

**Changing Labour Relations and Health:  
A Study of Casual Workers in the Formal Garment Export  
Industry in Delhi**

**Thesis Submitted to Jawaharlal Nehru University for the  
Award of the Degree of**

**Doctor of Philosophy**

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2008**



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04/08/2008

**Declaration**

This thesis entitled “Changing Labour Relations and Health: A study of Casual Workers in the Formal Garment Export Industry in Delhi” is submitted for the Degree of Doctor of Philosophy of this University. This thesis has not been previously submitted for any other Degree of this or any other University and is my original work.

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We recommend that this thesis be placed before the examiners for the award of the Degree of Doctor of Philosophy of this University.

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## Acknowledgement

The process of shaping a thesis is certainly bracing, however challenging too. It has been a continuous engagement with ideas, assumptions and practical realities. I indeed do not know to what extent I could put in place the thoughts of many who developed the borders of the wisdom, which I am subscribing to in this exploration. What I incorporated or contributed in this work subsumes quite a lot sharing of thoughts with many people.

When I met Prof. Nayar for discussing my M. Phil dissertation in 2002, I was not sure about continuing my studies in Jawaharlal Nehru University for a doctoral degree. I was in a confused state of mind with my unorganised and very raw ideas of research. He patiently listened to my scattered thoughts and helped to align them in a framework. In fact, it is with his unfailing supervision and encouragement that I could continue in the University for Doctoral Research. During the course of this study, I took much of his time in shaping my arguments and putting it in place, even at the last moments of writing. With profound sense of gratitude, I sincerely acknowledge the value of academic freedom that he offers, his readiness in responding to my urgent appeals and the constant support throughout the completion of this study.

During the initial months of my M. Phil dissertation, discussions with Dr. Sanghmitra S. Acharya and Prof. Nasir Tyabji introduced me to some of the critical views on work and health. I sincerely acknowledge their valuable help. I extend my gratitude to Prof. Mohan Rao, who used to ask about the progress of my study and Dr. Rajeev Das Gupta and Dr. Sunita Reddy who were members of the progress assessment committee for the extension of my work.

I received enormous support from Centre of Indian Trade Union (CITU) during the course of my field work in Delhi. Dr. K. Hemlata, introduced me to the CITU Delhi State Committee. Comrade Sudeer Kumar and Mohanlal then introduced me to Comrade Rampal, local secretary, Keerti Nagar, who whole heartedly extended his support to meet workers in Mangolpuri. I am very much indebted to Aravind, Meena Kumari and Asish who made all arrangements to meet and talk to workers.

My association with Centre for Education and Communication (CEC) for some period indeed helped me to interact and share views with national and international labour rights organisations working in the garment sector. Furthermore, I also got opportunities to study related sectors like sportswear industry during my association with CEC. I am grateful to my ex-colleagues in CEC, J. John, Manicandan, Ravindranath and Dr. R.S. Tiwari for their encouragements.

My sincere thanks are due to Dr. Rinju Rasaily, who spent lot of her time for my thesis by reading, rereading and timely intervening to remind me of my shortfalls. Her meticulous corrections and relevant comments could help me avert the mistakes, which I would not have noticed otherwise. I have no words to express my gratefulness for the support and encouragement from her at the critical junctures of my work.

Santhosh and Oommen were of great help in many fronts. Discussions with Santhosh helped me to sharpen my views. I sincerely acknowledge his comments and suggestions. Oommen extended his help at critical moments, which indeed helped to make my life easy.

Abhilash has always been there for all supports. Pramod fulfilled his historic responsibilities of last minute proof reading and page settings. I acknowledge the encouragement and support of Asif, Junais, Annie, Linu, Tito, Shiljo Nabeel, Vinod, Reji, Sreenath, Ragesh, Santhosh chettai, Prasanth and Sanal.

Above all I am obliged a lot to the workers in the garment export units in Mangolpuri. I have no synonyms to acknowledge their cooperation and support without which this study would not have been possible.

Sobin George

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## Abbreviations

1.5PL	1.5 times Poverty Line
2PL	Twice the Poverty Line
AEPC	Apparel Export Promotion Council of India
ASI	Annual Survey of Industries
ATC	Agreement on Textiles and Clothing
BPL	Below Poverty Line
CAW	Committee for Asian Women
CCC	Clean Clothes Campaign
CITU	Centre of Indian Trade Unions
CL	Casual Labour
CPI	Consumer Price Index
DDA	Delhi Development Authority
DGCIS	Directorate General of Commercial Intelligence and Statistics
EPZ	Export Processing Zone
ESI	Employees' State Insurance
ETI	Ethical Trading Initiative
EU	European Union
FDI	Foreign Direct Investments
GATT	General Agreement on Trade and Tariff
GDP	Gross Domestic Product
IIFT	Indian Institute of Foreign Trade
ILO	International Labour Organisation
IMF	International Monetary Fund
ITCB	International Textiles and Clothing Bureau
JJ	Jhuggi Jhopdi
LTA	Long Term Agreement Regarding International Trade in Textiles
MCD	Municipal Corporation of Delhi
MEPZ	Madras Export Processing Zone
MFA	Multi Fibre Agreement
MMF	Man Made Fibre
MPCE	Monthly Per Capita Expenditure
NAMA	Non-Agriculture Market Access
NCT	National Capital Territory

NCUES	National Commission for Enterprises in the Unorganised Sector
NGOs	Non-Government Organisations
NSSO	National Sample Survey Organisation
NTB	Non-Tariff Barriers
OECD	Organisation for Economic Cooperation and Development
PL	Poverty Line
PDS	Public Distribution System
RMP	Registered Medical Practitioner
RoO	Rules of Origin
RWS	Regular wage/salaried
SE	Self Employed
SEZ	Special Economic Zones
SSI	Small Scale Industry
STA	Short Term Agreement
TMB	Textiles Monitoring Body
TUC	The Trade Union Congress
TUC	The Trade Union Congress
UBINIG	Unnayan Bikalper Nitinirdharoni Gobeshona
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organisation
VER	Voluntary Export Restraints
WPI	Wholesale Price Index
WTO	World Trade Organisation

## Chapter 1

### Introduction

Labour relations are constantly intertwined in the changing nature of capital and modes of production. Capital-labour relations have undergone significant transformations in line with the significant transitions in the real world with regard to mode of production, right from agrarian economy and industrial capitalism to the contemporary age of global integration of production. The character of labour, thus, undergoes significant changes with transitions in mode of production. Theories and practices that held prominence under various political and economic regimes were influential in structuring, rearranging and governing the capital-labour relations. The study of capital-labour relations therefore necessitates examining labour processes under different regimes of capitalist production in the light of these theories and practices. Much of the debates on capital-labour relations and labour processes under capitalistic mode of production are derived from the works of Adam Smith, David Ricardo and Karl Marx on division of labour.

Labour processes under industrial capitalism attracted wide attention in the debates of capital-labour relations. The transition from agrarian economy to industrial capitalism rearranged the traditional capital-labour relations in the newly industrialised societies of Europe. The theoretical backcloth of division of labour during the emergence of industrial capitalism lies in the postulations of Adam Smith that division of labour brings about qualitative improvement in productivity. Smith (1776), argued, “the specialisation and concentration of the workers on their single subtasks often leads to greater skill and greater productivity on their particular subtasks than would be achieved by the same number of workers each carrying out the original broad task”. Smith put forward the thesis that division of labour leads to greater improvement in productive powers of labour and capital under three necessary conditions; “first, the increase of dexterity in every particular workman; second, the saving of time which is commonly lost in passing from one species of work to another; and lastly, the invention of a great number of machines which facilitate and abridge labour, and enable one man to do the work of many”.

However, industrialisation in Europe showed that division of labour and labour processes which were grounded on the postulations of Smith resulted in deskilling

and unfavourable conditions of work for labourers at the cost of increased industrial productivity, with the absolute control of capital over labour. For instance, the British example showed that development of industrial capitalism deteriorated the conditions of workers in the context of surplus labour, which was cheap and largely composed of women and children (Engels, 1845). It was in sharp contrast with Smith's view that division of labour would be a propellant for higher standards of living. In effect, mode of production under industrial capitalism was characterised by the 'formal subordination' of labour to capital.

The theories of Marx hold significance in this context as he noted that division of labour as postulated by Smith would lead to deskilling and alienation due to repetition of work. He argued that with such division of labour "worker is depressed, spiritually and physically to the conditions of a machine" (Marx, 1844). Marx emphasised that division of labour in manufacturing brings the labourer face to face with the material power of the production process, cutting down the worker to a detail labourer. Knowledge, judgment and will are formally exercised only for the factory as a whole, often crippling the worker's body and mind as well. The detailed division of labour-subdivisions of tasks within industries is thus distinguished from the social division of labour which sets off whole groups from one another in society (Mittleman, 1995).

It should be mentioned that the structures of management control in the capitalist mode of production during industrialisation largely determined the labour processes and nature of labour markets. The emergence of management paradigms such as Taylorism and Fordism had rearranged the capital-labour relations during the period of industrialisation in late nineteenth and early twentieth centuries. Taylorism marked the disassociation of skill of worker from the labour processes by the increasing control of capital over the conception and execution of work with its techniques, control and authority structures of production, often referred to as 'scientific management' (Braverman, 1974; Elger, 1979; Price, 1984).

The organisation of industrial production, division of labour and labour processes based on the postulations of classical economists had been seriously scrutinised in the wake of the World War I and the economic recessions thereafter. The significant development subsequent to the World War I and the economic recession was the emergence of the Keynesian economic paradigm. With the Great Depression and,

then, World War II, the classical paradigm was completely abandoned and the belief that Governments needed to play a role in regulating their economies had emerged (De Regil, 2001). Keynes (1936) emphasised that the neo-classical economic assumptions of “powerful market forces tend to ensure that the economy would stay close to full employment of its labour and capital resources” were unreal. Subscribing to this rationale, Keynes proposed that public investing, through taxation or public debt in the form of bonds, would need to be used as the central element in an entire program of discretionary policy. He also proposed that governments must act as compensatory agents at all times to assure full employment by way of a broad program of discretionary fiscal policy, which checks and balances every aspect of the capitalist economy (De Regil, 2001; *op. cit.*).

Mode of production that the capital persuaded in the welfarist nations therefore encompassed or accommodated the pertinence of the regulatory character of the State and its redistributive roles. Major development in the world of work in the light of Keynesian welfarism was the emergence of Fordist production organisation in some countries in Europe, which emphasised the mass production of consumer durables that are made on moving assembly line techniques operated with the semi-skilled labour of the mass worker. As Jessop (1992) noted, “the dynamics of Fordism is closely related to the form and function of the Keynesian welfare state since in Fordism, the State manages the wage relation and labour market policies and guides the aggregate demand, in this way it helps to balance the supply and demand”. The capital-labour relations also witnessed rearrangements, largely from a level of ‘actual subordination’ of capital to negotiations as mode of production accommodated the institutionalisation of collective bargaining to a certain extent (Przeworski and Wallerstein, 1982).

Mode of production and labour processes in the then emerged socialist regimes also require a mention in this context. It was clearly distinct from the welfarist postulations and practices of provisioning of basic needs. Conversely, socialist regime in Soviet Union emphasised on the non-contributory social insurance to cover all wage and salary earners as well as the rural and urban poor (Rimlinger, 1971; Mishra 1976). The concepts of welfare in the socialist states encompassed the principles of universal coverage, comprehensive protection, benefits as social rights and adequacy of benefits (Mishra, 1976; *op. cit.*, p.37). The role of labour in the

socialist regime was implied to cooperation on a planned basis, of the labour of all citizens and this process of social organisation of labour ensured that people work both for themselves and for the benefits of the entire society (Radek, 1931). The organisation of labour under socialism thus envisaged the complete elimination of workers' life-long bondage to any one production operation.

The shift towards flexible specialisation began when the crises of welfare and socialist states seriously posed questions on the production and labour practices. As Lipietz (1997) noted, "the crisis of welfare states and Fordist production practices was largely attributed to the 'problems of supply side' with regard to slow down in productivity, growth of total labour cost, worsening of capital/product ratio and increase in the price of primary commodities". In the pretext of mitigating this crisis, flexible policies of labour and production were put in place by Governments of United States and United Kingdom, which was eventually followed by other OECD countries (Lipietz, 1997). By 1980, with the macro economic crises of slow down of economic growth and fiscal strain, the choice of flexibility had gained wide recognition (Ibid).

According to the proponents of flexible specialisation like Piore and Sabel (1984), inflexibilities in the labour market are the key barrier to employment growth, and therefore "there has been a need to bring about a fundamental transformation in the relationship between the state and the labour market and to restore freedom of contract as the basis for economic relations" (Marshall, 1999). This particular flexibility thesis made several propositions. As Marshall (1999) noted, "firstly, wages are too high and too rigid, thereby pricing workers out of jobs and creating unemployment. Trade unions and collective bargaining arrangements here are seen as obstacles of economic growth and employment generation. Secondly, in the regulated paradigm, wage differentials are too small, hindering labour mobility. Thirdly, legally based labour rights are too extensive, leading to high labour costs. Finally, social security systems encourage voluntary unemployment and act as a disincentive to work". In this context, Piore and Sabel (1984) argued that State intervention leads to excessive legal and financial guarantees to labour. In short, they put forward the proposition that in response to the 'rigid' labour market, governments need to curtail involvement in the labour market and limit the power of



trade unions, to give employers more freedom of action, so that employment will grow.

Changes in production practices towards flexible specialisation in the developed world are to be viewed in the context of the increased movement of capital in the globalised world and the policies of deregulation that most of the developing and underdeveloped countries embarked on as part of macro economic stabilisation subsequent to the aforementioned economic crisis. Processes of globalisation resulted in global integration of labour markets, characterised by a 'new international division of labour' subsequent to the restructuring of the developed world with a shift from industry to service (Gordon, 1988). This has been driven by the opening and expansion of international trade and capital flows and a growing speed of global production networks, outsourcing and offshoring (Akyuz, 2003).

Notable manifestation of internationalisation of flexible specialisation on labour processes and labour relations was the shift of production base from formal to informal sector in the developing and underdeveloped countries, which were the 'emerged manufacturers' under the new international division of labour. It is well-entrenched that in many countries, during the period of economic reforms, informal economy tended to expand due to mobility of workers in the formal sector to the informal sector when public enterprises are closed or down sized. For instance, a World Bank survey in 1994 showed that more than a third of public labour force worked full time or part time in the informal sector in the developing world (WDR, 1995). UNCTAD accounted that informal markets expanded in those countries which experienced deindustrialisation subsequent to economic liberalisation (UNCTAD TDR, 2003). Outsourcing or offshoring of production from developed countries, which involved sub-contracted production chains, also invigorated the process of shift of production from informal arrangements. In fact, much of the export oriented outsourced production chains, adopted flexible specialisation and organised production along decentralised sub-contracted chains.

As mentioned above, flexible production primarily aimed at reducing the supply side cost i.e. labour cost. Since informal arrangements are relatively less regulated, employers could pursue the practices of flexible production towards reducing the labour costs unfettered. Labour processes and labour relations in such environments are quite informal in the context of the non-accommodativeness of wage-negotiating

institutions and obscure regulation by the Governments. There are different views on the impact of expansion of informal sector, especially export oriented manufacturing on employment and wages in developing countries. One view is that the growth of trade has a large positive effect on manufacturing employment and wages in developing countries which emerged as important exporters to developed countries (Ghose, 2000; *op. cit.*). As per this view, trade induced expansion of informal sector brings large employment opportunities for unskilled workers and women. Another view is that though expansion of informal export oriented sector generates some employment opportunities, it is very much associated with low wages and poor working conditions and adversely affects the working and living conditions of the labourers.

There were sufficient evidences of adverse conditions of workers in this informal arrangement of production organisation. For instance, in several developing countries, which underwent economic transition and structural changes, there was fall in aggregate demand for labour and decline of real wages of workers (WDR, 1995; *op. cit.*). However, there were no evidences of increase of wages of the unskilled and semi-skilled workers in the export oriented manufacturing sector in any of the transitional economies except the East and South East Asian countries as propounded by the theorists of flexible production. In India and Indonesia, for instance, wage differential between the skilled and unskilled workers are reported to be increased (Ghose, 2000; *op. cit.*).

Implications of flexible production organisation on employment and wellbeing and eventually health of workers hence are a case of critical exploration, especially in the context of expansion of informal employment and increase of wage differentials. The present study is such an attempt to examine whether labour processes under flexible organisation of production lead to inferior conditions of living and health outcomes for workers. Narrowing down further, the study seeks to examine how informality as a practice of flexible production is translated into adverse conditions of health of workers in the informal sector in general and export oriented manufacturing sector in particular, which is integrated to global production chain.

The study is organised in six chapters. Second chapter traces the interconnectedness of production organisation and labour relations under different production relations historically, and attempts to develop a framework for analysing work and health.

encompassing the broader aspects of nature of state, capital-labour relations, structure of labour market, hierarchies and qualitative aspects of wellbeing of workers. Under this revised analytical framework, the chapter problematises the present study. Third chapter analyses the macro context of work and health with a focus on the structural changes in the Indian labour market subsequent to economic reforms. The chapter, using secondary data sources, analyses the trends in informal employment and qualitative indicators of wellbeing such as wages, situation of poverty, consumption and expenditure pattern and healthcare in the informal sector in India in the post economic reform period. Fourth chapter specifically focuses on the structural changes in the textiles and garment sector in India in the context of international trade and its interconnectedness to production organisation and labour relations in India in the pre and post quota elimination phase of trade in textiles and clothing. It explores the implications of employment, wages and conditions of work of workers in the export oriented production sector in the post quota phase. Chapter five and six, in the light of the primary study carried out among casual workers in the formal garment export industry in Mangolpuri, Delhi, examine the interrelations of informal employment and adverse conditions of health of workers. Based on the primary study, chapter five examines how informality is practiced as part of flexible production and how it is multiplying the vulnerability of the workers with regard to declining conditions of living and wellbeing. With this, the chapter identifies the associated conditions of adverse health outcomes of the casual workers in the formal garment export units. The direct and indirect health consequences are examined further in chapter six in the backdrop of the identified associations of informal employment and adverse health outcomes for workers.

## Chapter 2

### **Conceptualisation and Methodology**

Conventional understandings of the interrelationship between work and health confine largely to the borders of occupational health hazards. This theoretical formulation had emerged during the period of industrialisation in the late eighteenth and nineteenth centuries in the Western countries. The history of discussions on work and health hence could be traced back to the period of industrial revolution. Ramazzini's (1700) work on the conditions of stone masons and miners drew attention on the eye problems of the workers who were engaged in gilding and printing. Ramazzini's work could be considered as the substantial one on occupational health of that time. Thus occupational health hazards gained primacy in the debates of work and health.

Another traditional understanding of health and work relates to the models of work, especially in the rubric of the forms and types of work (Daykin, 1999). The earlier conceptualisations of work and health considered barely the typical employment, which has a definite nature and structure of production organisation, usually performed in centralised production environments. However, there have always been different forms and types of work, which are performed by skilled, semi-skilled and unskilled workers. The perspective of work and health, which centred on typical employment, hence, excludes those forms and types of work of a wide spectrum of workforce who are engaged in atypical work, including unskilled and semi-skilled workers, children and paid and unpaid women workers as well as its significant associated factors of health. Therefore it is essential to re-examine the conceptual premises of work and health and expand its scope beyond occupational safety and health and formal employment to more qualitative aspects of well being.

This chapter attempts to re-examine the linkages of work and health in a broader framework. It seeks to place how health needs of workers were perceived and addressed in line with the changes in the world of production organisation and relations by surveying relevant literature. By examining work and health through the linkages of production and labour relations, it is attempted here to develop a framework for analysis.

## Work and Health: A Survey of Literature

The early developments in the field of work and health can be found in the writings of Agricola (1556). Though his book *De Re Metallica*<sup>1</sup> dealt more on mining and metallurgy, it gives a fair account of the diseases of miners and major causes of death of workers during that period. Similarly, works of Paracelsus and Ellenborg in the fifteenth century give a note of the occupational health problems of workers in the gold and mercury mines (Wilkinson, 2001). The work of Ramazzini, an Italian physician, in 1700 on the health problems of stone masons, gilders, tinsmiths and blacksmiths opened up a new branch of industrial medicine. His work, *The De Morbis Artificum Diatriba* was an original attempt in the field of trade diseases and industrial hygiene. Ramazanni was the first to recommend occupational safeguards for the workers who were labouring under unsanitary conditions (Robinson, 1941). This had posed questions on the traditional diagnosis patterns of practitioners and underscored the importance to take note of the occupational and social situation of the patient while making a diagnosis. Building on the foundations laid by Ramazzini, Thomas Percival and Robert Owen, the two eighteenth century physicians, attempted to view diseases in the specific context of the nature of work people engaged in. Percival studied factors such as conditions and hours of work in his work on typhus epidemic. This had not only contributed to the body of knowledge of work and health but to significant social reform initiatives such as the enactment of the first factory bill that came to be known as *The Health and Morals of Apprentices Act, 1802*.<sup>2</sup> This was followed by a great deal of legislation pertaining to employment conditions. Robert Owen incorporated aspects such as workers' level of awareness and education for assessing workplace health. His inferences were derived out of an experimental research, which had been conducted in his own mill. It revealed that reduction in the hours of work, adult education and elimination of

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<sup>1</sup> *De Re Metallica* originally written in French in 1556 was the first documented attempt in industrial medicine. It tried to reflect the hazardous occupational conditions of miners of that period. For more details please see, Agricola (1556), *De Re Metallica* available at [http://archimedes.mpiwg-berlin.mpg.de/cgi-bin/toc/toc.cgi?step=thumb&dir=agric\\_remet\\_001\\_la\\_1556](http://archimedes.mpiwg-berlin.mpg.de/cgi-bin/toc/toc.cgi?step=thumb&dir=agric_remet_001_la_1556). accessed on 21 September, 2007.

<sup>2</sup> The Health and Morals Apprentice Act was introduced in 1802 in Britain. This legislation was the first attempt at reforming working conditions in factories, especially textiles mills that used child workers. The Act attempted to legislate for apprentices, especially children and fixed a maximum twelve-hour working day for children. It also contained provisions for hygiene, ventilation, rest rooms, cloths and education for apprentices. For more details see, Greenwood, Major and Collis, L. E (1977)

child labour had significant impacts on the health of workers. This had also contributed to the enactment of an Act for protecting young people in textile mills, prohibition of child labour and reduction in the working hours to ten for minors. The notable finding of his work was the association he identified between education and improvement of work environment (Wilkinson, 2002; *op. cit*).

The theoretical premise of work and health was further expanded in the nineteenth century with the contributions of Charles Turner Thackrah, Anthony Ashley Cooper, E. H. Greenhow and John Thomas Aldridge. Among them, Thackrah, Greenhow and Aldridge who were English physicians, contributed academically to the foundations of the stream by publishing their works. The work of Thackrah, *The Effects of the Principal and Professions and of Civic States and Habits of Living on Health and Longevity*, published in 1832 was a milestone in the history of occupational medicine. Greenhow further strengthened the foundations laid by his forerunners scientifically by conducting an experimental study on crude death rates from pulmonary diseases in one of the lead mining towns in England with a control group from a nearby town. The association between chronic inhalation of dust and fumes and increased mortality was established by this work and it led to the implementation of some of the regulatory measures to control dust and fumes in the work environments. Similarly the work of Aldridge on the diseases of potters reinforced the association between specific work environment and diseases.

Though there were substantial efforts to conceptualise work and health earlier, an ensconced model of workplace health was evolved in the context of industrialisation. The major focus of health of workers in the earlier period was on the hazardous physical environment that they came across at workplace. Within this framework, the relationship between work and health was established by identifying the unhealthy working conditions and occupational health hazards that prevailed in the period of industrialisation in the newly industrialised countries. There are quite a large number of evidences of deterioration of health of the labouring population due to their exposure to unhygienic and hazardous work environment in the context of the expansion of precarious employment subsequent to industrial revolution in Europe. History illustrates that Industrialisation in Europe brought about several structural changes in the production and labour market structure. The transition from

agriculture economy to industrial capitalism resulted in the making of unskilled workforce. The British example showed that the development of industrial capitalism brought about the decline of traditional agriculture economy and brought about massive unemployment (Doyal, 1979). The newly emerged working class, who were agriculture labourers, were forced to migrate to urban centres to work in the industrial settings (Ibid, p. 50). The abundant supply of labour force, largely due to the labour migration to industrial centres, decreased their demand in the labour market. This situation enabled the employers to hire labour at low costs without any additional efforts to retain them with incentives and benefits.

The process of industrialisation therefore formed the context of analysis of much of the debate on work and health of the time. It was in this context that Engels, Chadwick and Rosen put forward their arguments on the relationship between work and health. The contribution of Engels has been rather significant in the field of work and health as he incorporated wide range of aspects such as nature of production organisation, class hierarchy and State in explaining work and health conditions. Engels observed that prevalence of this situation in Britain was primarily due to the rapid shift of the British economy to industrial capitalism. He argued that the problems of work and its adverse impacts on the health of workers were the effects of capitalism that prevailed in the nineteenth century and the root cause of illness and death of the working class people lay in the organisation of economic production and social environment (Engels, 1845). In his observation, industrialisation had reorganised production relations and class structure in several European countries. The new capitalist system thus created, forced the working class to live and work within the circumstances that led to ill health (Ibid).

Engels also highlighted the work induced behavioural risk factors of health. His analysis of alcoholism among workers, for instance, drew attention to the significance of work-related behavioural risk factors of health. He observed that alcoholism was firmly rooted among workers as a substitute for the absence of emotional gratification (Ibid, p. 142). His analyses also encompassed the unnoticed aspects of occupational health hazards at that period such as posture of the workers, which has distant consequences and stress, besides accidents and injury at the work place. Engels pointed to the orthopaedic disorders that stemmed from physical

works and identified that curvature of spine, deformities of the lower extremities, leg ulcers, flat feet and varicose veins as the manifestations of work that required long period of time in an upright posture (Ibid, pp. 190-193).

Engels pointed out the impact of social and living environment on the health of workers, which were determined by their nature of employment. In his work, *The Housing Question*, Engels depicted how the problem of inadequate housing led to filthy living conditions of workers in the industrial centres of Germany and the way in which industrialists and the State attempted to solve the problem (Engels, 1872). Engels probed into class politics and he brusquely criticised all the reactionary policy reforms by the industrialists and the State. Giving new dimensions to the theoretical foundations of work and health, Engels argued, “it is not that the solution of the housing question simultaneously solves the social question, but that only by the solution of the social question, that is, by the abolition of the capitalist mode of production, is the solution of the housing question made possible” (Ibid, p.143). Engels’s analysis also addressed the gender division of work, which was assumed to have significant impacts on the health of women. Engels pointed out the specific problems of women such as deprivations, exploitation and harassment at workplace and their multiple responsibilities. In precise, Engels broadened the scope of work and health from the contours of industrial medicine and occupational health to wider areas of class politics, production organisation, hierarchy, social environment, gender division of labour and work-related behavioural risk factors and placed in the broader canvas of social origin of illness.

The nineteenth century also witnessed several health movements pioneered by people like Edwin Chadwick. Sanitary Movement<sup>3</sup> was one among them. Sanitary movement has a place in the history of public health as it identified and explicated the social context of health problems. With the publication of the report of *Poor Law Commission* in 1842, which underlined the association between filthy living and working environment and epidemic diseases, Chadwick expanded the *Chadwickian tradition* that formed the pillars of social model of health. The report highlighted the

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<sup>3</sup> Sanitary movement was one of the major public health initiatives in Europe in the context of industrial revolution during 1840s. It was based on the report by Edwin Chadwick on the “Sanitary Conditions of the Labouring Populations of Great Britain published in 1842. For a detailed discussion on sanitary movement, see Hamlin. Christopher (1998).



pertinence of prevention of diseases by the provision of clean water supplies, effective sewerage and drainage, cleaning of roads, control of industrial effluent and establishment of new standards of environmental and personal cleanliness (Rosen, 1943; 1958). Subsequently, the *Public Health Act of 1848*<sup>4</sup> was passed and the historic *Public Health Movement* came into existence.

Works after Engels and Chadwick emphasised more on relating occupational conditions and psychological distress to health. By that period, through social legislations and public health movement, workplace health problems had been checked to a certain extent in all industrial societies. It is important to note that much of the legislative interventions of that time were grounded on the theories of Malthus, Ricardo and Bentham. For instance, Malthus, Ricardo, and Bentham argued for a change in the welfare interventions through the amendment of *Elizabethan Poor Laws* based on their theories of population and poverty<sup>5</sup>, iron law of wages<sup>6</sup> and stigmatising relief<sup>7</sup> respectively. In 1834, *The Poor Law* was amended in Britain with the principles of exclusion of less eligibility<sup>8</sup> and the workhouse test<sup>9</sup>, emphasised in the *Poor Law Commission*. The period from 1870s to late 1930s witnessed the beginning of State intervention through the enactment of various Acts related to public health, labour and welfare. By the end of nineteenth century, several European countries had introduced legislations against industrial injuries; by the outbreak of the First World War, many had passed legislations for retirement pensions and health insurance; and by the outbreak of the Second World War most had introduced insurance schemes against unemployment (George and Page, 1995).

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<sup>4</sup> The Public Health Act of 1848 was enacted in Britain in the context of the sanitary movement followed by the publication of Chadwick's Sanitary Report in 1848. For detailed discussion on the Act, see, Porter, Dorothy (1999).

<sup>5</sup> Malthus argued that population was increasing beyond the ability of the country to feed it. The Poor Law was seen as an encouragement to illegitimacy, and this would lead in turn to mass starvation. For a discussion see, Poynter (1960).

<sup>6</sup> Ricardo's *iron law of wages* was believed to show that the Poor Law was undermining the wages of independent workers together with the *roundsman system*, where paupers were hired out at cheap rates to local employers. For a discussion see, Poynter (1960).

<sup>7</sup> Bentham argued that people did what was pleasant and would not do what was unpleasant - so that if people were not to claim relief, it had to be unpleasant. This was the core of the argument for stigmatising relief. For a discussion see, Poynter (1960).

<sup>8</sup> Less eligibility was an elimination criterion of the people from assistance. As per the less eligibility criterion, the position of the poor must be 'less eligible', or less to be chosen, than that of the independent labourer. For a discussion see, Poynter (1960) and Laybourn (1995).

<sup>9</sup> Workhouse test, similar to less eligibility was an exclusion criterion. It emphasised on not giving relief outside the workhouse. For a discussion see, Fraser (1973) and Bruce (1978).

In Britain, series of legislative measures such as *Employment Liability Act (1880)*, *Notification of Diseases Act (1895)* and *Workman's Compensation Act (1908)* were introduced during the period of liberal reforms between 1880 and 1920 (Ibid, p.6). In Sweden, in response to the impact of industrialisation and massive emigration, legislations pertaining to social insurance and old age pension schemes were introduced. After 1930 since the election of Social Democratic led Government, services such as housing, maternity benefits, pension payment etc. were introduced for workers (Ibid.). Similarly in Germany, legislations against industrial accidents, for health insurance protection, retirement pension and employment benefits were introduced during this period. Thus as a response to the adverse effects of industrialisation, State intervened in many cases and introduced remedial measures. State provision of public measures was more evident in the post Second World War period. For instance, in Britain the development of National Insurance and National Health Service was introduced in this period, largely based on the *Beveridge Report* of 1942, which proposed a system of national insurance.<sup>10</sup>

There were three important developments, which catalysed the introduction of welfare provisions for the working class during this period. First was the working class pressure for better working and living conditions. It was at this juncture that the *Great General Strike* of 1920s and 1930s broke out. The Trade Union Congress (TUC) in 1924 came up with series of demands pertaining to clean working conditions, control of working environment and space for bargaining (Wilkinson, 2002; *op. cit*). Second was the need to sustain and improve the industrial production, which started declining because of the appalling health problems of the workers. For instance, introduction of health policies in Britain during the consolidation of industrial capitalism was largely to sustain production, which was severely hampered by the decline health conditions of workers (Doyal, 1979; *op. cit*). Likewise, the development of industrial health policies in the beginning of twentieth century in many of the colonies was due to the increased prevalence of infectious diseases like tuberculosis and malaria. For instance, industrial health policy in South Africa was developed in the context of the decline of production in goldmines due to

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<sup>10</sup> The Beveridge Report proposed a system of national insurance in Britain based on family allowances, a National Health Service and full employment. The report considered the whole question of social insurance, arguing that want could be abolished by a system of social security organised for the individual by the state. For a discussion, see Cole, G.D.H. (1942).

higher rate of disability of workers due to tuberculosis (Packard, 1987). Third was war emergency. When closely examined, it is seen that the reform and welfare measures in the industrial societies were largely introduced out of the economic interests of capitalists. Welfare provisions for workers were deliberately introduced to improve profitability and legitimisation of the capitalist system.

### **Regimes of Production Relations: Post War Welfarism to Neoliberalism<sup>11</sup>**

The origin of welfare state was primarily around the introduction of social insurance, extension of citizenship and the depauperisation of public welfare and growth of social expenditure (Pierson, 2006). The theoretical works of welfare economists like Keynes, Pigeau, and Schumpeter in fact provided sufficient justification for increased taxation, deficit financing for welfare activities during this period.<sup>12</sup> It should be noted that most of the policy reforms and state interventions in the *golden era* of welfare state assume its theoretical edification from the works of these neo-classical economists. Based on it, by 1945, the vision that aggregate demand through public spending must be used to maintain full employment was well entrenched (De Regil, 2001). The social insurance scheme was derived from the works of Beveridge and Keynes, which underscored that the incapacity to earn a living through eventualities such as old age, sickness or unemployment was normal conditions in societies and it was the responsibility of the state to organise for the collective provisions against the loss of income arising out these eventualities (Flora and Heidenheimer, 1981). Similarly, based on their positions, notion of citizenship was rearticulated as “the receipt of public welfare is not a barrier to political

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<sup>11</sup> The term neoliberalism here refers to the “policies and processes whereby a relative handful of private interests are permitted to control as much as possible of social life in order to maximise their personal profit” as Robert W. McChesney defines. The term neoliberalism suggests a system of principles that is based on the classical liberal ideas, originating from the theories of Adam Smith. Here the term is used as the defining political and economic paradigm, which better explains the present production relations in the context of diminishing role of nation States and emerging role of market. For a detailed discussion on neoliberalism, see, Jessop (1992), McChesney (1999) and Chomsky (1999).

<sup>12</sup> Keynes was the economist who took a complete theoretical and practical departure from the classic paradigm and succeeded in influencing the economic policies of many nations. He challenged the assumption of full employment of resources. He argued that the adequate level of wages and interests would not produce an allocation of all workers into employment and all capital into investment. He asserted that discretionary behaviours from the investors define their disposition to invest in productive ventures; and that these behaviours could be rooted in their perception of the market opportunities or simply rooted on personal reasons that had nothing to do with the economy. For details, see, Keynes (1936).

participation, but a benefit of full citizenship” (Goodin, 1988). Consequently, public provisioning with regard to social insurance and social expenditure witnessed a significant increase in the welfare states.

As mentioned earlier, every phase of transition of production organisation is associated with certain specific developments, which always have an impact on working conditions and health. For instance, the post war welfarism brought about definite policy reforms and regulated the labour market by enacting labour legislations and social security interventions. The nature of State intervention in the welfare provisions of the workers in the capitalistic production had paramount implications on labour relations. State intervention was in such a way that it freed the industrialists from the responsibilities of public welfare to some extent. Thus it encouraged the capitalistic economic growth unfettered (Pierson, 2006; *op. cit.*). The impact of these developments had reflected on the labour relations during the period of the crisis of welfarism in many countries.

Post war period also witnessed emergence of new regulatory regimes and world systems. The re-emergence of the relevance of International Labour Organisation (ILO) has to be closely seen with the rise of social welfare policies, which brought about the ‘capital-labour compromise’. With the Great Depression and, then, World War II, the need to implement international financial regulatory framework was emerged to support reconstruction and development of the nations of North and South. Especially, late 1940s was characterised by the establishment of new international organisations which are known as ‘Brettonwoods Institutions’ such as GATT, World Bank, IMF. Though their interventions were minimal in the initial phase, later these organisations emerged as major players in the changing international political economy, especially in the context of the crisis of 1970s.

There is a common agreement that the welfare states were characterised by the slowing of economic growth, fiscal strain and ageing of population in the late 1970s and 1980s (McGregor, 1999). For instance, between 1965 and 1973, the economies of OECD countries showed an annual average growth rate of about 5 percent, in 1974, it fell to 2 percent and in 1975, it was below zero for nine OECD countries (Pierson, 2006, *op. cit.*). Declining economic growth rates coupled with the oil price and resulted in the reduction of public

expenditure, introduction of privatisation, and rolling back of the frontiers of the state wherever possible (Alber, 1988). Crisis of welfare state and crisis subsequent to the abysmal hike of oil prices had its impacts on the real world and economies of developing and underdeveloped world.

Most of the countries that faced fiscal crisis had to look forward to International Financial Institutions and countries of the North for loan servicing and financial aid. However, International financial institutions such as World Bank and International Monetary Fund (IMF) put forward certain policy reforms for securing and regaining economic growth. It included fiscal discipline i.e. small deficit in government budget, tax reforms pertaining to reduction of marginal rates, prioritisation of public expenditure on investment than redistribution and deregulation with regard to labour market (Pierson, 2006, *op. cit.*). Eventually, these policies, which were suggested by the international financial institutions, became part of the 'conditionality' of aid. Thus the policies of economic liberalisation, with emphasis on fiscal discipline, tax reforms, reduced public expenditure and deregulation were adopted by several developing and underdeveloped countries, which received aid from international financial organisation.

Subsequently, these countries embarked to structural adjustment policies such as pricing policy, fiscal policy, monetary policy, trade policy, land policy and institutional reforms such as financial and health sector reforms in order to stabilise the economy (Gupta, 1995). Among these, trade policies, which include export promotion, trade liberalisation and deregulation of labour market have significant place in labour relations since it resulted in a new pattern of global trade. Significant developments that have taken place in the global level subsequent to trade liberalisation are the global integration of production, sectoral shift from industry to the service sector in the developed countries and the international division of labour<sup>13</sup> between North and South. It is well-entrenched that policies of trade liberalisation allowed the industries of the industrialised countries to enter the low cost production locations in the developing countries, which are labour intensive (Carr and Chen, 2001). Literature evidences that it contributed to the decline of traditional industries like textiles, footwear and steel in these countries (Despande,

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<sup>13</sup> For a discussion, see, Folker, Frobel, Jurgen, Heinrichs, and Otto, Kreye (1978), Chandrasekhar (1983) and Mittleman, James (1995).

1999). Second is the new international division of labour, which configures a new division of labour between the advanced and the developing countries (Gordon, 1988).

It is widely noted that trade policies in various countries have brought about significant changes in the domestic labour market structure. Major changes in the labour market are flexibilisation of production, dismantling of labour laws, subcontracting of production and informalisation of formal sector (Gupta, 1995; Carr and Chen, 2001; *op. cit.*; Pais, 2002; Unni, 2002). Similarly, a change in the employment pattern, mainly from formal to informal, organisation based to home based, wage based to piece rate based is appeared in many sectors. Flexibilisation of labour market<sup>14</sup> is one of the major implications subsequent to structural adjustment programmes on the labour market that contributed to the expansion of informal sector (Nath, 1994). The demand for flexibility of labour market is grounded on the logic of flexible specialisation that any intervention by the State, trade union or any other institutions on wages, employment and work allocation would affect production and hinder employment generation. Though there are no substantial evidences to support this argument, it is noted that labour market flexibilisation led to the increase in the incidence of casual workforce in the industries of the organised and the unorganised sectors in the developing countries (Carr and Chen, 2001; *op. cit.*). Practices of sub-contracting, decentralisation of production to informal settings, informalisation of formal sector and casual employment, which have contributed to the expansion of informal employment, have been legitimised by the practice of flexibilisation of labour.

The number of workers in the informal working environments has significantly increased attributable largely to this development. Available evidences show that, in many countries, during the period of economic reform, the informal economy expanded due to the mobility of workers in the formal sector to the informal sector when public enterprises are closed or down sized (Breman, 2001). Another set of

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<sup>14</sup> Labour market flexibility here refers to freedom of enterprises in deciding wages, employment and labour processes unfettered by any institutional and legal restrictions subsequent to the trade policy reforms. The demand for flexibility of labour market is mainly because of the market logic that any intervention by the state, trade unions or any other institutions on wages, employment and work allocation would affect production and hinder employment. For a discussion, see, Nath, G. B. (1994).

factors of informalisation of labour relates to economic growth. For instance, several countries have experienced little or no economic growth, while others have pursued capital-intensive growth with no significant employment generation, often referred to as jobless growth (Carr and Chen, 2001; *op. cit.*). This may push job seekers in the formal sector, in both these contexts, to seek job in the informal sector.

As mentioned above, the last two decades of the twentieth century witnessed an unsymmetrical form of expansion of informal sector, especially secondary and tertiary, fuelled largely by liberalisation and economic reforms in the developing world. The linkages of informal employment and ill health have become strong and appropriated through external interventions and macro policies such as labour market reforms and health sector reforms. The manifestations of labour market reforms such as deregulation of labour market, increased competition, labour market flexibilisation and sub-contracting are linked to excessive hours of work, the use of stimulants and other hazardous work practice and low wages (Quinlan et al, 2001). The specific policies of structural adjustment such as trade and institutional reforms limit the accessibility of workers to food, infrastructure facilities and their right to entitle the labour standards and statutory benefits. Health sector reforms and its implications such as user fee public-private partnership and cut down of public expenditure on health decrease the health accessibility of the poor in general and the informal workers in particular. Therefore the health consequences in informal sector employment are to be studied by viewing the working and living conditions of the labour force in the context of such macro policies.

Following part of the chapter presents a survey of relevant literature that dealt with the theoretical and empirical analysis of work and health within the premises of the above mentioned macro-micro linkages, especially in the context of labour market deregulation and flexible production. Scope of the survey of literature is limited to studies that explicated health outcomes such as morbidity, health care service availability and utilisation, health seeking behaviour, physically dangerous and psychologically stressful conditions of work in the context of nature of production organisation, labour market participation, labour market restructuring, flexible production organisation, casualisation, job security and labour relations.

## **Health of Workers under Changing Patterns of Employment**

The significant recent development of production organisation, which is influenced by the changes in the real world, is flexible production. It is functionally defined as the ability to adapt rapidly to changes in conditions of work and technology.<sup>15</sup> There are five types of defined flexibilities, namely numerical, functional, temporal and wage flexibility. Numerical flexibility implies the adjustment of labour inputs to changes in output and demand. Functional flexibility is the match between available workers and vacancies; temporal flexibility is the variety of working time arrangements, locational flexibility is the range of locations where work is undertaken and wage flexibility is the matching pay to productivity and profitability (Adnett, 1996). Outstanding among these different types of flexibility have been the growth of atypical or precarious employment and the decline of the standard full-time, permanent employment. Precarious employment could be any type of atypical employment including part-time work, on-call contracts, fixed-term contracts, seasonal work, agency work, home based work, tele-working, freelancing, self-employment and informal work (Delsen, 1991).

It is important to note that organisation of production largely determines the nature of employment, whether formal or informal, paid or unpaid, home based or firm based, regular or contract. Flexible production has rearranged the capital-labour relations and brought about structural changes in the labour market such as flexibilisation, sub-contractualisation and casualisation and redefined the conventional employment relations. Precarious employment thus emerged has significant impacts on the health of the labouring population. Quinlan et al (2001) categorised the factors linking precarious employment to adverse occupational health and safety outcomes as economic and reward pressures on precarious workers, disorganised work processes or settings and the weakening or bypassing of conventional regulatory regimes. By examining these factors in the studies conducted in various environments Quinlan, et al concluded that precarious

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<sup>15</sup> Flexible production or specialisation here refers to the post-Fordist stream of organisation of production. It could be functionally defined as "manufacture of a wide and changing array of customised products using flexible, skilled, semi skilled or un-skilled, but adaptable workers". In practice, it is decentralisation of production through small units and sub-contracting arrangements. It is often manifested as casualisation, deregulation and precarious working arrangements. For more discussion on flexible production and labour market flexibility, see Robbins, S (1997) and Papola, T. S. (1994).



employment is associated to inferior health outcomes through factors such as workers' pressure in terms of competition for jobs, contracts, pressure to retain a job and liveable income, low level of organisation and non-regulation (Ibid).

Workplace reorganisation as a result of the combination of increased international competition, introduction of new technologies, de-industrialisation, repeated recessions and the privatisation of previously state owned industries, have led many industries and individual companies to engage in reorganisation, restructuring and/or downsizing. There are several studies that established the relationship between the health of employees and workplace reorganisation in various country situations. A study conducted in a British water company during the period of privatisation and subsequent organizational restructuring revealed that throughout the period leading up to privatisation, workers experienced decline in physical health (Nelson et al, 1995). Besides, Nelson and colleagues found that during the period leading up to privatisation, manual and white-collar staff showed an increase in mental ill-health as measured by an 18 point scale gauging various affective symptoms such as reactive depression, free-floating anxiety, inability to cope and low self-esteem.

Gabriel and Liimatainen (2000) noted that a number of common threads appeared to link the high prevalence of stress, burnout and depression to changes taking place in the labour market, due to the effects of workplace practices, income and employment, which were deregulated by the process of economic globalisation. Landsbergis (2003) noted that recent trends in the organisation of work may affect worker health through a variety of pathways by increasing the risk of stress-related illnesses, such as cardiovascular disease, musculoskeletal disorders and psychological disorders and by increasing exposure to hazardous substances. Landsbergis (2003) argued that work organisation may be increasing the risk of occupational illnesses. Wahlstedt and Edling (1997) highlighted the effects of workplace reorganisation on gastrointestinal complaints and sleep disturbance in a study of a Swedish postal sorting terminal. The study findings showed that the company's reorganisation in fact led to a reduction in both gastrointestinal complaints and difficulties in sleeping. A study conducted in one of the ceramic industries in India cited that jobs in these units like packing of the fragile cups and saucers with straw in the poorly lit and unclean surroundings could severely affect the health of the labourers (Das, 2000). Kumar (2001) observed that the affluent, fast

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expanding software and service industry in India is also undergoing informalisation and workers' salaries are reduced to a larger extent. The informal IT service sector are featured by precarious work such as long working hours and low wages, generally paid on piece rate basis.

Several studies have attempted to approach work and health in the milieu of production organisation and changing patterns of employment. These studies examined the ways in which changing patterns of employment are creating new patterns of production and distribution of occupational hazards. Daykin (1999) argued that the concentration of economic power jointly with the mobility of capital and resources has led to the globalisation of many occupational hazards. Situated in the macro context of relocation of manufacturing industries from North to South, Johannaning et al. (1994) argued that workers in the South are facing newer threat of serious health risks such as asbestosis<sup>16</sup>, mesothelioma<sup>17</sup> and severe other breathing trouble after the relocation of asbestos based industries from USA and Europe to developing countries. Some scholars have approached this problem in the context of the declining regulatory power of the Governments in the underdeveloped and developing countries and the global competition resulting in the growth of structural unemployment and flexible employment in these countries subsequent to the process of globalisation (Pickvance, 1996; Cameron, 1995).

### **Control on 'Own Work', Work Environment and Hierarchy**

Control of the working systems and own work provide freedom for the workers to regulate one's working conditions. However, attentive question here is what does entitle a worker to exercise control over the working system and own work. To answer this, it is crucial to examine the position of the worker in the work hierarchy and the social and economic opportunities that determine the particular position. It is a well-identified fact that workers in the lower strata such as unskilled and manual labour are largely from the lower social and economic background and it has significant role in determining the skill, education and adaptation to technology of the worker. For these workers, labour is not a means of creativity and self-expression, but a means of mere livelihood (Navarro, 1976).

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<sup>16</sup> Asbestosis is scarring of lungs. which makes breathing difficult. For more discussion see. Rom, N. William and Markowitz. B. Steven (2006).

<sup>17</sup> Mesothelioma is a rare cancer of the lining of the chest or abdominal cavity.

Karasek and Theorell (1990) using the job demand-control model<sup>18</sup> proposed that the combination of heavy demands and limited decision latitude (control) to moderate these demands results in job strain, which in turn leads to negative health consequences (Platt et al, 1999). Kinnunen and Natti (1994) in a study of Finnish workers accounted the positional factors that are related to workers perceiving their employment as insecure. Nelson, *et al* (1995) looked at the perceived levels of control and uncertainty of three groups of workers including management, white-collar/administration and manual staff during the privatisation of a water company. The study found that workers in the positions of less control and high uncertainty suffered the furthestmost negative effects of major organisational change.

### **Job Insecurity and Health Behaviour**

A few studies have shown that redundancy can have effects on the health of workers. Hamilton et al (1993) in a study of American blue-collar autoworkers examined the relationships between being made redundant, coping styles and subsequent depression. The study showed that unemployment is associated with depression and also that depression is associated with subsequent unemployment. Introduction of new technology and related job insecurity has also been identified as one of the issues for analysing work and health by many scholars. Computer and information technology, for instance, has introduced new methods for work management and the surveillance and control of employee behaviour. There is extensive literature related to health problems and use of computer related technology. Studies of employees in high-technology industries have revealed that physical and psychosomatic symptoms are prevalent among the employees (Platt et al, 1999; *op. cit.*). Carter and Bannister (1994) found that Musculoskeletal (MS) problems are associated with computer related works among workers who use computers extensively. Similarly Arnetz and Wiholm (1997) cited evidences related to mental and physiological arousals and heavy dependence of computer in work.

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<sup>18</sup> Demand control model in work place health literature talks about the psychologically stressful conditions of work both at work place and living environment. This model shows that high pressure coupled with low control on own-work situations contribute to strain, particularly when combined with home stress and absence of social support. As per this model, the strain can be expressed in any form such as injury, infectious diseases, cardiovascular diseases, anxiety depression, hostility, dependence on alcohol, tobacco etc. For a discussion, see Moon, De Sam and Sauter, L Steven (1996).

Various studies have examined the health behaviour of workers that is associated with increased fear of job insecurity. These studies revealed that insecurity at work has been shown to add to the health burden of individual workers. Heaney et al. (1994) argued that chronic job insecurity is linked to increasing reporting of a range of physical symptoms in the light of the research study conducted on US automobile workers. Daykin (1998) found that uncertainty at work affected workers' health behaviour, most importantly, attitude to occupational health services. The study revealed that workers did not report injuries and other ailments for the fear that information about their health and sickness would be used in decisions about the renewal of contract as well as promotion and redundancy (Ibid, p. 4).

Survey of literature based on the studies that examined health outcomes such as morbidity, health care service availability and utilisation, health seeking behaviour, physically dangerous and psychologically stressful conditions of work in the context of labour market phenomena such as nature of production organisation, labour market participation, labour market restructuring, flexible production organisation, casualisation, job security and changes in patterns of work, revealed various associations between work and health. Studies in the context of changing production organisation revealed that it has rearranged the capital-labour relations and brought about structural changes in the labour market such as flexibilisation, subcontractualisation and casualisation and redefined all the traditional employment relations. Another set of studies in the similar context established that precarious employment in the export oriented sectors is linked to inferior health outcomes. The relationship between the health of employees and workplace reorganisation subsequent to the changes in production organisation has been established in various studies in different country situations. Some studies attempted to approach work and health in the milieu of production organisation and changing patterns of employment. These studies showed that the ways in which changing patterns of employment are creating new patterns of production and distribution of occupational hazards. Studies focussing on health behaviour revealed that unemployment is associated with depression and also that depression is associated with subsequent unemployment. Introduction of new technology and related job insecurity has also been identified as one of the issues for analysing work and health by many scholars. Some studies looked at the health behaviour of workers associated with increased

fear of work insecurity. These studies revealed that insecurity at work has been shown to add to the health burden of individual workers.

### **Conceptual and Analytical Framework of the Study**

Discussions on work and health have historically been developed through the contributions of physicians, social reformers and social scientists. Initially the concept was based on work and wellbeing and was predominantly confined to the borders of physically dangerous occupational conditions and psychologically stressful conditions to health. This analytical framework had been evolved during the period of industrialisation and hence, the focus of research was on the occupational conditions of workers and its health implications.<sup>19</sup> Subsequent to the consolidation of industrial revolution, the focus of research on work and health had shifted to workplace health. However, perceiving health merely based on occupational problems has several limitations as it often fails to untangle the web of interrelationships of occupational conditions, social and family environment, power relations at the workplace and living conditions. Similarly it undermines the larger political and economic questions, which could explain much of the structural issues.

Engels and Rosen tried to place health of workers in the context of the social, economic and political determinants.<sup>20</sup> To their understanding, health of the workers is determined by the factors of economic production, social environment such as position in the work hierarchy, subordination, level of organisation and their control over the workplace. This framework of analysis could address issues such as position of workers in the production chain, living conditions and housing problems, wage structure and the power structure. Sociological analysis is yet another approach, which tried to link work, stress and health. These analyses are primarily based on determinants such as hierarchy in the work ladder, class, control on working conditions, power, roles and relationships at the workplace. Though this analysis could explain issues related to subordination, power and relationships at the workplace, it undermines the economic variables such as wage determination and other associated factors such as job insecurity, labour rights and collective bargaining.

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<sup>19</sup> There were several studies carried out during the period of industrialization relating occupation and health problems. For details read the works of Ramazzini (1964), Aldridge, Engels, Chadwick etc.

<sup>20</sup> For a discussion, see Engels.. (1973) and Rosen (1943).

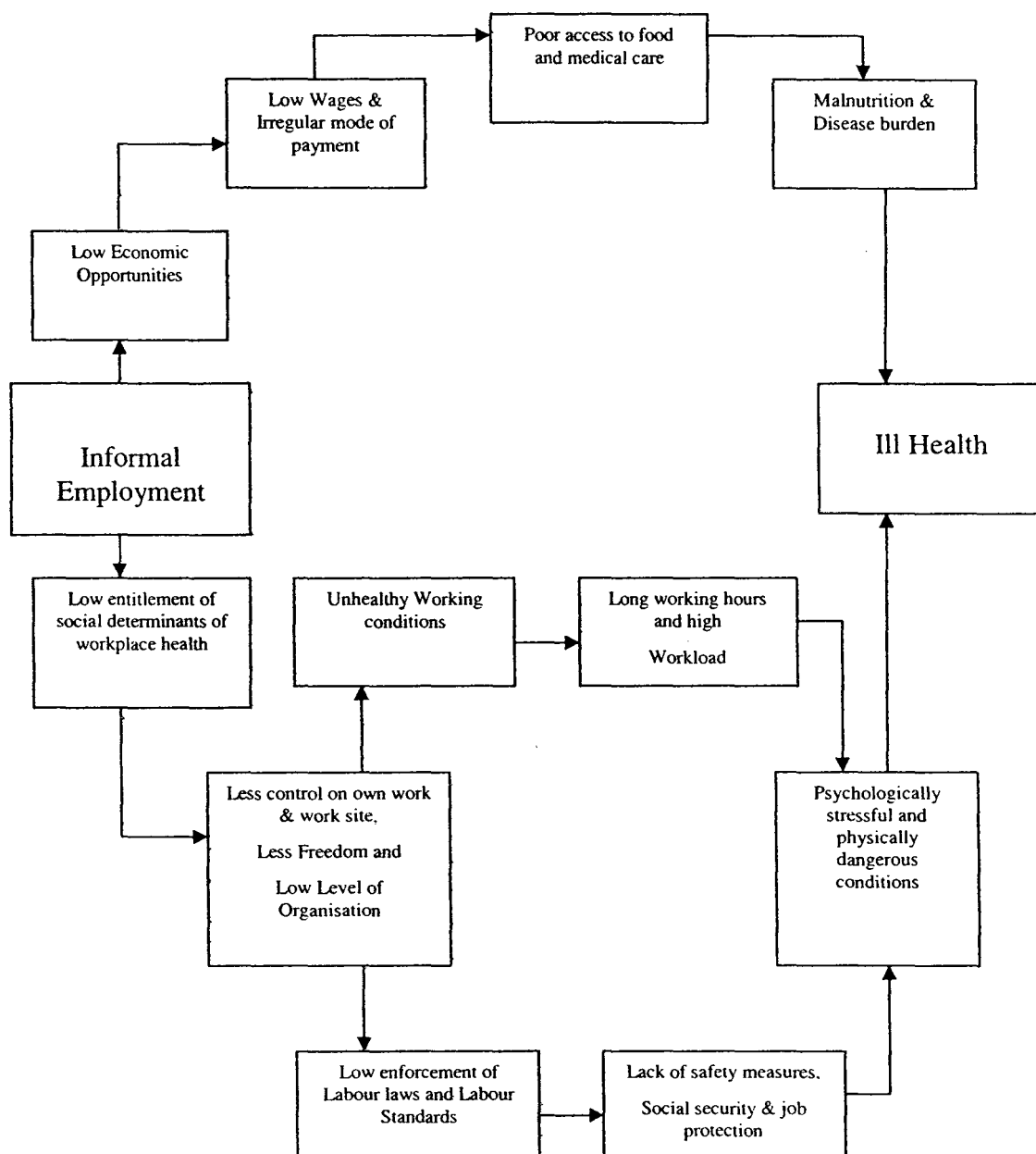
Another approach that tries to link work and health is grounded on the power relations at the workplace. This framework largely looks at the shifts in power relations in a work environment and the ways with which workers negotiate their space. For instance, based on this approach, Scott (2004) hypothesised that emerging contingencies associated with the flexibilised employment relationships and shrinking of workers' power have constituted work related insecurity as a chronic stressor with several implications for long term health outcomes at the industrial and societal levels. Nevertheless, power relations at the workplace alone cannot explain job security of the workers as it is also associated with changes in the international market and production strategies when the production is carried out along a value chain. This is more of a larger political question. Navarro et al. (2004) employed a framework based on political economy for analysing the developments occurred in the labour market and its impacts on labour relations and health. It uses nature of the State, policy measures the State adopts and the electoral mechanisms involved in it for contextualising health.

Literature on work and health since the period of industrialisation has evidenced that the production organisation, which is appropriated by means of economic growth by the State across time and space has a central place in the discussion of work and health. When closely examined, it could be observed that the changes in the real world with regard to economic production, forms of trade, recessions and its rearrangements have crucial roles in determining the means of economic growth of the nation States. Subscribing to this standpoint, the changing nature of production organisation and political situations in the real world in general and the resultant rearrangements through policy reforms in nation States in particular form the larger analytical context of the present study.

From this standpoint, exploration of health consequences of informal employment necessitates a broader approach and associations of informal employment and health are to be explored taking the macro level policy changes and its corollaries at the micro level with regard to the living and working conditions of workers into account. Operationally, the analytical framework looks at workers' health in the informal sector as determined by their income, nature of work, working conditions, social security measures entitled to them, work induced health seeking behaviour, degree of negotiation and collective bargaining, behavioural risk factors and

physically dangerous and psychologically stressful conditions of work at the micro level. Chart 1.1 forms the conceptual base for exploring the relationship between informal employment and ill health.

Chart, 1.1: Linkages between informal employment and ill health



## **Background of the Study and Statement of the Problem**

It has been noted that labour relations have undergone significant changes under different forms of production organisation. Production organisation in the neoliberal regime has rearranged the capital-labour relations and brought about structural changes in the labour market such as flexibilisation, sub-contractualisation and casualisation. As a result, a change in the employment pattern, mainly from formal to informal, organisation based to home based, wage based to piece rate based has appeared in many sectors. This has informalised labour through systematically weakening the level of workers' organisation, bargaining power and job security and placed workers in a detrimental position in the labour market. It resulted in the deterioration of the living and working conditions of workers which bear consequences on health. Given this backdrop, it is hypothesised that concerns of health are neglected or undermined in the deregulated and flexibilised 'system' of production organisation and the changes in labour relations characterised by casualisation and informalisation lead to adverse health outcomes. Export oriented formal garment sector is studied in this context to understand the essential and associated conditions of informality and ill health. It must be noted that policies such as privatisation, export promotion, trade liberalisation and deregulation of labour market have made noticeable impacts on the labour market structure in India. Impacts of these macro policies on production and work organisation in the export oriented garment industry and its ramifications for wellbeing and health of workers at the micro level is the case of investigation here.

It is well documented that policies of deregulation of labour market coupled with the quota elimination have brought about significant reorganisation in the garment industry in India. The assumption here is that this process would lead to informality due to the heightened competition between developing countries and resultant cost minimisation measures in production. This may have far reaching implications on the working and living conditions of the workforce in this sector, as it would lead to price-cutting and to practices of informality, reduction of wages and incentives for workers in the industry. In this context, it is assumed that the transfer of risks associated with international trade along with the cost reduction strategies for improving competitiveness of the industry would further suppress the wages and incentives for workers. Also, it would intensify informality in production and labour



practices, which would significantly affect employment and conditions of work and eventually well being and health of workers.

### **Overall Objective**

To study how informality is translated into adverse conditions of health of workers in the context of changing labour relations, which stem from the significant policy reforms at the macro level as well as specific production and work practices at the micro level

### **Specific Objectives**

- 1 To examine the trend of casualisation and informalisation and its ramifications on living conditions and wellbeing of workers in the informal sector in general and non-farm and manufacturing sectors in particular, subsequent to economic liberalisation in India
- 2 To study the implications of quota eliminations in trade in textiles and clothing and introduction of trade policies on production organisation, labour relations, wages and conditions of work in the export oriented garment sector in India
- 3 To explore how does informality in organisation of production contribute to the vulnerability of workers in the context of informal labour relations and its associations with declining living conditions and well being
- 4 To study how the conditions of informal employment and adverse health outcomes are associated and reflected in the formal export oriented garment sector
- 5 To study the perceptions of workers on their conditions of health and wellbeing
- 6 To understand the interrelationship between work and health behaviour with special reference to the work induced health behaviour and health seeking of casual workers in the formal export oriented garment sector

### **Methodology**

In line with the analytical framework outlined above, the study seeks to examine the interrelationships of work and health in the larger context of the trade policy reforms at the macro level and its implications on labour relations, employment, wages, conditions of work and well being of workers at the micro level. The indicators for work and health are categorised as macro and micro based on this framework of analysis. The macro level indicators include the nature of production organisation and changing patterns of employment, labour market structure and labour relations, regulatory mechanisms by the state, social security and access to basic amenities and health care, which are appropriated through definite policies of trade and health. Micro level indicators constitute (a) social and economic background, (b) social determinants of workplace health, (c) wages and working conditions, (d) welfare measures, (e) level of organisation and space for collective bargaining at workplace,

(f) job security, (g) physically dangerous and psychologically stressful conditions, (h) access to health care and (i) health behaviour. To examine these indicators, the study employed both primary and secondary research methods.

### **Secondary Research**

Secondary research was carried out to analyse the changes in the labour market in India and highlight the trends in production, export, employment and wages in the textiles and clothing sector in major exporting countries and in India after quota elimination. Overall trends in the informal sector with regard to employment, workforce participation, wages, poverty ratio, consumption expenditure, expenditure on treatment and hospitalisation were examined with the 50<sup>th</sup> to 61<sup>st</sup> rounds of National Sample Survey (NSS) on Employment and Unemployment Conditions, 55<sup>th</sup> to 61<sup>st</sup> rounds on Level and Pattern of Consumer Expenditure and 60<sup>th</sup> round on Morbidity, Health Care and Conditions of Aged. Data on poverty situation, real wages and conditions of workers in the unorganised sector were extracted from the report of National Commission for Enterprises in the Unorganised Sector (NCEUS), 2007, which is based on 55<sup>th</sup> to 61<sup>st</sup> rounds of NSS. Information on consumption pattern of various Monthly Per Capita Expenditure (MPCE) classes and annual rate of inflation were compiled from Economic Surveys 2001-02 to 2007-08. Data on health care spending in India was obtained from the Report of National Commission on Macroeconomics and Health, Government of India, 2005.

Information with regard to trade in textiles, including export and import were compiled from WTO Trade Statistics from 2001 to 2007. Data on capacity installed, production, number of units and export of textiles, clothing and readymade garments in/from India were extracted from Compendium of Textile Statistics for various years, reports of the Textile Commissioner for various years, Annual Reports of Ministry of Textiles for various years and report of Directorate General of Commercial Intelligence and Statistics (DGCIS), 2007. NSS rounds on Employment and Unemployment Conditions from 50<sup>th</sup> to 61<sup>st</sup> rounds and reports of Annual Survey of Industry (ASI) 2001-02 to 2004-05 on Principal Characteristics of Textile Industry were the sources of information of employment, number of units and wages for workers in the textiles, clothing and readymade garments in the unorganised and organised sectors respectively. Data on wages, conditions of industry and work were also obtained from reports of Occupation and Wage Survey for various years and Standing Committee reports of the Ministry of Labour

Besides, secondary information on evolution of employment and wages and labour cost in various producing and exporting countries in Asia were compiled from the published research reports of various academic institutions and other organisations. Furthermore, a review of relevant literature was included to highlight the conditions of working in various production environments.

### **Primary Study**

The present study is aimed to examine the health outcomes of work in the context of the increasing informality and changing labour relations in India. The case of export oriented garment sector in India is taken in order to establish the interrelationships of informal employment and adverse health outcomes since this sector witnessed noticeable changes with regard to trade, production and work organisation and labour relations in the post reform period. A primary survey is carried out in the formal garment export units in Delhi region for this purpose. Sampling details of the primary study are as follows.

### **Universe**

Garment export industry in India has its production base in small scale units, located mainly in major metropolitan and a few other cities, centralised production centres, home based sectors, firm based sectors and production units in export processing and special economic zones (Kathuria and Bharadwaj, 2001). Delhi is one of the important centres of centralised production in terms of volume of garment production and export in India. Data<sup>21</sup> from Annual Survey of Industries (ASI), 1999-2000 and 50<sup>th</sup> and 55<sup>th</sup> rounds of NSSO revealed that Delhi houses a total of 30,472 garment enterprises (Table 2.1). As per the combined estimations of ASI and NSSO, of 30, 472 units in Delhi in the year 2000, 675 were registered and remaining 29,797 were unregistered.<sup>22</sup> These estimates reveal that nearly 97.78 percent of the garment units in Delhi are in the unorganised sector.<sup>23</sup> Hence it becomes important to select Delhi region for studying health implications of workers.

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<sup>21</sup> The Annual Survey of Industries covers all manufacturing units registered under the Factories Act. The National Sample Survey Organisation covers manufacturing units, which are not covered under the Factories Act and comprises of informal own account enterprises and enterprises of the informal employers. Both the figures together give the overall picture of garment manufacturing across the formal and informal sectors.

<sup>22</sup> Registered and unregistered units are determined by examining whether or not the units are registered under the Factories Act.

<sup>23</sup> ASI survey covered the organised sector and NSSO 50<sup>th</sup> and 55<sup>th</sup> round covered the unorganised sectors.

Delhi is also important to study, precisely because of the presence of all actors in the value chain of the garment export sector from retailers to producers at the home based settings. Major retailers and brands, which are sourcing from Delhi region include Lerner and Lane Bryant<sup>24</sup> Gymboree,<sup>25</sup> the German mail order houses Otto, Karstadt, Quelle, Zara and Massimo Dutti,<sup>26</sup> The Gap,<sup>27</sup> Ralph Lauren and Marks, Spencers and the big retailers, like Wal-Mart, Tesco, Carrefour and Primark. At the production end, there are large registered firms of exporters and manufacturers, medium and small sized registered firms, small production units, workshops or fabricating units and home based units.

Table, 2.1: State-wise number of readymade garments and hosiery units in India (As on October, 2006)

States	Readymade Garments and Hosiery Units
Delhi	1413
Gujarat	278
Haryana	87
Karnataka	614
Kerala	39
Madhya Pradesh	39
Maharashtra	1685
Punjab	659
Rajasthan	355
Tamil Nadu	4126
Uttar Pradesh	208
West Bengal	168
India	9724

Source: Lok Sabha Unstarred Question No. 260, dated 27.02.2007, Compiled by Indiatat

Table, 2.2: Size of garment industry in Delhi

	Enterprises (Numbers)			Production (In lakhs)		
	ASI	NSSO	Total	ASI	NSSO	Total
All India	5055	776904	781959	472468	301305	773773
%	0.65	99.35	100	61.06	38.94	100
Delhi	675	29797	30472	90719	49832	140551
%	2.22	97.78	100	64.55	35.45	100
Delhi as a %	13.35	3.84	3.90	19.20	16.54	18.16

Source: NSSO: 2000, ASI: 1999, compiled

<sup>24</sup> Retailing company. which operates around 5000 stores in the US, specialising mostly on clothing for women.

<sup>25</sup> Company which sells children's apparels and operates in around 500 retail stores in the US, Canada and UK.

<sup>26</sup> Part of the Inditex Group with 1299 stores in 39 countries.

<sup>27</sup> A US based apparel brand.

Table, 2.3: Exports of garments from Delhi

Year/ %	Restrained Countries			OBA Countries/Items			Total		
	Qty	Value		Qty	Value		Qty	Value	
		US\$	RS.		US\$	RS.		US\$	RS.
1998	2283	11593	475924	1310	6966	288911	3593	18559	764835
%	25.17	34.83	34.71	30.42	40.49	40.57	26.86	36.76	36.71
1999	2374	12077	519133	1129	6284	270770	3503	18361	789903
%	24.98	35.12	35.10	24.86	33.34	33.33	24.94	34.49	34.57
2000	2758	14770	661561	1195	6155	276200	3953	20925	937761
%	25.85	36.33	36.26	27.30	36.21	36.31	26.27	36.30	36.27

Quantity in lakh pieces and value in lakh US \$ & Rs

Source: Hand Book of Export Statistics 1998, 1999 & 2000, Apparel Export Promotion Council, compiled

Another significant reason for selecting Delhi region is its labour composition. Garment sector in Delhi is largely composed of migrant workers from different States. It is estimated that Delhi employs nearly 1.02 lakh workers in the garment industry (Table, 2.4). Of these, only 21469 workers are in the registered garment sector and 80051 workers are in the unregistered sector according to estimations based on the 55<sup>th</sup> round of NSSO. The total garment sector employment in Delhi is roughly 5.82 per cent of the All India garment sector employment. This includes labour, which is employed in informal enterprises and establishments, including own- account enterprise. This however, does not include home based workers who work for fabricating units by bringing work home or do specialised tasks such as hand embroidery or other forms of garment adornment. The gender distribution of the estimated work force suggests that in the unorganised garment work force as estimated from NSSO data, men form roughly 96.68 percent of the total garment employment in Delhi. The share of women is barely 3.32 percent. In Delhi's registered ASI sector though women's share is much higher i.e. 17.87 percent, while men's share is nearly 82.13 percent. In relation to all India, Delhi employs roughly 5.82 percent of the total garment workforce, 7.33 percent of the total male and 1.45 percent of the total number of female workers in the garment sector. In the registered ASI sector, the share of Delhi's male workers is roughly 14 percent and that of female workers is close to 2 percent. In the unregistered sector, Delhi's share of all India male garment workers is 6.60 percent approximately and that of women nearly 1 percent (Table, 2.4).

Table, 2.4: Share of Delhi in all India garment sector employment

	ASI (No and %)				NSSO (No and %)			Combined Total
	M	F	C	Total	M	F	Total	
All India	123284	175374	151	298809	1173409	272693	1446102	1744911
%	41.26	58.69	0.05	100.00	81.14	18.14	100.00	100.00
Delhi	17633	3836	-	21469	77391	2660	80051	101520
%	82.13	17.87		100.00	96.68	3.32	100.00	100.00
Delhi as a %	14.30	2.19	0.00	7.18	6.60	0.98	5.54	5.82

*M=Male, F=Female, C=Children*

Source: NSSO: 2000, ASI: 1999, compiled

### Selection of Area

The major garment export units in Delhi region are spread over the industrial areas of the nine districts and the adjoining *NOIDA* and *Gurgaon* area. Among the nine districts in Delhi, the West district has the major share of the second level sub-contracted garment production units in the formal sector whereas in other major centres of production in an around Delhi, including *Okhla Industrial Area*, *Faridabad*, *NOIDA* and *Gurgaon*, production is largely based on large centralised units, which fall in the first tier of production; managed by large exporters and manufacturers. Other pockets of production in Delhi region, which are spread over *Munirka*, *Hauzrani*, *Govindpuri*, *Sultanpuri*, *Malviya Nagar* and other suburban areas largely have home based production settings.

The present study is focussing on casual workers in the formal garment production units. Therefore, from various locations, West district has been selected due to the presence of large number of sub-contracted medium and small production units in the formal sector; employing casual and contract workers in the production line. The industrial areas where garments production for exports are located in the West district are *Magolpuri Phase -I* and *Phase-II*, *Naraina*, *Keerthi Nagar*, *Mayapuri*, *Udyog Nagar*, *Sagarpur* and *Uttam Nagar*. Mangolpuri Industrial Area was selected for primary study from various locations of production in the West district due to the higher concentration of firm based sub contracted units in the formal sector. Selection of Mangolpuri is also grounded on the fact that production units in Mangolpuri are relatively newly established; mostly in the post quota elimination phase after the relocation of industrial units in the Delhi region. The changes in

Table, 2.6: Units selected for the study

Unit	Male	Female	Total
B	120	80	200
H	400	100	500
K	460	140	600
G	100	30	130
F	200	50	250
Total	1280	400	1680

### Selection of workers

There was no definite sample frame available in any of the units selected. Therefore the sampling was purposive, based on the criteria of gender, unionisation and nature of work i.e. casual or permanent. Out of a total of 1680 workers from five units, 156 (9.29 percent) were selected, following the above criteria. Out of 156 workers selected, 99 were male (7.73 percent of total male workers in five units), 57 were female (14.25 percent of total women workers in five units) and all were casual or contract workers. Table, 2.6 details sample size per unit.

Table, 2.6: Sample size per unit

No	Units	Frequency
1	B	33
2	H	35
3	K	31
4	G	32
5	F	25
	Total	156

### Data Collection

Identification and selection of workers from the units were done initially with the help of trade unions and later on through workers who had already been selected. Pilot survey for the study was carried out in December 2005. Primary survey was conducted from September 2006 to March 2007. Initial rapport with the workers was built through trade union members. Workers were contacted near the workplace, mostly near gate of the units, near tea stalls, near *dhabas* and on their way back home from work, in the presence of trade union members who were also workers in the units in Mangolpuri. After identification and initial discussion with workers, an appropriate place for interview was fixed. For most of the workers, who were residing near Mangolpuri area, interviews were conducted at their residence. For

others, interviews were conducted in places like parks and tea stalls. All women workers were interviewed at their place of residence.

### **Methods and Tools of Data Collection**

In-depth interviews, observation and discussions were the methods adopted for data collection. As explained above, the selected respondents were interviewed outside the premises of the workplace and at their residence as per the availability, willingness and convenience. A semi-structured interview schedule<sup>29</sup> was administered for interview. However, interviews mostly were conducted in the form of discussions than point to point questions and answers. In some cases, where workers were interviewed in places like public parks and tea stalls, interviews were carried out through discussions for collecting general information; however, individual specific responses were recorded separately for each respondent. Information collected with the help of interview schedule from workers include personal profile, social and economic background, nature of job, earnings, mode of payment, facilities available at the workplace, level of organisation, working hours, job security, workload, occupational health problems, stress related problems, health behaviour such as food intake pattern, perceived health conditions, health seeking, living conditions and consumption expenditure on food and medical care.

Discussions were carried out with labour commissioners, trade union members and leaders, sub-contractors and management of some of the units. Information with regard to registration of units, wage structure, labour inspection and applicability of labour laws pertaining to unorganised sector in the informal production environments in the formal units of Mangolpuri were sought from labour commissioners in West district of Delhi. Information on locations of the unit, contract system, efforts in organising workers and labour practices in the units were obtained from trade unions. Discussions with a few sub-contractors from the selected units were held to understand the recruitment practices, payment of wages and relationships with management of the units. Information with regard to sourcing parent firms, brands and retailers were collected from the managements of some of the units.

### **Scheme of Analysis**

Relevant data from the secondary sources were adapted, computed and compiled from the sources mentioned in the section of secondary research as per the

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<sup>29</sup> Please see. Annexure for the interview schedule



requirement of analysis. Trends in casualisation of labour was analysed by extracting information on usual status of workers and unorganised workers in the organised sectors, regular and unorganised workers in the unorganised sectors in various agriculture, non-farm and manufacturing sectors using macro data sources of NSS and various reports based on NSS. Similarly feminisation was examined from the trends and shift in female employment from self-employed categories to casual employment and increase of women workers in the non-farm and manufacturing employment using the same data sources. Wages of workers were examined in the purview of stipulated minimum wages and changes in the real wages of workers in the informal sector over a period of time. Expenditure pattern was analysed by extracting information from the data of NSS and Economic Survey based on monthly per capita expenditure classes. Similarly, trends in employment, wages and working conditions in the textile, clothing and garment sectors subsequent to elimination of quota and introduction of trade policies were analysed from 1995 onwards as the year marked the progressive elimination of quota restrictions under ATC.

Primary data collected was analysed using the statistical package, SPSS. Collected data were segregated across gender and occupation category, based on skill levels and nature of work to analyse workforce distribution, education and skill levels, wages, work intensification, physical conditions at work place, facilities available, consumption expenditure, perception on health and health seeking. Informality and labour relations in the units were analysed based on the data on work contract, labour practices and extent of regulations with regard to applicable labour laws and code of conduct.

### **Limitations of the Study**

The primary study has been limited to the second tier of production in the international garment supply chain. The entire supply chain at the production end, which is diverse and complex and involving multiple layers of sub-contracting, has not been traced in the primary study. Also, all export oriented garment units in Mangolpuri could not be identified while selecting sample units; largely because of the absence of proper address and name boards of the units. Therefore, the scope of the primary study is limited to identified units and workers in the area.

## **Structural Changes in the Indian Labour Market: Implications for Living Conditions, Wellbeing and Health of Workers in the Informal Sector**

Subsequent to economic reforms and the introduction of policies of trade liberalisation and export promotion, there have been perceptible attempts to flexibilise labour market in India, primarily through labour market reform initiatives. The capital investment through Foreign Direct Investments (FDI), export oriented production, off-shoring and sub contractualisation, which are largely triggered by trade policy reforms, was based on the notions of 'cost advantage' on labour. Hence, there has been an 'emphasis' on reduction of labour cost associated with capital investments. It integrated the component of cost reduction into capital investment and aphorisms of 'labour cost advantage', 'labour productivity' and 'efficiency' have been mainstreamed in the trade and industrial policies of India.

It is well-entrenched that there has been substantial growth in capital formation<sup>1</sup> through investments (including FDI, mergers, domestic investment, off-shoring etc) in industry sectors, especially in manufacturing and integration of flexible production practices in India. The emerged patterns of production organisations and practices, largely persuaded by the prerequisite of capital investments based on the philosophy of 'competitiveness', demanded a flexible labour market, which is deregulated or less regulated and un-intervened by the State, trade unions or any other significant agencies on wages, employment relations and work organisation. Labour market reforms therefore aimed at deregulating the regulatory instruments of the State and other significant agencies such as trade unions, forms of workers

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<sup>1</sup> There has been an increase in capital formation in the post reform period in India, especially due to the increase in domestic and foreign direct investments. Economic survey, 2007-08 indicated that the average investment ratio for the Tenth Five Year Plan was 31.4 percent, higher than that for the Ninth Five Year Plan. The ratio of gross capital formation to GDP averaged 31 per cent during the Tenth Five Year Plan of which manufacturing accounted for 76.5 percent and gross capital formation in manufacturing grew at a phenomenal 33.6 percent per annum during the Tenth Five Year Plan period. FDI into India also grew substantially. On a gross basis, FDI growth in 2006-07 was 150.2 percent and on a net basis it was 179.5 percent. FDI inflows were largely to a range of economic activities like financial services, manufacturing, banking services, information technology services and construction.

organisations and international instruments for enabling flexible production practices.

The 'legislative reforms' in India in the post reform period<sup>2</sup> was intended to enable the requirements of numerical, functional, temporal and wage flexibilities of newly adopted production practices.<sup>3</sup> It is important to note that along with liberalisation of restriction on FDI and investment promotion policies with regard to licensing, finances, import, incentives and tax reforms,<sup>4</sup> there have been modifications in the significant labour laws in India. For instance, Central and State Governments made several amendments in the existing labour laws with regard to industrial disputes, lay off, retrenchment and migrant and contract labour to flexibilise labour relations. Coverage of this measure as per the provisions of the Act was initially for industrial establishments employing not less than 300 workers. This coverage with an amendment in 1982 was extended to include establishments with at least 100 workers. Most of the State governments granted mandatory permission for restructuring, retrenchment and closure for large firms by amending respective laws. For instance, most of the States amended Schedule 1 of the *Industrial Dispute Act, 1947* and included several sectors in the list of public utility services in the post reform period. As per the provisions under Sections 22-25 of the Act, workers are not allowed to strike work in public utility services.<sup>5</sup> Similarly, amendment to the Contract Labour Act facilitated outsourcing of activities without any restrictions and enables employers to have contract labour.

State policies of Special Economic Zones (SEZ) and the *Special Economic Zone Act, 2005* are typical examples of dismantling of labour laws towards flexibilising labour in India. The Maharashtra SEZ Policy says that *The Industrial Dispute Act, 1947* is not fully applicable in the zones in Maharashtra. Acts such as *The Contract Labour*

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<sup>2</sup> Reforms hereafter refer to economic reforms and macro economic stabilisation policies, including trade policies, labour policies and institutional reforms under structural adjustment programmes in India after June 1991.

<sup>3</sup> There are five types of defined flexibilities, namely numerical, functional, temporal and wage flexibility. Numerical flexibility implies the adjustment of labour inputs to changes in output and demand. Functional flexibility is the match between available workers and vacancies; temporal flexibility is the variety of working time arrangements, locational flexibility is the range of locations where work is undertaken and wage flexibility is the matching pay to productivity and profitability. For a discussion, see, Crouch, Colin and Streeck, Wolfgang (1997).

<sup>4</sup> For more information on India's economic reforms with regard to fiscal deficit, trade, finance, industry, import and export, see, WTO (2007).

<sup>5</sup> For details, see, Schedule 1, Sec. 22-25, *The Industrial Dispute Act, 1947*. Government of India.

(*Regulation and Abolition*) Act, 1970, *The Trade Union Act, 1956* and *The Maharashtra Reorganisation of Trade Union and Prevention of Unfair Labour Practices Act, 1947* are not applicable for the zones. All industrial units and other establishments in the SEZs are declared a 'Public Utility Service' under the amended provisions of the *Industrial Disputes Act*.<sup>6</sup> There are some exemptions for *The Minimum Wages Act, 1948* such as maintenance of registers and records and fixing hours for normal workdays.<sup>7</sup> Likewise, publication of working time, wage rate and shift working under *The Industrial Employment (Standing Orders) Act, 1946* is exempted for the zones.<sup>8</sup> *The Special Economic Zone Act, 2005*, which is applicable to all SEZs in the country says "any modifications of any Central Act or any rules or regulations or schemes, made relating to trade unions, industrial and labour disputes, welfare of labour including conditions of work, provident funds, employers' liability, workmen's compensation, invalidity and old age pensions and maternity benefits are not applicable in any special economic zones".<sup>9</sup> These clauses in the Act cart off all the welfare and social security provisions of workers.

Given this context, the chapter seeks to examine the argument that the new forms and types of production organisations and labour relations that emerged in the post reform period have been invariably partial towards capital and its objectives of profit maximisation. In such a system, where deregulation of labour market is authorised by the State, it leaves little scope for labour to entitle its 'rights' and welfare of workers turns out to be no longer the liability of the capital. Hence regulatory frameworks of the State that aimed at ensuring the rights/welfare of workers become ineffective in most of the situations. The underpinning assumption is that labour market deregulation, which is being operated through the process of dismantling of labour laws, fragmentises the formal employment and invigorates a process of expansion of non-standard employment and in turn adversely affects the wellbeing of workers.

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<sup>6</sup> Section 5(5) (e), (f) and (g) of the SEZ Rules asks the State Governments to delegate powers under the Industrial Disputes Act to the Development Commissioner and to declare SEZs as Public Utility Services.

<sup>7</sup> See, Section 18 and 13 of *The Minimum Wages Act, 1948*. Government of India.

<sup>8</sup> See Annexure A, Labour Framework for SEZ, Amendments to *The Industrial Employment (Standing Orders) Act, 1946*. Policy of Govt. of Andhra Pradesh.

<sup>9</sup> For details. see, Section 49 (1), *The Special Economic Zone Act, 2005*. Ministry of Law and Justice. Government of India.

In this backdrop, this chapter examines the living conditions and wellbeing of workers in the informal sector in general and non-farm and manufacturing sectors in particular in order to get an overall understanding on health risks, which are interrelated with factors, specific to availability, conditions and nature of work, wages, consumption pattern and access to healthcare. Structural changes in the labour market that this chapter deals with are informalisation, casualisation and feminisation of labour. Living conditions and implications on health of workers are examined by analysing the changes in real wages, working conditions, poverty situation, consumption and expenditure pattern on food and healthcare (treatment and hospitalisation) using various available macro and micro level data.

### **Structural Changes in the Labour Market: Trends of Informalisation**

Literature on the impact of policies of trade on employment situations subsequent to economic reforms in India essentially evidences the expansion of atypical employment.<sup>10</sup> There have been considerable restructuring of production organisation and dismantling of labour regulations with the introduction of trade liberalisation and export promotion policies in India that facilitated the progression of informalisation of labour<sup>11</sup> and atypical employment. There is a growing literature, which links economic reforms and trade policies with the processes of flexibilisation<sup>12</sup> and informalisation of labour in India. Studies, analysing disinvestment, privatisation and the downsizing of the public sector enterprises and informal sector in India underpinned that policies like deregulation of labour markets, dismantling of labour legislations led to sizeable informalisation of labour

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<sup>10</sup> Atypical employment here refers to the new forms of non-standard employment emerged mostly in manufacturing and service sector. Atypical employment alias non-standard employment can be classified into part-time work, agency work, fixed-term employment (temporary employment, daily employment and contract employment) and others (on-call work, tele-work, etc.). Classification of atypical employment differs in different country contexts. For instance, as per the Anglo-Saxon model of UK and the US, atypical employment refers to short-term employment, short term work, contract work, absence of employment protection and absence of fringe benefits such as health, pension and leave.

<sup>11</sup> Informalisation of labour here refers to the increase of casual labour in the formal sector or expansion of employment in the informal sector.

<sup>12</sup> Flexibilisation of labour here refers to the decentralisation production process or the dismantling of organised production with flexible, skilled, semi skilled or un-skilled, but adaptable workers, See Chapter 2, p. 18 for more discussion on flexible production and flexibilisation of labour market.

and casualisation<sup>13</sup> of workforce. Gupta (1995) estimated that casual employment in India fell by 1.1 percent per annum between 1983 and 1990-91 and rose by 3.3 percent per annum in the period 1990-91 to 1996-97. On the basis of this empirical evidence, he argued that policies of export promotion, trade liberalisation and deregulation of labour market have led to increased casualisation of labour in the post reform period. Nath (1994) accounted that trade policy reforms had implications on flexibilisation of labour market and it rearranged the formal employment relations, over and above, thrived a major shift from formal to informal employment in manufacturing and service sectors in India. Mahadevia (2001) in the context of the industrial decline in Ahmedabad city noted that all through later half of eighties, continuing in the nineties, there had been a gradual decrease of employment in the formal sector and an increase in the informal sector.

In line with the trends shown in the initial years of post reforms, increase of employment in the informal sector and informalisation in the formal sector is found to be on an upward flight in India. As per the estimations of National Sample Survey (NSS), informal sector employment<sup>14</sup> in India increased to 394 million in 2004-05 from 342.6 in 1999-2000 (Table, 3.1). Likewise, informal employment in the formal sector increased to 29.1 million in 2004-05 from 20.5 in 1999-2000 with an increase

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<sup>13</sup> Casualisation here refers to the process of loosening the formal employment relations by the replacement of permanent regular employees by temporary workers, process by which employment changes from full-time and permanent employees to temporary casual workers. In the literature, it is commonly used to refer to the spread of bad conditions of work such as employment insecurity, irregular hours of work, intermittent employment, low wages and absence of standard employment benefits. It also refers to "the changing character of industrial work on the basis of the new technology and managerial strategies whereby work is decentralised, low paid, irregular and with part time or temporary labour contracts. For a discussion on casualisation, see. Basso, P (2003) and Elson, Daniel (1996).

<sup>14</sup> NSS definition of informal sector is adopted here. As per the NSS definition informal sector comprises of jobs held by own-account workers and employers who have their own informal sector enterprises; contributing family workers, irrespective of whether they work in formal or informal sector enterprises; Employees who have informal jobs (Employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severance pay, paid annual or sick leave, etc.). casual jobs or jobs of a limited short duration; jobs with hours of work or wages below a specified threshold (e.g. for social security contributions); employment by unincorporated enterprises or by persons in households; jobs where the employee's place of work is outside the premises of the employer's enterprise (e.g. outworkers without employment contract); or jobs, for which labour regulations are not applied, not enforced, or not complied with for any other reason.) whether employed by formal sector enterprises, informal sector enterprises, or as paid domestic workers by households; members of informal producers' cooperatives; and persons engaged in the own-account production of goods exclusively for own final use by their household, such as subsistence farming or do-it-yourself construction of own dwellings.

of 8.6 million in absolute numbers. This substantial increase in the number of informal workers in the formal sector reinforces the continuing trend of informalisation of labour in the post reform period. Notable trend here is that while informal employment both in informal and formal sectors increased substantially from 341.3 million in 1999-2000 to 422.6 in 2004-05, formal employment correspondingly declined during this period, evidencing the expansion of informal sector and informal employment in general (Table, 3.1).

Table, 3.1: Trends in formal and informal employment, 1999-2000 and 2004-05 (Based on usual principal and subsidiary status)

Sector/Worker	Total Employment (Million)		
	Informal/Unorganised worker	Formal/Organised worker	Total
1999-2000			
Informal/Unorganised sector	341.3 (99.6)	1.4 (0.4)	342.6 (100.0)
Formal/Organised sector	20.5(37.8)	33.7 (62.2)	54.1 (100.0)
Total	361.7 (91.2)	35.0 (8.8)	396.8 (100.0)
2004-05			
Informal/Unorganised sector	393.5 (99.6)	1.4 (0.4)	394.9 (100.0)
Formal/Organised sector	29.1 (46.6)	33.4 (53.4)	62.6 (100.0)
Total	422.6 (92.4)	34.9 (7.6)	457.5 (100.0)

Source: NSS 61<sup>st</sup> (2004 – 2005) and NSS 55<sup>th</sup> (1999-2000) rounds, Employment-Unemployment Survey, compiled

### **Trends of Informalisation in Non-Farm and Manufacturing Sectors**

Even though informal sector evidenced an overall expansion, various asymmetries appeared across sectors with regard to employment growth. Unorganised agriculture, for instance, showed a negative growth in employment. There were evidences of a sectoral shift in employment from the primary to tertiary sector. Shariff and Gumber (1999) accounted that the share of workforce in the primary sector fell to 65 percent for the period 1993-94 from 74 during 1972-73. As per their observation, the workforce probably shifted to the tertiary sector, which had grown from 15 percent to 21 during the same period of time. This possibly added to the process of expansion of the informal urban manufacturing sector. It is also estimated that the

employment growth in different industrial categories in the unorganised sector was increased as compared to the organised sector. For instance, non-agriculture unorganised sector employment grew at the rate of around 4.5 percent for a period of 21 years from 1973 to 1994 (Ibid, p. 201). Although non-agriculture employment showed a trend of growth, it marked some fluctuations between 1973 and 1994. During 1988-89, non-agriculture employment declined to 3.2 percent (Ibid, p. 202). Kundu, et al (2001) noted that the share of employment in the urban manufacturing sector to the total informal sector employment declined in India. Kundu, et al accounted that the annual growth rate in the number of enterprises and employment in urban India decreased from 4.1 percent and 2.8 respectively during the period 1980-89 to 2.3 percent and 1.1 respectively during 1990-98. The estimation also revealed that employment in informal manufacturing industries recorded a marginal advance during 1990-98 after a significant fall during 1980-90. The growth rate in the sector rose up to 2.7 percent in 1990-98 from 1.1 in 1980-90 (Ibid, p.90). Many scholars attributed it to the rapid growth of employment in areas like Delhi, where growth rate has jumped from 3.7 percent to 11.1 during this period, implying that expansion of industrial manufacturing sector is not being taken place uniformly across the country but concentrated to some urban centres only.

However, NSS, 61<sup>st</sup> round revealed that employment in the non-farm and manufacturing sectors increased and informalisation of workforce is a phenomenon for all status of non-farm employment. For instance, number of self employed, regular and casual workers in the usual non-farm sector increased between 1999 and 2005 (Table 3.2). Among, various statuses, the number notably increased for male and female casual workers between 1999 and 2005. Data on usual non-farm workers also reflects on the pace of informalisation. It revealed that informalisation was at a greater pace for males than females, except in self-employed category, which is in contrast to the general trend of feminisation in the informal sector employment. In self-employed status, number of women workers was increased to around 97 percent in 2005 from 92 in 1999.



Table, 3.2: Usual non-farm workers in the informal sector

	1999-00			2004-05		
	Male	Female	Persons	Male	Female	Persons
Percentage of total usual status non-farm workers						
Self-employed	90.7	92.1	91.1	95.0	96.6	95.4
Regular	33.6	28.4	32.8	44.0	25.8	40.5
Casual	69.8	63.7	68.7	80.5	73.8	79.4
Total	69.5	75.0	70.7	78.1	77.1	77.9
Absolute number of informal non-farm sector workers (in millions)						
Self-employed	23.6	8.8	32.4	32.7	12.0	44.6
Regular	5.1	0.7	5.8	7.8	1.1	8.8
Casual	11.0	2.0	13.0	17.1	3.2	20.2
Total	39.5	11.6	51.0	57.2	16.0	73.3

Source: NSS 61<sup>st</sup> (2004 – 2005) and NSS 55<sup>th</sup> (1999-2000) rounds, compiled

Recent trends of informalisation in manufacturing can be obtained from the NSS 61<sup>st</sup> round estimation of informal sector workers by industry division. Table, 3.3 reveals that the industry groups together accounted for more than 95 percent of all urban non-farm workers. Percentage of informal workers in the non-farm sector grew to 77.9 in 2004-05 from 70.7 percent in 1999-00. It implies that informalisation is on an upward trajectory in almost all industry groups except for mining, real estate and business. In the trade and repair and hotels and restaurants categories that employ bulk of the urban workers, 95 percent of all workers were found in informal sector in 2004-05, where as it was 90 percent in 1999-00. The pace of informalisation has been found notably high in manufacturing, construction transport and communications and community, social and personal services. In manufacturing, which saw highest increase in urban employment, total employment increase for urban males was 4.3 million. It must be noted that out of this, a sizable proportion of growth was marked in the informal sector. For instance, number of informal sector workers in manufacturing was increased by 4.7 million during the same period.

Table, 3.3: Percentage of informal sector workers among usual status non-farm workers

Sector	1999-00			2004-05		
	Male	Female	Persons	Male	Female	Persons
Mining	65.6	73.2	67.2	71.9	79.8	73.6
Manufacturing	78.7	87.6	81.9	85.9	91.6	88.1
Electricity, Gas & Water Supply	9.3	2.5	9.2	8.7	11.2	8.8
Construction	69.7	51.9	67.7	80.0	71.8	79.1
Trade and Repair	89.0	89.6	89.1	93.7	95.7	93.9
Hotels and Restaurants	86.7	87.8	87.0	94.0	93.3	93.9
Transport & Communications	71.7	51.4	71.5	83.0	67.1	82.6
Financial Intermediation	23.8	29.1	24.3	28.4	48.6	30.2
Real Estate and Business	75.3	67.5	75.0	86.9	78.5	86.4
Education	18.7	24.8	20.4	26.7	28.5	27.4
Health and Social Work	53.1	18.3	42.0	60.1	36.4	52.0
Community, Social & Personal	74.1	78.1	75.3	85.3	93.2	87.0
Total	69.5	75.0	70.7	78.1	77.1	77.9

Source: NSS 61<sup>st</sup> (2004 – 2005) and NSS 55<sup>th</sup> (1999-2000) rounds, compiled

### Trends of Casualisation and Feminisation<sup>15</sup>

The post reform period also witnessed changes in the structure of workforce in the informal sector, particularly in the informal export oriented manufacturing sector in India. Sub-contracting<sup>16</sup> and outsourcing of work<sup>17</sup> are two major changes occurred in this sector largely triggered by the linkages of the industries with international market. These have presumably contributed to the process of casualisation and feminisation of work to a greater extent as this period recorded a steady decline in the share of self-employed and regular wage/ salaried employees and increase in the share of casual wage labour in the export oriented manufacturing sector (Shariff and Gumber, 1999; *op. cit.*).

It is also documented that the share of casual labourers in the urban industrial sector in India increased over a period of time. The share of casual male workers in the urban labour force increased from 59.42 percent in 1987-88 to 64.02 in 1993-94.

<sup>15</sup> The term feminisation here refers to “the rise in female work participation along with a fall in male participation rates substitution of men in certain jobs, which have been traditionally done by women”. For a discussion on feminisation of labour, see Standing (1989).

<sup>16</sup> Sub-contracting here refers to the decentralisation or fragmentation of a portion of production. Sub-contracting can be from one country to another or one production site another, depending upon various situations. International sub-contracting is often occurring from capital intensive to labour intensive countries in search of cheap labour. Sub-contracting in the domestic production settings is usually taken place along the supply chain of production at multiple levels.

<sup>17</sup> Outsourcing here refers to the shift of entire production from one site to another or one country to another, taking comparative advantage of labour cost into account.

Simultaneously, the percentage share of female urban casual workers in the industries rose to 75.54 in 1993-94 from 73.43 in 1987-88 (Despande and Despande, 1998: p. L-34). Industries such as agriculture and allied, manufacturing-2, construction, transport and services had also shown an increase in the share of both male and female casual workers during this period. Another noticeable trend is that the share of casual workers among female workforce is on an upward trajectory as compared to males (Shariff and Gumber, 1999; *op. cit*, p.202). This increase in the incidence of casual female workforce, especially in the sectors where men are largely employed refers to increasing trend of feminisation of labour. This increase in women's employment in the informal sector is attributable to the stagnating and falling income of the households that forces women to enter into the labour market after policy reforms (Unni, 2001, a). Unni attributed the trend of increasing work participation of women in the informal export oriented manufacturing sector to the process of globalisation, export oriented industrialisation, and industrial outsourcing from developed to the developing countries (Ibid, p.2360).

Banerjee (1999) argued that increased feminisation in India is part of the general increase in the size of the workforce following the overall expansion of the economy. She noted that women workers are ready to accept low wages and work in poor conditions of work because of their disadvantageous position in the labour market (Ibid, p.301). Ghosh (2002) noted that feminisation of employment is closely linked to export employment in India. As argued by Ghosh (2002), the preference for women workers in export employment is primarily because of the inferior conditions of work and pay that they were usually willing to accept. Thus, women workers had lower reservation wages than their male counterparts, were more willing to accept longer hours and unpleasant and often unhealthy or hazardous factory conditions, typically did not unionise or engage in other forms of collective bargaining to improve conditions, and did not ask for permanent contracts (Ibid, p. 18). They were thus easier to hire and fire at will and according to external demand conditions, and also, life cycle changes such as marriage and childbirth could be used as proximate causes to terminate employment (Ibid). Another important reason for feminisation was the greater flexibility afforded by such labour for employers, in terms of less secure contracts (Ibid, p. 19).

Table, 3.4 presents estimations of number of workers by usual status from 1993 to 2005. It shows that in the urban industrial division, share of casual female labour increased significantly in industries like transport, services and manufacturing and marginally in agriculture and construction. It is important to note that in all these industrial divisions, the share of female workforce as compared to male was substantially high, indicating the extent of feminisation in the casual urban employment. However, in the non-farm sector, the 2004-06 data showed a significant increase in male casual workforce as compared to females. While percentage of male casual workers in the non-farm sector was increased to 78.1 percent in 2004-05 from 69.5 in 1999-2000, the same for female workers showed a slower pace from 75 percent to 77.1 (Table, 3.4). For males, a large part of the increase was accounted for manufacturing. Manufacturing also recorded a substantial increase in female employment along with other services. Similarly, in trade and hotels sector, the absolute number of female workers seemed to be declining. In fact, for both males and females, manufacturing employment which had been declining in terms of share of total employment till 1999-00, is now showing an increase. The trend, however, is reverse in the tertiary sector.

Table, 3.4: Number of workers by usual status by industry and employment (in millions)

	Urban Male			Urban Female		
	1993-94	1999-00	2004-05	1993-94	1999-00	2004-05
By Industry						
Agriculture	5.8	5.0	5.5	4.3	3.2	4.5
Mining	0.8	0.7	0.8	0.1	0.1	0.0
Manufacturing	15.2	16.9	21.2	4.1	4.4	6.9
Electricity, water	0.8	0.6	0.7	0.1	0.0	0.0
Construction	4.5	6.6	8.3	0.7	0.9	0.9
Trade, hotel	14.1	22.2	25.3	1.7	3.1	3.0
Transport, storage	6.3	7.8	9.7	0.2	0.3	0.3
Other services	17.0	15.8	18.8	6.0	6.2	8.8
Total non-farm	58.7	70.6	84.9	13.0	15.0	20.2
By status of employment						
Self-employed	26.9	31.3	40.5	7.9	8.2	11.7
Regular	27.1	31.4	36.7	4.9	6.1	8.8
Casual	10.5	12.7	13.2	4.4	3.9	4.1
Total	64.6	75.4	90.4	17.2	18.2	24.6

Source: NSS 61<sup>st</sup> (2004 – 2005) and NSS 55<sup>th</sup> (1999-2000) rounds, compiled

## **Implications on Wages and Working Conditions**

Expansion of informal sector has made mixed impact on wages and income of workers in these sectors. There is no increase reported in the wages of male and female urban casual workers as a percentage of regular wages as a whole. Casual wage as a percentage of regular wages for men for all industry division was increased from Rs.40.70 during 1987-88 to Rs.43.25 during 1993-94 (Despande and Despande, 1998; *op. cit.*: p. L-36). Correspondingly, wages for women for all industry division showed an increase; however inconsequential, from Rs.26.81 during 1987-88 to Rs.31.10 during 1993-94 (Ibid.). It is important to note that the actual increase in the wage of casual labourers in this period was less and some sectors showed decline of wages over a period of six years. For instance, wages for urban male casual labourers was declined in Sectors like mining and quarrying, manufacturing, trade finance insurance and services in the period 1987-88 to 1993-94 (Ibid). For female urban workers, the wage decrease was marked in industries like agriculture and allied, mining and quarrying, manufacturing and transport. The sector wise growth of wages of workers like regular employees, non-agriculture casual labourer, home-based workers and workers in all other informal settings were reported to be less in the post reform period than in the pre reform period in India. The increase of wages of regular employees was 56 percent in pre-reform period (1983-88) where as it is only 12 percent in the post reform period (Shariff and Gumber, 1999; *op. cit.*) The male female wage differential is also reported to be increasing in the category of regular employees in the post reform period (Ibid, p.204).

NSS 61<sup>st</sup> round data showed that there is significant percentage of workers who are receiving wages far below the national minimum wage<sup>18</sup> of Rs.66 per day. Table, 3.5

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<sup>18</sup> Statutory Minimum Wage refers to the wage determined by the procedure prescribed by the relevant provisions of the Minimum Wage Act of India. This applies to the employments that are included in the parts I and II of the schedules to the Act. The authority to include an employment in the schedule to the Act and revise it lies with both Central and State Governments. National minimum wages refer to the minimum wages fixed by the Govt. of India for various categories of employment and skill levels. For more information see. *The Minimum Wages Act, 1948*. GOI.

shows that in the rural areas, sectors, including agriculture and manufacturing witnessed maximum share of workers with wages below national minimum wages. It is important to note that 90.46 percent of workers who were engaged in activities related to agriculture and 71.37 percent in manufacturing received wages less than minimum wages in 2004-05. Moreover, the association of informal employment and lower earnings are found to be strong for female workers than males as out of the total workforce, in almost every sector in the rural areas women received wages far below minimum wages. Importantly, male-female wage differential was found to be high in the entire industry group in rural India. For instance, estimations for the years 2004-05 revealed that the average wage differential was Rs.19.90 in rural India for casual workers. It is also striking that manufacturing and non-agriculture sectors witnessed highest male-female wages differential in the rural India.

Table, 3.5: Average earnings of casual workers by industry and gender, rural, 2004-05

Industry group	Average daily earning (Rs.)			Percent below minimum wages (National minimum wage Rs.66)		
	Male	Female	Total	Male	Female	Total
Agriculture	47.88	33.15	42.48	86.56	96.71	90.46
Manufacturing	63.85	37.63	57.59	63.86	92.89	71.37
Construction	69.49	49.81	66.94	58.25	85.99	61.91
Trade and related etc	59.46	-	58.79	64.26	-	65.05
Transport, storage and communication	69.97	-	69.28	58.47	-	59.03
Education, health, other services etc	59.68	41.07	52.66	62.46	82.95	70.51
Non agriculture	67.53	44.05	63.79	60.14	87.97	64.70
All causal workers	54.62	34.72	48.49	77.98	95.56	83.72

Source: NCUES Report (2007), based on NSS 61<sup>st</sup> round (2004 -2005), Employment-Unemployment Survey

The declining trend in wages of casual workers has been equally persisting in urban India as well. Table, 2.6 reveals that 57.20 percent of casual workers in urban India received wages less than the stipulated national minimum wages of Rs.66 per day during 2004-2005. Agriculture, manufacturing and trade related occupations were the sectors where higher percentage of workers received wages less than minimum wages. This infers that majority of the casual workers in India receive wages less

than minimum wages. It is also notable that in most of the situation, minimum wages do not conform to living wages. In all informal sectors in urban India, percentage of women received wages less than minimum wages were considerably high as compared to men. While percentage of male casual workers who received wages less than minimum wages was 48.68 in urban India, 82.98 percent of female casual workers worked with wages less than national minimum wages during 2004-05 in urban India. As observed in rural India, relationship of casual wages and lower level of economic entitlement is found to be strong in urban India as well. Male female wage differential for casual workers in urban India is Rs.30.72 and is much higher than that of rural India (Table, 3.6).

Table, 3.6: Average earnings of casual workers by Industry and gender, urban, 2004-05

Industry group	Average daily earning (Rs.)			Percent below minimum wages (National minimum wage Rs.66)		
	Male	Female	Total	Male	Female	Total
Agriculture	56.80	34.29	46.72	76.63	96.55	86.13
Manufacturing	68.85	41.04	63.95	52.58	92.77	60.68
Construction	84.85	57.19	81.64	36.45	72.21	40.94
Trade and related etc	60.40	40.90	58.28	65.46	-	68.22
Transport, storage and communication	81.12	38.85	80.59	38.53	-	39.49
Education, health, other services etc	66.98	45.94	53.63	56.35	82.84	73.10
Non agriculture	76.12	47.62	71.29	45.48	82.98	51.94
All causal workers	74.30	43.58	68.10	48.68	87.51	57.20

Source: NCUES Report (2007), based on NSS 61<sup>st</sup> round (2004 -2005), Employment-Unemployment Survey

Though the general trend of wages in the informal sector in India showed a narrow increase, it did not add to the increase in real wages, which is an indicator for general conditions of living. Tables, 3.7 and 3.8 reveal that the period between 1999-00 and 2004-05, in line with the trends shown in 1990s, was characterised by significant deceleration in wage rates for both casual and regular workers. Real wages for casual workers witnessed a considerable decrease in both agriculture and non-agriculture sector. It is also notable that sharp decrease in the growth rate of real wages was marked in non-agriculture sectors, particularly for female casual workers (Table, 3.7). What is also clear from the data on rate of growth of wage is that the

declining trend had not been restricted to any single category; nevertheless it was evident in almost all categories of workers across sexes and sectors.

Table, 3.8 reveals that real wages showed a substantial decline for regular workers as well. Furthermore, it exhibited notable variations along the lines of education and skill level of workers. For instance, growth rate of real wages for regular non-literate workers declined to -1 during 1999-00 to 2004-05 from 6.18 during 1993-94 to 1999-00 where as corresponding decrease in the growth rate in real wages for graduates was not abrupt. Although there was a general decline in rate of growth of real wages across sectors and irrespective of educational and skill levels, the burden is found to be more for workers with less education.

Table, 3.7: Growth rate of real wages (1999-00 prices) for casual workers of age 15-59

Sex	1993-94 to 1999-00		1999-00 to 2004-05	
	Agriculture	Non-agriculture	Agriculture	Non-agriculture
Male	2.80	3.67	1.38	0.67
Female	2.95	5.13	1.04	1.51
Persons	2.78	4.19	1.31	0.76

Source: NCUES Report (2007), based on NSS 61<sup>st</sup> round (2004 -2005), Employment-Unemployment Survey

Table, 3.8: Growth rate of real wages of regular workers by education status

Literacy	Rural		Urban	
	1993-94 to 1999-00	1999-00 to 2004-05	1993-94 to 1999-00	1999-00 to 2004-05
Not literate	6.18	-1.67	2.63	-1.00
Primary	3.88	-0.57	3.42	-2.20
Secondary	4.33	-0.72	4.37	-1.74
Graduates	6.04	2.00	5.27	1.91
All	5.38	0.56	5.01	0.21

Source: Source: NCUES Report (2007), based on NSS 61<sup>st</sup> round (2004 -2005), Employment-Unemployment Survey

The initial period of reform was also marked by deterioration in the consumption pattern of the population and increase in the incidence of poverty (Gupta, 1995; *op. cit.*). The average wages as percentage of the regular average daily wages of casual workers decreased in some sectors, remained same in some other and increased slightly in some segments over a period of seven years (1987-1994). Real wages in



the unorganised sector in many Indian states also exhibited a declining trend. Table, 3.9 shows that industrialised states of Gujarat and Maharashtra and states like Tamil Nadu and Madhya Pradesh showed a noticeable decline in real wages in the unorganised sector. In Gujarat, real wages in the unorganised sector declined to 3.76 in 1996 from 6.70 in 1987, showing a decrease of 43.8 percent in a period of nine years. In Maharashtra, real wages declined from 5.34 to 3.84, showing a decrease of 28.46 percent between 1989 and 1996. Likewise, Tamil Nadu recorded a decline of 16.52 percent in real wages between 1987 and 1994 and showed a slight increase in 1995 and then declined in 1996. The percentage decline of real wages of the unorganised sector in Madhya Pradesh between 1987 and 1996 was 16.02. Karnataka, Uttar Pradesh and West Bengal were the states that showed an increase in real wages of unorganised sector workers between 1987 and 1996. The percentage rise of real wages in these states was 46 (1987-95), 13.62 (1987-94) and 21.88 (1987-96) for Karnataka, Uttar Pradesh and West Bengal respectively.

Changes in real wages in the unorganised sector over a period of nine years gave a general picture of the income of informal sector workers. Since the informal sector covers a wide spectrum of employment, of which many sectors are unidentified, calculation of overall changes in wage is impossible. The data from various States (Table, 3.9) is of scheduled employment and there could be remarkable wage disparities between sectors. Nevertheless, real wages was not found to be increasing even in the industrialised states of Gujarat and Maharashtra along with the less industrialised ones. What is significant here is that there was substantial decline in the real wages of 'identified' unorganised sectors in many states and marginal increase in some other states between 1987 and 2005. The situation of workers in the unidentified sectors could be worse than this. The subsequent section seeks to examine the impact of intensification of informalisation on working conditions as a factor along with decline of real wages resulting in adverse health outcomes for workers in the informal sector.

Table, 3.9: Real wages in unorganised sectors in selected states

States	198	198	1989	1990	1991	1992	1993	1994	1995	1996
Gujarat	6.70	6.50	6.03	5.39		5.03	4.35	3.66	3.29	3.76
Maharashtra	-	-	5.34	4.27	4.06	-	-	4.39	4.45	3.82
Karnataka	2.16	-	3.07	3.10	2.47	-	4.08	3.64	3.16	-
Tamil Nadu	3.39	3.34	3.22	2.97	2.83	2.92	2.97	2.83	3.62	3.35
M. P.	3.87	3.67	3.35	3.33	2.18	3.22	3.16	3.17	2.80	3.25
U. P.	4.26	3.74	4.02	3.91	-	4.48	3.57	4.84	-	-
W. B.	3.20	3.87	3.74	3.76	4.09	4.36	3.99	3.64	4.33	3.90

MP-Madya Pradesh, UP-Uttar Pradesh, WB-West Bengal

Source: Unni and Rani (1999), p.128

Several micro level studies have highlighted the interconnectedness of informalisation and poor conditions of work in India. Studies that dealt with informal employment and working conditions have reflected on instances of long hours, dangerous conditions of work, unfavourable physical working conditions such as space, volume, ventilation etc. and occupational health hazards. Sekar and Mohammad (2001) pointed to the 'dismal' conditions of workers in the manufacture of locks, *beedi* rolling, diamond cutting, textiles including handlooms and powerlooms under which workers engage in production for long hours. Mishra and Srivastava (2002) in a study of handloom sector in Kanpur found that there were instances of long working hours up to 12-15 hours a day. George (2006, b) noted that working hours for contract workers in the periphery production layer of Samsung India was more than 54 hours a week, excluding overtime. Studies in the leather tanning industry found that workers "without footwear worked for long hours with their bare feet soaked in chemicals, animal wastes and decomposing offal" (Banerjee and Nihila, 1999; Nihila, 2002). Dewan (2001) accounted the unfavourable conditions of work in the fish processing units in the export zones. A few studies have attempted to highlight the physical conditions of work such as space, volume (space and height of work place), ventilation, illumination, temperature and humidity. Studies have noted that large numbers of workers were "cramped in a tiny room, or that the roof of the work shed was very low making the

work place hot, humid and stifling” (Pais, 2002). Some of the studies have also identified health hazards (for example respiratory diseases) that can be directly related to inadequate ventilation at work place and long exposure to dust and fumes. Chaachi (1999) accounted that the home based electronic production units and flattered factories of electronic production were found to be poorly ventilated and filled with chemical fumes.

Micro level studies on various informal industry sectors in India also reiterated the interrelationships of informal employment, low wages, poor working and living conditions as well as adverse health outcomes for workers. A study conducted among the piece-rated home based garment workers in Ahmedabad city revealed that the workers received daily wage below the poverty line daily wage of Rs.52 compounded for 1998, except dress, pants-shirt, mattress cover stitching and shirt cutting (Unni, 2001; *op. cit.*). A study by Raj and Kapoor (2001), on the home-based women workers revealed that the income of women in this sector is far below the minimum wages. They found that the average monthly income in technical trade was Rs.450. Their work was not on a regular basis and it affected their effective average monthly earning.<sup>19</sup> In many cases the value of effective average monthly earnings was estimated at Rs.250 (Raj and Kapoor, 2001, a). Therefore, in effect, income of workers from home-based work through sub-contracting was minimal. The study also showed that majority of the workers had heavy workload and had been working in unhygienic conditions with poor lightning and ventilation. It was also noted that workers suffered from health hazards like “back ache, eye strain, breathing problems and headache” (Ibid, p. 20).

Evidences from the Indian handicraft sector, which has undergone structural changes in the post reform period, showed that wages had not been increased in commensuration with the general increase in the cost of living in this sector (Ibid). Raj and Kapoor (2001, b) noted that if the wage levels of 1990-91 are deflated by the present cost of living index, handicraft artisans are in no way better off, at present as compared with the situation obtaining ten years earlier in respect of real wages (Ibid, p. 7). The male-female wage differential was also found to be

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<sup>19</sup> Effective Average Annual Income is the average annual income from seasonal work. It is calculated as monthly earnings multiplied by numbers of month the work was available divided by 12.

considerably high in this sector and “the average daily wage rate of women workers was half the wages of male craft workers” (Ibid, p. 9). It is reported that workers in this sector were appointed on contract basis and were not covered by any statutory protection as ensured by the labour laws and regulations. The study revealed that there was no enforcement of laws with regard to regulation of work, precautions against accidents and provisions of medical facilities, paid/compensatory leaves in case of serious accidents or illness and compensation for workers for accidents in this sector.

A study conducted on the surgical instruments manufacturing industry, where production is organised through family based household units, at Jalandhar, Punjab, showed that wages of workers were extremely low and based on piece rate (Singh, 2001). It was accounted that a wageworker in this industry earned roughly Rs.1800 per month depending upon the nature of job and the amount of skill involved, which is far less than the statutory minimum wages (Ibid, p. 218). The working conditions in the industry were also reported to be appalling. It is reported that the “workers were highly at the risk of accidents, when they hit red-hot iron piece with hammer and the prolonged sedentary work in the dust-flying atmosphere found to be increasing the risks of tuberculosis and related respiratory diseases for workers” (Ibid). Singh (2001) identified three reasons accountable for the existence of this precarious working conditions and low wages. First is the abundant supply of skilled cheap labour in this sector that enables the employer to hire and fire the worker easily. Secondly the workers are highly unorganised and lack collective resistance due to the scattered distribution of the workforce. Thirdly, the industry tries to insulate itself from the implementation of labour legislation meant for the protection of workers. It is reported that in the surgical instrument manufacturing industry more than 90 percent of the workers do not have the legal status of a worker (Ibid, p. 226).

Vanamala (2001) noted that the wages and working conditions were extremely low even in the informal industrial sectors that are protected by state incentives and concessions. The case study of an engineering unit in Tamil Nadu showed that the cost reduction is found to be accomplished in such industries largely through feminisation and casualisation of labour (Ibid, p. 2383). It is reported that minimum wages were not provided to the workers in this sector and the percentage short fall

from minimum wages for the trainees and casual workers was 25 and 38 respectively (Ibid, p. 2385). Das (2000) accounted that the wages of workers in the ceramic ware industry in Gujarat was much lower than that was prescribed under the Minimum Wages Act. Workers, especially women, were reported to be paid wages much lower than the stipulated minimum wages. He also reported that “jobs in these units like packing of the fragile cups and saucers with straw in the poorly lit and unclean surroundings could severely affect the health of the labourers” (Ibid, p. 273). Kumar (2001) noted that workers in the informal IT service sector were paid on piece rate basis and their income was lower compared to the organised sector enterprises. “Working hours in this sector was reported to be long and majority of the labourers were found working more than ten hours per day” (Ibid, p. 239).

Studies in the context of Export Processing Zones (EPZ) in India also showed similar trends. It was generally noted that manufacturing units of export commodities in EPZs are highly informalised and feminised. In a recent study of the NOIDA EPZ, it was found that women constituted a substantial share of the workforce (Rajalakshmi, 1999). The participation of women in work was found to be higher in industries like garments, gems and jewellery. The wages for the women workers in these units were reported to be significantly low. The overall conditions of the workers were found far from satisfactory levels and many of the statutory benefits were denied to them (Ibid, p. 119). Swaminathan (2002) noted that most of the workers were women in the Madras Export Processing Zone and they were paid low wages mostly based on piece rate. She reported that most of the workers in these units developed “health problems like cough, asthma, skin diseases, headache etc due to the precarious working conditions and job pressures prevailing in these units” (Ibid, p. 46).

Micro studies on home-based workers, piece-rated home workers in Ahmedabad, women workers sub-contracted to manufacturing sector in India, craft workers, surgical industry in Jalandar etc reveal that wages in these sectors are below the minimum wage fixed by the States and in many cases, minimum wages are not found to be fixed. Based on the above evidences it can be inferred that wages have

not been increased in commensuration with the general price rise in several segments of the informal sector and there is no job guarantee or protection of work. Conditions of work in the informal sector are also found to be appalling in the informal sector largely due to low level of regulation and enforcement of significant Acts. In short, there is a clear interrelationship of factors of wages, poor working conditions and dismal living conditions that adversely affect health of workers in the informal sector caused by structural changes within the labour market.

### **Implications on Living Conditions of Workers**

Living conditions and quality of life are related to a range of factors including, level of income and its distribution, environment, nature and condition of work, availability of basic facilities like nutrition, safe drinking water, sanitation and health. Poverty estimations of the unorganised sectors give a general trend of living conditions and quality of life of workers. In order to draw a general picture of living conditions and well being of workers in the informal sector, this section examines inflation, general estimated poverty situations and household consumption pattern on food and health.

The risk of being poor for the working population in the informal sector may be looked at in the macro context of annual inflation of commodities. Trends in inflation give a general picture of access to basic amenities. During the last two decades (1980-2000), the average annual rise in price level has been around 8-10 percent (Economic Survey, 2000-01). The period 1985-90 to 1990-95 registered a substantial increase of price rise in all commodities. The average annual inflation of all commodities based on the Consumer Price Index (CPI)<sup>20</sup> of the industrial workers and agricultural labourers rose from 6.7 percent in 1985-90 to 11 in 1990-95 (Ibid, p. 90). The average annual inflation based on Wholesale Price Index

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<sup>20</sup> Consumer Price Index (CPI) numbers is the measure of change of prices over a period of time for a given bracket of goods and services. It is a price index that tracks the prices of a specified basket of consumer goods and services, providing a measure of inflation.

(WPI)<sup>21</sup> of the primary articles rose from 5.5 percent to 12.3 during this period of time (Ibid, p.91).

Table, 3.10 gives annual trends in inflation from 2000-01 to 2006-07, estimated for various categories of workers, based on both wholesale and consumer price index. Inflation rate as per WPI showed mixed trends after 2000. It declined from 7.1 in 2000-01 to 5.5 in 2003-04 and showed an increase in 2004-05. WPI does not give adequate indication to assume that the cost of living has been increased in general, however; it evidences the unpredictable fluctuations in prices of articles. Conversely, inflation as measured by CPI has been found to be consistently increasing for all categories of workers. Thus, inflation as per CPI from 2000-01 clearly evidences the continuing trend of increase of prices of articles and cost of living for industrial workers, agriculture labourers and regular labourers. What is striking here is that this was the period when the real wages of the unorganised sector workers declined in many states. This implies that the burden of accessibility of all commodities in general and food in particular have increased for the unorganised sector workers.

Table, 3.10: Annual trends in inflation, year on year inflation in percent

Year / Indices	WPI	CPI-IW	CPI-AL	CPI-RL	GDP consumption
2000-01	7.1	3.8	-0.3	0.0	3.5
2001-02	3.6	4.3	1.1	1.3	3.2
2002-03	3.4	4.0	3.2	3.1	2.9
2003-04	5.5	3.9	3.9	3.8	3.6
2004-05	6.5	3.8	2.6	2.6	2.8
2005-06	4.4	4.4	3.9	3.9	3.0
2006-07	5.4	6.7	7.8	7.5	5.1

*IW-Industrial Workers, AL-Agriculture Labourers, RL-Regular Labourers*

Source: Economic Survey, 2007-08, p.68

### **Informal Workers and Poverty**

Poverty in the informal sector is related to factors of availability of employment days, income/wages they draw from employment as well as their purchasing power. Informal sector employment, primarily agriculture and other rural wage work, is seasonal in nature and therefore do not ensure full time employment for workers in

<sup>21</sup> WPI is the price of a representative basket of wholesale goods. In India, a total of 435 items are included in the basket. WPI is taken as a measure of inflation in India.

these sectors. For agriculture wage workers, employment is limited to the seasonal agriculture activities such as ploughing, sowing, weeding, transplanting, harvesting and winnowing.<sup>22</sup> Similarly, the rural wageworkers also do not get employment all through a year. Other sections of informal sectors such as casual wageworkers and contract labourers in the organised and unorganised sector, availability of employment is uncertain and determined of several external factors. Wages and income also depend on many factors. For wageworkers, employed both in organised and unorganised settings, determination of wages is the freedom of the enterprise even though minimum wages are fixed by the state. These factors augment the uncertainty in wage earning of the workers in the informal sector. Hence, chances of working in the informal sector and being poor are high in India.

Table, 3.11 gives the disaggregate estimations of working poor in India along the lines of activity status, location and gender as estimated by NSS. Overall, households below poverty line showed a narrow decrease between 2000 and 2005. However, estimations crossways location and activity status showed that number of working poor increased in urban India and in the households of casual labourers. The number of working poor in urban India rose by over 4 million between 2000 and 2005. Likewise, more households of casual labourers came under BPL category between 2000 and 2005, reinforcing the linkage of casual labour and poverty. Substantial increase in the number of workers below poverty line has been found in households of casual labourers in urban India. This trend is in agreement with the above mentioned trend of higher pace of casualisation in the urban India.

Table, 3.11: Working poor by gender, activity-status and rural-urban location, All-India, 1999-2000 - 2004-05

Number of UPSS Workers in BPL Households (in thousands)								
Population Segment	1999-2000 (number and percentage)				2004-05 (number and percentage)			
	SE	RWS	CL	Total	SE	RWS	CL	Total
Rural (Males + Females)	35,151 (20.8)	2,615 (12.4)	44,528 (38.7)	82,294 (26.9)	38,281 (18.6)	2,611 (10.8)	38,590 (34.3)	79,482 (23.2)
Urban (Males + Females)	9,243 (23.0)	4,103 (10.8)	7,522 (43.6)	20,868 (21.9)	12,271 (23.5)	4,740 (10.4)	7,994 (46.2)	25,005 (21.7)
Males (Rural + Urban)	28,449 (20.1)	5,432 (11.0)	32,560 (37.7)	66,441 (24.0)	31,402 (18.7)	5,451 (9.7)	30,090 (35.3)	66,943 (21.6)
Females (Rural + Urban)	15,945 (23.5)	1,286 (13.6)	19,490 (42.2)	36,721 (29.7)	19,150 (21.1)	1,900 (14.2)	16,494 (37.0)	37,544 (25.3)
Person (Rural + Urban)	44,394 (21.2)	6,718 (11.4)	52,050 (39.3)	103,162 (25.7)	50,552 (19.6)	7,351 (10.5)	46,584 (35.9)	104,487 (22.8)

SE-Self Employed, RWS-Regular wage/salaried, CL-Casual Labour  
Source: Sundaram (2007), p. 56

<sup>22</sup> For more details see. GOI, *Indian Labour Year Book* (2001), Labour Bureau. p. 14.



Industry and sector wise poverty estimations<sup>23</sup> of NSS give additional disaggregated level information. As per the estimations in the 61<sup>st</sup> round, poverty ratio of workers crossways industry and sectors stood at 19.3 percent (Table, 3.12). Across industries and sectors, in line with the trends exhibited during 1990s, higher levels of prevalence of poverty were found among the unorganised sector workers. Within unorganised sectors and workers, poverty ratio was found to be high in the non-agriculture sector. It must be noted that, in the non agriculture sector, higher level of poverty was exhibited among urban unorganised sector workers. This is in congruence with the decrease in the real wages of workers in the unorganised manufacturing sectors in India. It evidences that, although there is an increase in the overall employment in the unorganised sector in non-agriculture, it has not been translated into better wages and better conditions of living for informal/casual workers in the non-farm and manufacturing sectors in urban India. Hence, it could be inferred that there is no significant decrease in the incidence of poverty in the post reform period and the linkages of informal/casual work and poverty has become evident conversely.

Table, 3.12: Poverty ratios of workers by industry and sector, 2004-05

Industry	Sector						All workers
		Unorg sector	Org sector	Unorg. workers in the org sector	Unorg. workers	Orga workers	
Agriculture	Total	20.5	16.5	18.9	20.5	13.8	20.4
	Rural	17.2	11.2	17.0	17.2	3.5	15.7
Non-agriculture	Urban	24.1	10.4	20.4	23.7	4.3	19.6
	Total	20.6	10.7	18.7	20.4	4.1	17.8
All	Rural	19.3	12.0	17.0	19.2	5.4	18.7
	Urban	25.5	10.7	20.7	25.1	4.5	21.0
	Total	20.5	11.3	18.7	20.4	4.9	19.3

Source: NSS 61<sup>st</sup> round (2004 – 2005), Employment-Unemployment Survey.

State wise estimations of poverty in the unorganised non-agriculture sectors indicate various associations of informal employment and poverty. Table, 3.13 shows that poverty ratio in the unorganised non-agriculture sector at the all India level stood at 20.6 percent in 2004-05. Of this, the ratio was found higher among casual labourers. A closer view of unorganised non-agriculture sector, where the incidence of poverty

<sup>23</sup> Poverty estimates given here is based on the changed methodology regarding the measurement of durable consumer goods from a 30 day recall period in the earlier NSS survey to 365-day recall period adopted from 55<sup>th</sup> rounds onwards.

was found to be notably high than that of other sectors, reveals that casual employment is strongly associated with poverty. State wise estimation is in congruence with this trend. For instance, within the unorganised non-agriculture sector, incidence of poverty was found to be significantly high among casual workers in all the states. State wise estimations of poverty ratio in the non-agriculture sector also correlate informal employment and poverty. States where economic and social developments are reported to be low, informal employment and poverty are found to be more prevalent. For instance, Orissa, Uttaranchal, Madhya Pradesh, Jharkhand and Bihar are the states where poverty ratio among the unorganised non-agriculture workers was found to be high. Conversely, in states like Punjab, Kerala and Haryana where social development indicators are relatively high, incidence of poverty among casual workers was found to be low as highlighted in table, 3.13 below.

Table, 3.13: State wise poverty ratio of unorganised non-agriculture workers (sector wise in selected states, 2004-05)

State	Unorganised Non-Agriculture			
	Casual labour	Regular	Self-employed	All
Andhra Pradesh	17.2	16.9	11.6	13.5
Bihar	43.7	33.0	25.6	28.2
Gujarat	23.5	8.7	8.5	10.8
Haryana	25.8	6.1	9.6	11.8
Karnataka	25.2	18.4	21.9	22.1
Kerala	12.6	9.2	7.3	9.6
Madhya Pradesh	57.0	36.6	29.6	36.4
Maharashtra	49.6	25.6	21.7	27.1
Orissa	51.6	29.0	30.7	34.6
Punjab	7.7	3.3	2.4	3.7
Rajasthan	26.2	24.3	19.5	22.1
Tamil Nadu	18.0	16.8	15.1	16.1
Uttar Pradesh	37.9	17.3	24.3	25.9
West Bengal	22.6	11.0	15.8	16.3
Jharkhand	43.2	16.4	28.3	32.7
Chhattisgarh	54.4	35.2	31.7	36.4
Uttaranchal	53.6	24.6	32.3	35.1
All India	29.8	17.4	18.6	20.6

Source: NSS 61<sup>st</sup> round (2004 – 2005), Employment-Unemployment Survey.

The *Expert Group of Planning Commission on Poverty* estimated incidence of poverty among informal sector workers in some states. It also established a positive association between poverty and informal sector employment. Table, 3.14 reflects that states where informal sector employment is high, poverty is high. For instance, in Bihar and Orissa, incidence of poverty in 1987-88 period were 45.0-49.99 percent and more than 55 percent respectively and the corresponding informal employment was 60-64.99 percent and above 65 percent respectively. Haryana, Punjab, Andhra Pradesh and Rajasthan were the states that showed lesser incidence of poverty and large informal employment compared to other states. But incidence of poverty in the informal sector in these states ranged between 30 to 34.99 percent, which is not a low value compared to other organised sectors.

Table, 3.14: Informal sector employment and poverty in selected states

Incidence of poverty (%) (%), 1987-88	Informal Sector Employment, 1990 (%)				
	Less than 30	50-54.99	55-59.99	60-64.99	65and above
Less than 30			HAR, PUN	A. P.	
30.0-34.99	Gujarat			Kerala	Rajasthan
35.0-39.99		Assam		Karnataka	
40.0-44.99	Maharashtra			W. B.	M.P., U.P.
45.0-49.99				T. N.	
50.0-54.99				Bihar	
55and above					Orissa

*HAR-Haryana, PUN-Punjab, AP-Andhra Pradesh, MP-Madhya Pradesh, UP-Uttar Pradesh*

Source: Mitra (1993), P. 90

There are also evidences of gender implications in the association between informal sector employment and poverty in the post reform period. It has been observed that the link between working in the informal sector and being poor is stronger for women than for men and stronger for female-headed households than male-headed households. It must be noted that feminisation of labour is found to be concentrating largely in the informal sector and percentage of women is higher than that of men in the informal economy. This has been found to be high in sectors like home-based handicraft sector, sub-contracted manufacturing and export oriented sectors where wages are relatively low. Women mostly are willing to accept these poorly paid jobs because of their disadvantageous position in the labour market in terms of skills and education (Banerjee, 1999; *op. cit.*). Thus women are shifted to the lower income

statuses in the informal sector such as casual wageworker, industrial outworker and unpaid worker. Hence, poverty situations would be worse off in female-headed households than male-headed.

### Consumption Patterns on Food and Healthcare

Consumption pattern on food, non-food items and healthcare are important indicators to assess the general conditions of living of the working population. It is noted that there has been a persisting trend of price hike of basic amenities coupled with decline in real wages across all informal sectors in the post reform period. What is notable here is that a major share of workforce in the unorganised sector falls under the expenditure class of 'poor and vulnerable' as estimated by NSS. It is estimated that 78.7 percent of workers in the unorganised sectors belonged to the expenditure class of 'poor and vulnerable' in 2004-05 (Table, 3.15). Among, various categories, proportion of workers belonged to 'poor and vulnerable' class was highest among casual unorganised workers. Analysis of consumption pattern of across various expenditure classes provides a basic understanding of their living conditions.

Table, 3.15: Percentage distribution of unorganised workers across expenditure classes

Status	Total	Self employed	Regular wage worker	Casual workers
Poor and vulnerable	78.7	74.7	66.7	90.0
Higher income group	21.3	25.3	33.3	10.0
Total	100.0	100.0	100.0	100.0

Source: NCUES Report (2007), based on NSS 55<sup>th</sup> (1999-2000) and 61<sup>st</sup> (2004 – 2005) rounds, Employment-Unemployment Survey.

The consumption pattern at the household level has been found to be varying significantly across different expenditure classes in India. Tables, 3.16 and 3.17 present estimations of consumption pattern across different Monthly Per Capita Expenditure (MPCE)<sup>24</sup> classes of population in rural and urban India. The average per capita consumption expenditure for rural and urban population as per NSS 61<sup>st</sup>

<sup>24</sup> As per NSSO, the Monthly Per Capita Expenditure (MPCE) is defined as the household consumption expenditure over a period of 30 days divided by household size.

Round (2004-05) was Rs.558.78 and Rs.1, 052.36, respectively. What is striking from the consumption pattern of expenditure classes in the unorganised sector is that both in rural and urban India, much of the household income was spent on food items reinforcing the trend of rise of living expenditure and poverty for workers in the post reform period. For instance, NSS data revealed that rural population on an average spent about 55 percent of its consumption on food and remaining 45 on non-food items. Data on rural population divided on the basis of their monthly per capita expenditures shows that expenditure on food items was substantially high among 'poor and vulnerable' class. The spending on food showed decrease with regard to the increase in income. For instance, rural poor (below poverty line) were found to be spending 64.78 to 68.45 percent of their total consumption expenditure on food items and remaining on non-food items. Likewise, in the group of between Poverty Line (PL) and 1.5 times Poverty Line (1.5PL), spending on food items accounted between 54 and 64 percent of the total consumption expenditure and for PL and twice the Poverty Line (2PL), spending on food items accounted around 50 percent of the total consumption expenditure.<sup>25</sup>

The trend is relatively similar in urban India too. Table, 3.17 shows that, on an average, 43 percent of the consumption expenditure of urban population in the low income category was on food and remaining 57 percent on non-food items. However, population under 'poor' category, per capita monthly expenditure on food was higher than that of the average, varying from 58 percent to 65. Likewise, for population belong to 'roughly near poverty line', per capita monthly expenditure on food varied between around 47 percent to 56, reinforcing the trend of increase of cost of living.

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<sup>25</sup> In rural areas, poverty line based on MPCE class is income level less than Rs.356.30 a month, '1.5 times the poverty' is income less than Rs.534.45 and 'twice the poverty line (2PL)' is income less than Rs.712.60. Corresponding calculations for urban India are Rs.538.60 for PL, 807.90 for 1.5PL and 1077.20 for 2PL.

Table, 3.16: Consumption pattern across different MPCE classes of population, Rural

Expenditure Class	Food (%)	Non-Food (%)
MPCE of population-Rural	55.05	44.95
I Poor (roughly below PL)		
0-235	68.45	31.55
235-270	67.16	32.84
270-320	66.35	33.65
320-365	64.78	35.22
II Roughly between PL and 2PL		
365-410	63.99	36.01
410-455	62.93	37.06
455-510	61.61	38.39
510-580	60.11	39.88
580-690	58.02	41.98
690-890	53.92	46.08
III Roughly above 2 PL		
890-1155	49.80	50.20

Source: Economic Survey, 2007-08, based on NSS 61<sup>st</sup> round (2004-2005), Level and Pattern of Consumer Expenditure

Table, 3.17: Consumption pattern across different MPCE classes of population, urban

Expenditure class	Food (%)	Non-Food (%)
MPCE of population—urban	42.51	57.48
I Poor (roughly below PL)		
0-335	64.86	35.14
335-395	63.11	36.89
395-485	60.04	39.96
485-580	57.30	42.70
II Roughly between PL and 2 PL		
580-675	55.35	44.65
675-790	52.37	47.62
790-930	49.69	50.31
930-1100	46.61	53.39
III Roughly above 2 PL		
1100-1380	44.44	55.56
1380-1880	40.17	59.83

Source: Economic Survey, 2007-08, based on NSS 61<sup>st</sup> round (2004-2005), Level and Pattern of Consumer Expenditure

Although food constituted the major item in the consumption expenditure of 'below poverty line' and 'near poverty line' households in India, food inadequacy in the BPL households has been found to be persisting. NSS data for various rounds based on perceived adequacy of food revealed that percentage of food adequacy reported by the rural households stood at 2 in 2004-05 (Table, 3.18). Data also shows that reporting of inadequate food came down between 1993-94 and 2004-05 with 1.9 percent households reporting inadequate food availability for the country as a whole

in 2004-05 as against 4.2 percent households in 1993-94. However, inadequate food availability was found prominent among rural households, reinforcing the linkages of informal employment to falling household income.

Table, 3.18: Food inadequacy status of households (in percent)

Round/Year	Sum (aggregate)	All months	All months
Total			
50 <sup>th</sup> (1993-94)	-	-	4.2
55 <sup>th</sup> (1999-00)	-	-	2.6
61st (2004-05)	1.6	0.3	1.9
Rural			
50th (1993-94)	4.2	0.9	5.1
55th ((1999-00)	2.6	0.7	3.3
61st (2004-05)	2.0	0.4	2.4
Urban			
50th (1993-94)	1.1	0.5	1.6
55th (1999-00)	0.6	0.3	0.9
61st (2004-05)	0.4	0.1	0.5

Source: Economic Survey, 2007-08, based on NSS rounds, state wise food availability status and perceived adequacy of food consumption in Indian households

### Trends in Healthcare Spending

Healthcare spending is an important indicator of general living condition and well being of the working population. Literature that dealt with health sector reforms and public health spending in India indicated the decline of financial accessibility of people to healthcare in the post reform period, especially after health sector reforms (Prabhu, 1994; Garg, 1998; Nayar, 1998; Sengupta, 2003; Narayana, 2003). Prabhu (1994) accounted the declining trend of revenue expenditure on public health in the initial years of structural adjustment programmes (from 1990-91 to 1993-94) in the Indian states. She noted that the 'stringency' in Central and State finances led to a decline in social sector expenditure in general and real per capita health expenditures in particular. Nayar (1998) noted that the public investment and spending had been continually declining in India from 1991 to 1995 and it affected the financial accessibility to health of the population.

Sengupta (2003) argued that cut in welfare investment, introduction of service charges and transfer of the responsibilities of health services to private sector as part of the larger structural adjustment and health sector reform programmes, adversely affected people's access to health. He accounted that there was a 'squeeze' on the

resource allocation for health, water supply, sanitation and public distribution at the Central and State levels. It is important to note that rural health services were affected badly due to the rolling back of state in health expenditure. He pointed out that diminished resource allocation affected the health programmes and it brought about the resurgences of infectious diseases, primarily due to the fall in national health programmes like TB. Narayana (2003) in the backdrop of shifting of health responsibilities to private sector in the State of Andhra Pradesh noted that private hospitals were replacing rather than complimenting public hospitals and considerably limited the access of poor people to essential health services.

Economic Research Foundation study (2006) accounted that the share of expenditure allotted to public health is declining in India and there has been stagnation in public health expenditure since 1999, except for AIDS control programmes and medical training and research. The study also revealed that there has been a sharp drop in spending on public health in per capita terms since 2000. Similarly, State Governments' expenditures on health, including medical, public health and family welfare show declining trends. Literature dealing with Government healthcare expenditure and accessibility evidenced that the rate of growth of health budget in most of the States has been below the rate of growth of aggregate real GDP (ERF, 2006: p. 21).

It must be noted that the diminishing share of public spending on healthcare passes the brunt of healthcare to households. Eventually, the financial burden of healthcare would come high for workers in informal sector where there are no institutional mechanisms such as employer insurance and employer responsibilities exist. Data on healthcare spending till the year 2005 evidenced that a significant share of healthcare expenditure had been found to be met by the households. Table, 3.19 shows that, in India, spending on health as a proportion of total household consumption has been gradually increasing. For instance, in India a significant share (73.5 percent) of the per capita expenditure was met by households in 2004-05 while public spending accounted barely 22 percent (Table, 3.19). The trend was found to be similar in most of the States except Mizoram, Meghalaya, Sikkim and Delhi where public spending on health held a significant share.



It is evident from the configuration of per capita health expenditure that the financial burden of healthcare on population is significantly high. It is primarily because of the persisting trend of decline of real wages and income in India, especially in the informal sector as noted earlier in the chapter. It is also important to note that there is no system of affordable health insurance for poor in India. Also, as noted earlier, employers do not account for spending on health, as in many cases there are few possibilities that employers bear or share the costs of medical treatment in the informal sector. Therefore instances of health emergencies requiring hospitalisation have severe effects upon the households of the affected.

Table, 3.19: Healthcare spending in India, 2004-05

State	Per capita expenditure (Rs)	Percent spent by		
		Household	Public	Other
Andhra Pradesh	1118	73.4	19.4	7.2
Arunachal Pradesh	4365	86.5	13.5	0
Assam	1347	80.8	17.8	1.4
Bihar	1497	90.2	8.3	1.5
Delhi	1177	56.4	40.5	3.1
Goa	4564	79.2	17.5	3.3
Gujarat	1187	77.5	15.8	6.7
Haryana	1786	85	10.6	4.4
Himachal Pradesh	3927	86	12.4	1.6
Jammu & Kashmir	2082	77.3	20.7	2
Karnataka	997	70.4	23.2	6.4
Kerala	2952	86.3	10.8	2.9
Madhya Pradesh	1200	83.4	13.6	3
Maharashtra	1576	73.3	22.1	4.6
Manipur	2068	81.2	17.2	1.6
Meghalaya	664	36.5	58.4	5.2
Mizoram	1027	39.4	60.6	0
Nagaland	5338	91.7	7.6	0.7
Orissa	995	79.1	18	2.9
Punjab	1813	76.1	18	5.9
Rajasthan	808	70	24.5	5.5
Sikkim	2240	56.9	43.1	0
Tamil Nadu	933	60.7	26.6	12.7
Tripura	1101	69	27.4	3.6
Uttar Pradesh	1152	84.3	13	2.7
West Bengal	1188	78.4	17.3	4.3
Union Territories	598	85.1	8.8	6.1
All India	1377	73.5	22	4.5

Source: Report of National Commission on Macroeconomics and Health, Government of India, 2005

### Healthcare Spending as Proportion of Household Consumption Expenditure

There are sufficient evidences to presume that living conditions of poor households declined in the context of diminishing consumption expenditure on healthcare in India. In other words, inflated healthcare burden of households has been found prominently affecting the overall living conditions of population. Examination of the trend of household spending shows that health spending as proportion to total household consumption expenditure has been on a rise in both rural and urban India. Table, 3.20 reveals that health spending as proportion to household consumption expenditure showed an increase to 6.61 percent in 2005 from 5.43 in 1993 in rural India. Similarly, household spending on health was increased in urban India. This reinforces the persisting trends of reduced access to public health services, increase in user charges and other 'effective charges' upon people in the public health system and privatisation of healthcare services, noted in the early phases of reforms by many scholars.

Table, 3.20: Health spending as percent of household consumption expenditure, 1993-94 to 2004-05

NSS Rounds/Years	Rural	Urban
1993-94 50 <sup>th</sup> Round	5.43	4.6
1999-2000 55 <sup>th</sup> Round	6.09	5.06
2004-2005 61 <sup>st</sup> Round	6.61	5.19

Source: NSS 50<sup>th</sup>, 55<sup>th</sup> and 60<sup>th</sup> rounds, Consumption Expenditure, compiled

The burden of healthcare for the informal poor households could be analysed with NSS data on source of finance in household expenditure on treatment and hospitalisation. Household income and savings had been the source of finance for most of the households for the expenditure on medical treatment.<sup>26</sup> While 772 households out of 1000 relied on household income or savings for treatment, 'borrowings' had been the source for 172 and 'other sources' including sale of assets, ornaments, animals etc accounted the treatment expenditure for remaining 56 households for all expenditure classes in the rural India. The pattern is relatively similar for all Monthly Per Capita Expenditure classes. Nevertheless, it must be

<sup>26</sup> Expenditure for medical treatment in NSS 60<sup>th</sup> round is calculated as the total expenditure incurred for medical treatment received during the reference period (15 days for non-hospitalised treatment and 365 days for hospitalised treatment) included expenditure on items like bed charges (with charges for food included in it), medicines (including drips), materials for bandage, plaster, fees for the services of medical and paramedical personnel, charges - for diagnostic tests operations and therapies, charges of ambulance, costs of oxygen, blood, etc.

noted that number of households, which relied on 'borrowings' and 'other sources' (sale of assets, ornaments and animals) were more in the lower expenditure classes in the rural India, more specifically categories in which monthly per capita expenditure was less than Rs.525. In urban India, while household income or savings had been the source of finance for 865 households out 1000, it was 'borrowings' and 'other sources' for 71 and 64 households respectively for all expenditure classes. Incidents of borrowing and sale of assets for meeting treatment expenditure were found more among lower expenditure classes (MPCE is less than 665) in urban India also, evidencing the interrelationships of low income, financial accessibility to health and increased burden of healthcare.

Table, 3.21: Per 1000 distribution of household total expenditure on treatment during the last 15 days by source of finance for each MPCE class

MPCE classes (Rs)	Source of finance			
	Hhd income/ savings	Borrowings	Others*	Total
<b>Rural</b>				
less than 225	785	134	81	1000
225 – 255	688	214	98	1000
255 – 300	785	176	39	1000
300 – 340	689	262	50	1000
340 – 380	722	164	114	1000
380 – 420	725	196	80	1000
420 – 470	740	177	83	1000
470 – 525	684	279	38	1000
525 – 615	806	147	47	1000
615 – 775	865	106	30	1000
775 – 950	869	116	15	1000
950 or more	794	136	70	1000
All	772	172	56	1000
<b>Urban</b>				
less than 300	717	244	39	1000
300 – 350	778	127	96	1000
350 – 425	820	147	33	1000
425 – 500	732	201	68	1000
500 – 575	851	116	33	1000
575 – 665	856	125	19	1000
665 – 775	843	99	58	1000
775 – 915	932	38	29	1000
915 – 1120	911	47	42	1000
1120 – 1500	871	60	69	1000
1500 – 1925	964	12	24	1000
1925 or more	862	11	127	1000
All	865	71	64	1000

\*'Others' include contribution from friends & relatives and sale of ornaments and other physical assets, animals, etc.

Source: NSS 60<sup>th</sup> round (Jan -June, 2004), Morbidity, Healthcare and the Condition of the Aged in India, compiled

Table, 3.22 shows the distribution (per 1000) of household total expenditure on hospitalisation<sup>27</sup> by source of finance for various MPCE classes in rural and urban India. While household income or savings were the sources of treatment expenditure (expenditure incurred for medical treatment, excluding hospitalization) for most of the rural and urban households, 'borrowings' and 'other' sources were the source of finance for expenditure on hospitalization. It was found to be more in lower expenditure classes in the rural India. Except for MPCE classes starting from Rs.525, proportion of households relied on 'borrowings' and 'other' sources was significantly high in the rural India, reinforcing the trends of falling household income and rise in the hospitalisation expenditure in the post reform period. Hospitalisation was found to be financially burdening urban households as well.

It is important to note that the number of households depended on 'borrowings' and 'other sources' was more for hospitalisation than for medical treatment (excluding hospitalisation) in rural and urban India. The pattern was found to be similar, irrespective of expenditure classes, for both in rural and urban households. For instance, out of 1000 households, 'borrowings' and 'other sources' together accounted for the financing of treatment (excluding hospitalisation) of 228 rural and 135 urban households across all expenditure classes. Whereas 592 rural and 422 urban households out of 1000, had to borrow or sell their assets for incurring the cost associated with hospitalisation across all expenditure classes. In short, it can be inferred that expenditures on medical treatment and hospitalisation plunge more households into debt and selling of assets in the context of declining family income and rising healthcare expenditure. Furthermore, the burden of healthcare could be more on informal workers due to the persisting trends of wage decline and absence of guarantee of wages and employment.

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<sup>27</sup> As per NSSO definition. "one was considered hospitalized, if one had availed of medical services as an indoor patient in any hospital" Hospital refers to "any medical institution having provision for admission of sick persons as indoor patients (inpatients) for treatment". Hospitals covered in the NSS survey are public hospitals, community health centres and primary health centres (if provided with beds), ESI hospitals, private hospitals, nursing homes, etc. In this context it may be noted that admission for treatment of ailment and discharge thereof from the hospital was considered as case of hospitalisation irrespective of the duration of stay in the hospital. It may also be noted that hospitalisation in the cases of normal pregnancy and childbirth were treated as hospitalisation cases.

Table, 3.22: Per 1000 distribution of household total expenditure on treatment on account of hospitalization during the last 365 days by source of finance for each MPCE class, India

MPCE classes (Rs.)	Rural				MPCE classes (Rs.)	Urban			
	Source of Finance					Source of finance			
	HH income/savings	Borrowings	Other*	Total		HH income/savings	Borrowings	Other*	Total
< 225	332	435	233	1000	< 300	541	308	151	1000
225 – 255	265	556	178	1000	300 – 350	338	401	262	1000
255 – 300	314	488	198	1000	350 – 425	322	334	343	1000
300 – 340	349	462	189	1000	425 – 500	345	486	169	1000
340 – 380	379	461	161	1000	500 – 575	472	359	169	1000
380 – 420	347	402	251	1000	575 – 665	419	407	174	1000
420 – 470	391	451	158	1000	665 – 775	573	295	132	1000
470 – 525	399	435	166	1000	775 – 915	526	283	191	1000
525 – 615	420	411	169	1000	915 – 1120	625	191	184	1000
615 – 775	418	406	176	1000	1120 – 1500	585	203	212	1000
775 – 950	419	411	170	1000	1500 – 1925	707	116	177	1000
950 or more	485	331	184	1000	1925 or more	665	107	229	1000
All	409	411	181	1000	All	578	227	195	1000

\*include contribution from friends & relatives and sale of ornaments and other physical assets, draught animals, etc

Source: NSS 60<sup>th</sup> round (Jan -June, 2004), Morbidity, Healthcare and the Condition of the Aged in India, compiled

The data given above on household healthcare expenditure explicated only the financial burden and subsequent falling conditions of living and health of the population. However, it must be noted that there is a significant section of population in the lower expenditure classes who did not seek treatment because of high cost associated with treatment. Morbidity and healthcare survey of NSS (60<sup>th</sup> round) identified that 'financial problem' and 'ailment not considered seriously' had been the major reported reasons for not taking treatment (Table, 3.23).

Table, 3.23: Percentage distribution of untreated spells of ailments by reason for no treatment

Reason	Rural	Urban
No medical facility	12	1
Lack of faith	3	2
Long waiting	1	2
Financial problem	28	20
Ailment not considered serious	32	50
Others	24	25
Total	100	100

Source: NSS 60<sup>th</sup> round (Jan -June, 2004), Morbidity, Healthcare and the Condition of the Aged,

Patterns of consumption on food and medical treatment including hospitalisation reveal the intensity of situations of poverty and appalling conditions of living of the informal sector workers. It must be viewed in the purview of continuing trends of informalisation and casualisation of employment in India and subsequent fall in real wages of workers. With the above evidences it can be inferred that informal sector employment is associated with poor living conditions and health in terms of access to healthcare resources and treatment show a decline in the post reform period.

## Conclusion

Persisting trends of increase in informalisation and casualisation of labour passably validate the interrelationship of changes in production organisation, flexible production and expansion of atypical employment in the post reform period in India. The phenomenal increase in the share of informal sector employment in proportion to the growth of capital investment gives space to spell out the 'overemphasis' of the notion of 'reduction of labour cost' associated with trade and investment in the post reform period. Subsequently, in all sectors there have been rearrangements in production organisation and labour relations towards enabling flexible labour. Emphasis in reduction of labour cost by decentralising production organisation and engaging casual labour was evident in the wage structure, working conditions, living conditions and consumption expenditure of the workforce in the examined sectors. Across various segments of informal sectors and informal working arrangements in the formal sectors, wages for workers have been either below 'minimum' or 'living' wages. It was also seen from the workforce composition that there have been a thrust

on engaging casual female labour in most of the segments for further reducing labour cost. Discussions on the general living conditions, health and wellbeing of the informal sector revealed that informal employment has been strongly associated with situations of poverty and burdens of healthcare. It is primarily because of the marked uncertainty in employment, low wages and absence of social security measures with informal sector employment. Evidences based on macro and micro level data reiterated the interrelationships of informal employment, low wages, poor working and living conditions as well as adverse health outcomes for workers in informal sectors in India.

Examination of non-farm and manufacturing sectors revealed that that there has been a considerable expansion of employment in the informal non-farm and manufacturing segments. It has made mixed impact on the wages and incomes of workers in these segments. There was considerable decline in the real wages of the identified unorganised sectors in many states and marginal increase in some other states between 1987 and 2005. Though the general trend of wages in the informal sector in India showed a narrow increase, it has not marked an increase in real wages, which is an indicator for general conditions of living. Data evidenced that the average wages as percent of the regular average daily wages of the casual workers decreased in non-farm and manufacturing sectors in the post reform period. Decline of wages subsequently had ramifications on the living conditions of workers. Estimation of situation of poverty among the informal sector workers in general and non-farm and manufacturing segments in particular showed a positive association between poverty and informal sector employment. Across industries and sectors, in line with the trends shown during 1990s, higher levels of prevalence of poverty is found among the informal sector workers. Within informal sectors and workers, poverty ratio is found to be higher in the non-farm and manufacturing sector, more notably in urban India. There are also evidences of gender implications in the association between informal sector employment and poverty. Informalisation with added emphasis on cost reduction persuaded to engage more women workers as casual wageworker, industrial outworker and unpaid worker, especially in the non-factory and household based categories of work. In every segment of the informal

sector, wages for female workers were substantially lower than that of males. Hence the chances of working in the informal sector and being poor are found more for women than men and situations of poverty were found to be intense in female-headed households than male-headed. In short, although there is an increase in the overall employment, it has not been translated into better wages and better conditions of living for informal/casual workers in the non-farm and manufacturing sectors in India. Hence, it can be inferred that there is no significant decrease in the level of poverty in the post reform period; conversely, the linkages of informal/casual work and poverty has become prominent.

Analyses of conditions of living in the light of consumption expenditure of households in the informal sector also reinforced the general inference of decline in the wellbeing of informal workers in the post reform period. Patterns of consumption on food, its inadequacy and medical treatment including hospitalisation revealed the magnitude of situations of poverty and appalling conditions of living of the informal sector workers. It is important to note that across all expenditure classes in the informal sector share of expenditure on food have been higher than non-food expenditure. Similarly, household income or saving and borrowing constituted a major share in the expenditure on treatment and hospitalisation of the workers in the context of diminishing share of public spending on healthcare in the post reform period. It is also important to note that there were instances of non-treatment for ailments among informal sector workers in the lower expenditure class due to financial inaccessibility. In short, it can be inferred that expenditures on medical treatment and hospitalisation plunge more households into debt and selling of assets in the context of declining family income and rising healthcare expenditure. Furthermore, the burden of healthcare could be more on informal workers due to the persisting trends of wage decline and absence of guarantee of wages and employment. Absence of institutional mechanisms such as employer insurance and employer responsibilities also increases the burden of healthcare for informal sector workers.



Structural changes in the Indian labour market therefore found to have significant corollaries in the living conditions of workers. Its impact on the health of the workers could be better analysed by studying the determinants of social and economic background, social determinants of workplace health, wages and working conditions, welfare measures, level of organisation and space for collective bargaining at workplace, job security, physically dangerous and psychologically stressful conditions, access to healthcare and health behaviour at the micro level. In the light of these indicators, the subsequent chapters examine the health consequences in informal sector employment with special focus on garment export sector in India in the context of the macro policies of trade related to textiles and garments.

## **Trade in Textiles and Clothing: Implications on Production Organisation and Labour Relations for India in the Pre and Post Quota Regime**

The major policy outcome of trade liberalisation on the global textile and clothing sector is the phase out of quota system that existed under the Multi Fibre Agreement (MFA)<sup>1</sup> as well as the elimination of quantitative restrictions as under the Agreement on Textiles and Clothing (ATC).<sup>2</sup> It, presumably, rearranged production organisation and labour relations in the producing and exporting countries as ATC phase out necessitated domestic reforms in textile and clothing production. Domestic reforms were largely due to the pressure of international competition after the phase out of quota system and the processes of trade liberalisation, which linked the domestic economy with the world trading system (D'Souza, 2004). The discriminating competition among producing countries subsequent to quota elimination is assumed to have far reaching implications on working and living conditions of workforce in the sector, as it would lead to price-cutting and eventually to reduction of wages and incentives. Subscribing to this assumption, the analytical premise here is how the process of this shift creates a condition for heightened competition between developing countries, which have corollaries in the working and living conditions of workers. In this context, this chapter examines the assumption that lowering of prices of garment due to heightened competition would further adversely affect the wages and working conditions of the already subjugated

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<sup>1</sup> The Multi Fibre Arrangement (MFA) was signed in December of 1973. The GATT Council adopted the text, and thereby legalised the breakaway of the textile and clothing sector from the general system of world trade. The MFA represented an umbrella framework which governed the trade in textiles and apparel under the General Agreement on Tariffs and Trade (GATT) jurisdiction. MFA, in the developing country context is discussed in detail in another section of this chapter. For detailed discussion on MFA, see, Das, Lal Bhagirat (1998).

<sup>2</sup> Agreement on Textiles and Clothing, which replaced Multi Fibre Agreement proposed the removal of quota restrictions under the MFA. The ATC is a transitional agreement that regulated trade in textiles for 10 years after which trade in textiles and clothing is to be completely integrated into the GATT. It has been carried out in three stages. In the first stage, Sixteen percent of the 1990 import value of products including, at least one from each sector – yarns, fabric and textiles products were to be removed from quota restrictions by January 1996. In the second stage another 17 percent were to be derestricted by 1998, while export growth rate was to be increased by 25 percent. By January 2002, another 18 percent were to be removed from quota restrictions, and growth rate increased to 27 percent, and by January 2005, all remaining products representing at least 49 percent of 1990 import volume have become free of all quota regimes. ATC, in the developing country context is discussed in detail in another section of this chapter. For a detailed discussion on ATC and its implementation see, Matt, Svetlana (2006).

garment export industry workers in general and specifically casual workers in India.<sup>3</sup> To study it, the chapter specifically examines the macro level changes in production organisation in the sector and its impacts on production and labour relations at the micro level in the milieu of Multi Fibre Agreement, Agreement on Textiles and Clothing (ATC) and the present system of trade in garments and textiles in general and in India in particular.

### **International Trade in Textiles and Clothing: General Understanding of Regulatory Frameworks**

Regulatory frameworks in the direction of discriminatory protectionism in textiles and clothing have been in place since the export of textiles and garments had gained momentum. Readymade garment became significant in international trade by early twentieth century, more specifically, by 1920s (Koshy, 1997). The notable aspect of garment production during this period was the emergence of factories and large scale production of factory made clothing. Imports to the developed markets also began to grow by this period largely triggered by the processes of mechanisation in the sector (Das, 1998). However, considerable discrepancies existed in terms of trade and market access for producing countries largely due to the policies of domestic protection in the importing countries. This was the period when forms of trade regulations by importing countries came into existence. For instance, the US administration persuaded Japan to accept Voluntary Export Restraints (VERs)<sup>4</sup> during the early 1950s, when the incursion of Japanese cotton textiles into the US market became significant (Koshy, 1997; *op cit*). Likewise, restrictions had been imposed by the UK administration on textile exports from Hong Kong, India and Pakistan for three years from 1959-1962 (Ibid). Subsequently, other importing countries like West Germany and Canada, which also had production of garments and textiles, implemented VERs. Such restrictions were aimed at protecting the investment and employment in these countries.

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<sup>3</sup> Many studies in India in the post MFA context have projected that impact of phase out would lead to cut of wages and welfare provisions of workers as well as to informalisation due to increased competition among producing countries. Some of the studies, which subscribe to this argument are Breman, Jan (2001); Ghosh, Jayati (2001) and Mazumdar, Indrani (2004).

<sup>4</sup> Voluntary export restraints (VER) are arrangements between exporting and importing countries in which the exporting country agrees to limit the quantity of specific exports below a certain level in order to avoid imposition of mandatory restrictions by the importing country. The arrangement may be concluded either at the industry or government level. For more discussion on VER and its implications for garment sector, see, Bhagwati (1987).

As a process of domestic protection, the VER was legalised, precisely through Short Term Agreement (STA)<sup>5</sup> for regulating trade in cotton textiles, for a period from September 1961 to August 1962 under the General Agreement on Trade and Tariff (GATT) framework (Ibid). This was followed by Long Term Agreement Regarding International Trade in Textiles (LTA)<sup>6</sup> for regulating trade in cotton and textiles in the sixth round of GATT negotiations in 1962, which lasted for 12 years from 1962 to 1974. The provisions in LTA vested importing countries the right to impose quota restrictions unilaterally, if imports of textiles from other countries disrupt their domestic market (Nayyar, 2007). Though this agreement in principle aimed at bringing about a cooperative spirit among exporting countries, it was noted that LTA had been used to promote the protectionist intentions of the importing countries (Ibid, p.77).

Consequently, restrictions had adverse effects on exports and employment in the developing countries. For instance, within three years of LTA coming into force, the US imposed quotas on imports from countries including India, Hong Kong, Pakistan, Taiwan and UAR (Ibid). It is also important to note that the provisions of the agreement were extended to Man Made Fibres (MMF) during 1962-68 when the import of these products increased to tenfold in the US, which limited the market access of Hong Kong, Korea, Taiwan, Malaysia and India to a considerable extent (ITCB, 2002). Arrival of more categories of fibre, textiles and garments into international market from the developing countries made importing countries launch restrictions in the form of agreements, by covering MMF and wool products. By 1974, LTA was extended to cover other materials than cotton and it led to the formation of Multi Fibre Agreement (Ernst et al, 2005).

There were evidences of consequent cut down in wages for workers as cheap labour was apparently considered as the comparative advantage of the developing countries and contraction of industry in terms of total value of export due to quota restrictions.

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<sup>5</sup> The Short-Term Arrangement (STA) covering cotton textiles was agreed as an exception to the GATT rules. The arrangement permitted the negotiation of quota restrictions affecting the exports of cotton-producing countries. For a detailed discussion on STA. see. WTO (2006).

<sup>6</sup> The Long-term Arrangement Regarding International Trade in Textiles (LTA) came into existence from 1 October 1962. It provided for quantitative restraint actions against particular products from particular sources on the basis of market disruption or threat thereof. The restraint action could be unilateral or by bilateral agreement. Under the LTA, extensive use is made of bilaterally agreed restraints, as well as unilateral safeguard actions. LTA was extended twice, in 1967 and 1970 and it lasted until 1974 when the Multi fibre Arrangement entered into force. For detailed discussion on LTA and its impacts on export. see, Nayyar, Deepak (2007).

Data on the growth of textiles and clothing imports in developed countries during the time of Short Term and Long Term Agreements showed that developing countries experienced considerable discrimination in terms of market access (Table, 4.1). Table 4.1 shows that, twenty years of trade restriction and discriminatory protection by the importing developed countries reduced the real growth of textiles and clothing to 9 percent during 1978-84 from 14.1 percent during 1963-76. When examined closely, it draws from the nature of the agreements that whenever the importing countries faced a threat of domestic market disruption, they imposed trade restrictions on developing countries.

Table, 4.1: Real growth of textiles and clothing imports in developed countries from developing country exporters, 1963 to 1984

Category	Year		
	1963-76 (%)	1976-78 (%)	1978-84 (%)
Textiles	7.2	4.6	3.7
Clothing	20.9	4.8	10.9
Total	14.1	4.8	9.0

Source: Wolf (1986) as quoted in Cable (1987)

#### **Trade under Multi-Fibre Arrangement (MFA) and Agreement on Textiles and Clothing (ATC)**

As imports of other fibre based textiles and garments started increasing in the early seventies, LTA was replaced by the Multi-Fibre Agreement (MFA) in 1974. MFA consisted of a system of bilateral quotas against Textiles and Clothing exports from developing countries. The basic idea of the MFA was the same as those of its predeceasing Short-Term Arrangement Regarding International Trade in Cotton Textiles (STA), 1961-62, and the Long-Term Arrangement Regarding International Trade in Cotton Textiles (LTA), 1962-73 (Goto, 1989). It had since regulated world trade in textiles and clothing, with renewals till 1994. MFA extended the coverage of restrictions on textiles and clothing from cotton products to wool and man-made fibre products and since 1986, to certain vegetable fibre products.

The objectives of MFA as stated in *Article 1* of the Agreement were “to achieve the expansion of trade, reduction of barriers to such trade and the progressive liberalisation of world trade in textile products, while at the same time ensuring the orderly and equitable development of this trade and avoidance of disruptive effects in individual markets and on individual lines of production in both importing and exporting countries”. It also by definition, intended “to further the economic and social development of developing countries and secure a substantial increase in their

export earnings from textile products and to provide for a greater share for them in world trade in these products”. The MFA also provided that importing countries can take unilateral or bilaterally agreed restrictive measures to avoid “disruptive effects in individual markets and on individual lines of production”.<sup>7</sup> Operationally, it provided rules for the imposition of quotas, either through bilateral agreements or unilateral actions, when surges of imports caused market disruption or threat thereof in importing countries (Ibid, p209).

Quotas under MFA were implemented/removed in four stages from January 1974 to December 1994. The first period was from January 1974 to December 1977 and was characterised by a period of relative liberalisation of trade in textiles and clothing. During this period, many previous restrictions were abolished, consistent with MFA article 2<sup>8</sup>. Not only had cotton textiles been subject to restrictions under the STA and LTA since 1961, however there were also trade restraints on wool and synthetic fibre products (Ibid). Therefore, the period under MFA-I “witnessed enhanced discipline in the regulatory measures as compared to the autonomous and arbitrary methods of the past”.<sup>9</sup> Second stage of MFA began from January 1978 and continued till December 1981. It was noted by many scholars that MFA-II witnessed more restrictive measures, primarily because of European importing countries (Cable, 1987; Goto, 1989; *op.cit.*). For instance, during this period, the European Community formulated comprehensive restrictions, by dividing MFA products into 114 categories and five groups and adopted a mechanism whereby any exporter whose exports exceeded a threshold share of total European imports would be subject to new controls (Goto, 1989; *op cit.*). European countries imposed increased import restrictions consequently to the increase of import of textiles and clothing in the European markets, followed by the market shift from the United States where a comprehensive system of bilateral restriction had been set up during the MFA-I period (Ibid: p. 214). Some others attributed increased import restrictions by European Union (EU) to the general economic recession and high unemployment subsequent to the first oil crisis (Hamilton, 1990).

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<sup>7</sup> Article 3 of Multi Fibre Agreement provides for measures taken when market disruption occurs, and Article 4 provides for measures when there is only the risk of disruption. For details, see *Restrictive Measures*, Article 3 and 4, Multi Fibre Agreement.

<sup>8</sup> Article 2 of MFA details the phasing out of pre-MFA restrictions.

<sup>9</sup> For a detailed discussion on regulatory measures and arbitrary methods under MFA, see, Goto, Junichi (1989).

Third stage of MFA commenced in January 1982 and continued till July 1986 with certain modification from MFA-II. Major changes were with regard to the exclusion of reasonable departure<sup>10</sup> clause primarily due to the objections from developing countries and anti-surge provisions<sup>11</sup> by the importing countries pertaining to under utilised quotas. The third stage also witnessed further restrictive regulations for developing countries. It was marked by frequent instances of unilateral measures on import, adoption of restrictive measures on previously unrestricted countries through bilateral agreements, increased coverage of products under restraint and more and more restrictive agreements with large suppliers (Ibid). During MFA IV (August 1986-July 1991), provisions for even broader coverage and tighter restrictions had been introduced. The reasonable departures clause had been restored, the product coverage had been extended to include vegetable fibres and silk blends, and other small changes have been made to further restrict textiles and clothing exports (ITCB, 2002; *op cit*). The last stage of MFA continued till December 1994.

Effects of quota restrictions and trade under MFA were dissimilar for exporting and importing countries. Exporting countries, mostly developing and underdeveloped ones, had adverse impact on export earnings and employment by the reduction in export opportunities. For underdeveloped countries, MFA initially imposed either no restrictions or less restriction. Therefore, initial period of MFA had made positive impacts on industrial growth and employment. Nevertheless, restrictions were progressively imposed under MFA as soon as the underdeveloped countries such as Bangladesh started increasing their export share (Cable, 1987; *op cit*; Goto, 1989; *op. cit*; Hale, 2002). Another view on the impact of MFA on textiles and clothing export of developing countries is that export marked a growth after 1984 as compared to other manufacturing exports (Hale, 2002; *op. cit.*). As shown in table, 4.1, till 1984, rate of growth of textile and clothing export from developing to the developed world decreased considerably. It showed a comparative increase in general after 1984, more specifically after 1986, subsequent to MFA IV (1986 -

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<sup>10</sup> Reasonable departure refers to reductions in quota for the developing countries on jointly agreed terms. As per MFA-II, reasonable departures consisted of reduction in quotas from their previous levels and reductions in flexibility, which intended to keep growth rate of import below 6 percent as per the MFA objectives.

<sup>11</sup> Anti-surge provisions in MFA refer to the regulation of unutilised quota for each exporting country. It aimed at avoiding sudden influxes of imports under unutilised quotas.-For a detailed discussion on anti-surge provisions under MFA and its effects on developing countries, see. Dolan. B. Michael. (1983).

1992). However, there were estimations that complete non-discriminatory liberalisation could raise export of clothing of developing countries by 135 percent and textiles by 78 percent (UNCTAD, 1986). While there were various estimations on export performance of developing countries, there was hardly any substantial evidence to establish that it contributed to employment growth or increase of wages for workers in the sector in developing countries.

Although there exists multiple views on the impact of MFA on developing countries, there is a general conclusion that MFA was orchestrated almost exclusively to protect against imports from developing countries. Several studies have subscribed to the argument that MFA had not achieved its proclaimed objectives of temporary regulation, adjustment and overall liberalisation have been realized (OECD, 1983; GATT, 1984; Cable, 1987; WTO, 2001). Cable (1987) observed that the bilateral agreements under MFA had grown progressively more restrictive for developing countries instead of improving market access through liberalisation. A World Bank study (1987) noted “under MFA, annual growth rates permitted within quotas have generally been below 6 percent; the number of product categories subject to restrictions has been increased; quota fragmentation coupled with revision of the original swing or carry forward provisions has reduced quota utilization; requirement of proof of inquiry to domestic producers have become minimal; and several very small suppliers have been controlled”.<sup>12</sup> However, the trade scenario has notably been changed by the process of elimination of quota with the integration of MFA to the Agreement on Textiles and Clothing in 1995. There were manifold ramifications on export, production organisation and labour relations in the sector for the developing and underdeveloped countries after the quota elimination.

### **Agreement on Textiles and Clothing (ATC)**

The progressive phase out of MFA began in 1995 as the Agreement on Textiles and Clothing (ATC) entered into force from January 1, 1995. The ATC was an intermediary agreement that regulated trade in textiles for ten years, between 1995 and December 31, 2004 after which trade in textiles and clothing is wholly integrated into WTO. ATC was primarily based on five key elements, namely

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<sup>12</sup> For a detailed discussion on the impact of MFA, please see. Cable, Vincent (1987).



product coverage<sup>13</sup>, programme for the integration of textile and clothing products into GATT 1994 rules, liberalisation process to progressively enlarge existing quotas, special safeguard mechanism<sup>14</sup> to deal with new cases of serious damage or threat to domestic producers, establishment of a Textiles Monitoring Body (TMB) to supervise implementation of the Agreement and other provisions, including rules on circumvention of the quotas, their administration, treatment of non-MFA restrictions, and commitments undertaken elsewhere under the WTO agreements and procedures affecting this sector (WTO, 2001).

With regard to the ATC liberalisation process, it was required by all importing countries to reduce their bilateral quotas, which were subject to the MFA framework, by a minimum of 16 percent by January 1995, 17 percent by January 1998, 18 percent by January 2002, and for the remainder of the quotas to be eliminated by January 2005, respectively (Table, 4.2). Nevertheless, the process of removal of import restriction and quota elimination was not in good agreement with the time frame as prescribed under ATC. Studies have noted that effective trade liberalisation in the sector had been slower than anticipated and quota had not been completely removed by the major importing countries of European Union, the US, Canada and Sweden during the first stage of ATC (Naumann, 2006: p. 8). However, in principle, complying with the agreement, quotas of export for developing countries has been removed and 'free trade' in textiles and clothing came into existence by December 2004. The significant ongoing development with regard to trade in textiles, clothing and apparel under the multi lateral trading system now is the proposal of tariff reduction in developing countries and removal of non-tariff barriers and special safeguard mechanisms in the developed countries as per WTO Non-Agriculture Market Access (NAMA).

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<sup>13</sup> Product coverage under ATC encompassed yarns, fabrics, made-up textile products and clothing. For more details on product coverage under ATC, see. List of Products Covered by ATC. Annex. *Agreement on Textiles and Clothing*, p. 98.

<sup>14</sup> Special safeguard mechanism in ATC refers to the steps that could be taken by the importing countries to safeguard its domestic production on the demonstration that the import of the particular product in increased quantity would cause serious damage or actual threat to the domestic industry. In such cases, the importing country could apply a specific transitional safeguard mechanism. For details, see. *Article 6, Agreement on Textiles and Clothing*, pp. 92-95.

Table, 4.2: Required process of elimination of import restriction as under ATC

Stage	Date of implementation	% of products to be integrated with GATT Rules	% of products to be brought under GATT (including removal of any quotas)
1	1 Jan 1995 – 31 Dec 1997	16 (minimum, using 1990 imports as base)	6.96 per year
2	1 Jan 1998 – 31 Dec 2001	17( minimum)	8.7 per year
3	1 Jan 2002 – 31 Dec 2004	18 (minimum)	11.05 per year
4	1 Jan 2005 Full integration into GATT(final elimination of quotas, termination of ATC)	49 (maximum)	No quota left (full integration)

Source: WTO (1994)

Although, ATC envisaged inclusive elimination of quantitative restrictions, it is widely noted that barriers with regard to tariffs, Non-Tariff<sup>15</sup> and Rules of Origin,<sup>16</sup> which could minimise the ‘market access’ still exist for exporting countries. Market access restrictions were prevalent in the US as United States even after the expiration of the ATC, imposed substantial restraints including high tariffs, quantitative restraints on some large exporters, and rules of origin that apply to duty-free imports from preferential trading partners remained (Fox et al, 2007). Quantitative restraints remained as barriers to imports for China and Viet-Nam to US, with the existed quantitative restraints by the US (Ibid, p.1). Consequently, market access for these countries in the US has been constrained considerably. Higher level of import tariff is yet another significant ground for market access restrictions. For instance, in the US, expiration of ATC did not reduce textile or apparel tariff rates and it remained the highest among the entire US product sector

<sup>15</sup> Non-Tariff Barriers (NTB) to trade refers to measures other than tariff employed to restrict import. State subsidies, occupational safety and health regulations, labour laws, import licences, export subsidies, foreign exchange control and multiplicity, intellectual property laws, unfair customs procedures, restrictive licence, import bans etc are some of the NTBs that restrict import. There is a large number of NTBs in international textile trade, especially taking into account their different way of action and a different market protection effect. For a detailed discussion on NTB, see, WTO (2000) and Zigmantaviciene, Aida; Snieska, Vytautas and Neverauskas, Bronius (2006).

<sup>16</sup> WTO defines Rules of Origin (RoO) as the criteria needed to determine the national source of a product. Their importance is derived from the fact that duties and restrictions in several cases depend upon the source of imports. The Agreement on Rules of Origin, in principle, aims at harmonization of non-preferential rules of origin, and to ensure that such rules do not themselves create unnecessary obstacles to trade. However, in practices, RoO often becomes barrier for exporting countries. For a discussion on RoO and its impacts on trade in textiles and clothing, see, Fox, Powers and Winston (2007).

(Ibid). Likewise, export to the US was also constrained by the existing preferential rules of origin in textiles and apparel of the US (Ibid).

Impacts of quota elimination on global textiles and clothing sector, specifically for the developing countries necessitate further inquiry. The major change that occurred subsequent to the expiration of ATC is the elimination of quotas with the full application of WTO rules to the textiles and clothing sector with regard to tariffs, rules on anti dumping, provisions for special safeguard mechanisms and provisions of rules of origin. It should be noted that textiles and clothing sector has relatively higher tariffs than other sectors, which in turn could adversely affect the export from developing to developed countries. It also increased preferential treatment and trade agreements as per the regional and bilateral trade agreements subsequent to the quota phase out. In spite of that, phase out of ATC is also accompanied by the introduction of transitional specific rules by importing countries as well as special safeguards, which are protective and hence import restricting in nature. The global trade in textiles and clothing therefore is in a complex matrix and factors like regional and bilateral agreements, Non-Tariff Barriers of domestic protection, tariff rates, production as well as export capacities of producing countries and cost of production appear to be deciding the trade performance. It leaves relevance for further questions; (a) how quota elimination would help improve trade for the developing countries under the new system and (b) the impacts of the new trade regime on employment, labour relation and working and living conditions of workers in the developing world.

### **Trade under Pre and Post Quota Regime: A General Picture**

Significant changes in the international textiles and clothing trade in terms of export and export destination for the developing countries, especially Asian countries have appeared after the ATC regime. WTO (2007) trade statistics revealed that most of the producing and exporting countries, except Mexico, United States, Romania and Tunisia (till 2005), were reported with positive growth rate in export (Table, 4.3). Table 4.3 gives adequate evidences to reiterate the general observation that quotas under MFA and MFA phase out under ATC favoured export growth for most of the Asian countries, though there was prominent difference in growth rate among countries. China, as most of the studies projected, appears to be the gainer in terms

of textiles and clothing export after quota elimination.<sup>17</sup> There has been a steady quantum increase in Chinese export from 1980 to 2006 and it notably marked a growth of 18 percent from 2000 to 2006 in export (Table, 4.3).

Likewise, India, though there had been slower pace in growth of export as compared to China, recorded a growth amounted to 9 percent in export from 2000 to 2006. Other Asian countries, which marked growth in clothing export after quota elimination are Bangladesh, Indonesia, Pakistan, Viet Nam and Thailand (Table, 4.3). Nepal, Sri Lanka and Maldives are the Asian countries, which marked negative growth rate (Table, 4.4). Morocco and Tunisia are the other developing countries, where export marked negative growth subsequent to quota elimination. It is important to note that countries in European Union (25 countries), being both exporting as well as importing, marked positive growth subsequent to quota elimination. United States, also an importer, conversely marked negative growth rate in clothing export along with Romania after the quota regime (Table, 4.3).

Table, 4.3: Clothing export, selected countries, 1980-2006

Exporters	Share in world's export (%)				Percentage change			
	1980	1990	2000	2006	2000-06	2004	2005	2006
China a	4.0	8.9	18.2	30.6	18	19	20	29
EU (25)	-	-	26.9	26.8	8	12	3	5
Hong Kong China	12.3	14.2	12.2	9.1	3	8	9	4
Turkey b	0.3	3.1	3.3	3.8	10	12	6	0
India b, c	1.7	2.3	3.1	3.3	9	0	39	11
Bangladesh b, c, d	0.0	0.6	2.1	2.8	-	24	23	-
Mexico a	0.0	0.5	4.4	2.0	-5	2	-2	-13
Indonesia	0.2	1.5	2.4	1.8	3	6	16	15
United States	3.1	2.4	4.4	1.6	-9	-9	-1	-2
Viet Nam d	-	-	0.9	1.7	-	28	9	-
Romania	-	0.3	1.2	1.4	11	16	-2	-4
Thailand	0.7	2.6	1.9	1.4	2	10	3	4
Pakistan	0.3	0.9	1.1	1.3	11	12	19	8
Morocco a	0.3	0.7	1.2	1.0	5	6	-6	14
Tunisia b	0.8	1.0	1.1	1.0	6	11	-5	2

a: includes significant shipments through processing zones, b: includes secretariat estimates, c: figures refer to fiscal year, d: 2005 instead of 2006, e: Imports are valued f.o.b.

Source: WTO (2007)

<sup>17</sup> For more discussion on export performance in textiles and clothing of Asian countries, see, Nordas, H.K. (2004); Manole, Vlad. (2005); Kathuria, Sanjay, Will Martin, and Anjali Bhardwaj (2001) and Cerra, Valerie, Sandra A. Rivera, and Sweta Chaman Saxena (2005).

Tables 4.4 and 4.5 detail export of South Asian countries to the US and EU markets in the post quota elimination phase. While India, Pakistan and Bangladesh recorded a positive growth in terms of value and volume from 2004 to 2006, Maldives, Nepal and Sri Lanka could not desirably reach to the US markets following quota elimination. It should be noted that, in contrast to the general assumption of trouble-free market access to the US, export from these countries to US has declined in the post quota elimination phase. Similarly, clear discrepancy is evident in the market access to countries in European Union as well for South Asian countries. For instance, in most of the South Asian countries, except India, percentage change in export of textiles and clothing in terms of value and volume recorded negative growth over 2004-05, the period when MFA was fully phased out under ATC (Table, 4.5). However, export during 2005-2006 recorded positive growth for most of the countries, except for Nepal and Maldives. These differences in market access to the US and EU could be explained by many factors. Firstly, it points to the elements of discrimination in terms of non-tariff barriers, rules of origin and the special safeguard mechanisms by the US to some countries as discussed earlier in the chapter. Secondly, bilateral agreements between importing and exporting countries, to a greater extent, have been instrumental in determining market access. Other associated factors could be the competitiveness of the industry for better export performance, domestic policies of export promotion mechanisms, infrastructure base and production capacities (Hashim, 2005).

Table 4.4: US import of textiles and clothing from six South Asian countries

Country	T&C imports value (million US\$)				T&C imports volume ('000 kg)			
	% Change (2004-05)	Jan-Jul 2005	Jan-Jul 2006	% Change	% Change (2004-05)	Jan-Jul 2005	Jan-Jul 2006	% Change
Bangladesh	19.8	1294	1598	23.4	18.7	135,133	160,104	18.5
India	26	2913	3312	13.7	19.8	301,149	344,546	14.4
Maldives	-94.2	n/a	n/a	n/a	-95.4	n/a	n/a	n/a
Nepal	-25.8	63	56	-9.7	-41.3	4,409	3621	-17.9
Pakistan	13.2	1579	1882	19.2	16.6	288,732	349,097	20.9
Sri Lanka	5.9	979	987	0.9	-3.6	62,374	60,752	-2.6
Total	4.78	6828	7835	14.76	15.63	791,797	918,120	15.95

Source: WTO (2007)

Table 4.5: EU import of textiles and clothing from six South Asian countries

Country	Import value in million Euro				Import volume ('000 kg)			
	% change (2004-05)	Jan-May, '05	Jan-May, '06	% change	% change (2004-05)	Jan-May, '05	Jan-May, '06	% change
Bangladesh	-5	1363	1932	41.7	-1.1	231,537	261,413	12.9
India	18.3	2209	2757	24.8	6.2	351,219	369,984	5.3
The Maldives	-78.5	n/a	n/a	n/a	-73.3	n/a	n/a	n/a
Nepal	-6.1	25	26	3.9	-11.7	2539	2426	-4.5
Pakistan	-13.2	792	946	19.4	-4.4	201,146	210,610	4.7
Sri Lanka	-1.3	307	410	33.5	-1.7	40,703	47,046	15.6
Total	2.55	4697	6071	29.25	0.84	827,144	891,479	7.78

Source: WTO (2007)

Data on export of textiles and clothing from developing countries after quota eliminations showed trends of relocation of production of textiles and clothing paralleling to the general trend in shift of manufacturing from the developed to the developing world where cost of production is comparatively low.<sup>18</sup> The diminishing share of production in the US, European countries and in some South American countries proves to it as table 4.3 explains. Within Asian region also, there has been relocation of textiles and clothing production to countries where cost of production is less. For instance, companies based in Hong Kong and South Korea and Taiwan shifted production to Lesotho in search of cheap labour (Clean Cloth Campaign, 2001). There are also trends of shift of production from developing to the developed world, especially at the high end segments. For instance, for the production of high end fashionable clothes, some part of the production shifted back from the Middle East and Asia to Northern Europe (Spain, Portugal, Greece and Turkey) and to the United States (Ibid). Production also shifted to Eastern Europe and the former Soviet Union with the collapse of the socialist governments in these countries. The reason for this shift was their geographic proximity to Western Europe, the existence of a ready infrastructure and the availability of a skilled workforce (Ibid).

It has also been reported from the garment exporting countries that production organisation and production relations have significantly been rearranged along with

<sup>18</sup> Subsequent to trade liberalisation and trade policy reforms in the nation states, there has been a sectoral shift from industry to the service sector in the developed countries as well as relocation of manufacturing to the developing world. This has caused the decline of industries like textiles, footwear, steel etc in the developed world and has increased the demand of such products manufactured in the developing countries, which are referred to as global relocation of industries and international division of labour. For more discussion see. Ghose. Ajit. K.(2000); Despande L. K (1999) and Carr. Marilyn and Martha. Chen (2001).

fluctuations in employment in response to the differences in 'advantage' of countries and its relative 'international competitiveness' (ILO, 2000; Mazumdar, 2004). Major reason attributable to this trend is the enhanced level of competition after quota elimination. Hence, reduction of cost appears to be the single main objective for outsourcing/relocation of production to developing countries. Retailers/brands from the sourcing countries, therefore, source from or relocate or outsource to countries and places where cost of production is less. Manufacturers in the producing countries also rearrange the production organisation through decentralising production and adopting flexible production practices. This bears significance on labour relations and employment pattern in the producing countries.

### **Employment, Labour Relations and Conditions of Work under Pre and Post Quota Regime: A General Picture**

Several studies have noted that the phasing out of quotas by 2005 under ATC would likely to bring significant shifts in employment patterns within and among developing and developed countries (ILO, 2006). UNIDO (2005) data evidenced that employment in textiles and clothing worldwide showed a decline from 14.5 million workers in 1990 to 13.1 in 1995 and to 13 million in 2000. However, with regard to the increase in export in textiles and clothing in the post quota regime, employment has increased in some developing countries. Countries that reported increase in employment in textiles and clothing production are China, Pakistan, Romania, Guatemala, Mexico and Turkey (Table, 4.6).<sup>19</sup> An analysis of the evolution of employment in the clothing sector in total manufacturing employment shows that for China, Pakistan, Cambodia, India, Guatemala, Romania and Turkey, it is increasingly important, while its share declined in Sri Lanka and Bangladesh, as well as in Africa, apart from Madagascar. However, literature showed that countries where employment shows an increase, a significant chunk was generated in the informal sector largely due to the phenomenon of flexibilisation of labour market and the scattered nature of production organisation of the industry in general (Carr and Chen, 2001; Singh and Sapra, 2003; CAW, 2007).

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<sup>19</sup> Data as extracted from UNIDO. 2003 and 2005, revision 2 and 3. China: China Textile Industry Development Report, 2005 for textiles and clothing and China Statistical Yearbook 2004 for manufacturing employment. Pakistan: Textiles and clothing employment for 2001 from IFM, 2004. Manufacturing employment from Federal Bureau of Statistics of Pakistan, Bangladesh: BMGEA for 2004 data. Guatemala: *Asociación Gremial de exportadores de productos no tradicionales*, Madagascar: Labour and Social Law Ministry. Mexico, 2005: National Chamber of Textile Industry (including share). Cambodia, 2005: Industry of Commerce (share from 2000 based on UNIDO data). Mauritius, 2004: AfrolNews, 26 September 2005 by Ernst et al. (2005). For original document, see. Ernst. Christopher: Alfons Hernández Ferrer and Daan Zult (2005).

Among developing countries, Bangladesh, which in fact improved clothing exports, has been found to be showing declining trend in employment in the formal textiles and clothing sector after quota elimination. Mlachila and Yang (2004) estimated that total employment in Bangladesh would decline between 2.5 and 7.7 percent depending on the assumption of changing purchasing preferences of the buyers. However, there is no evidence to establish the possible impact on employment growth in the informal sector in Bangladesh. The impact on employment in the developed countries varies considerably. Estimating the production decline subsequent to the elimination of quota and tariff cuts, Francois, Glisman and Spinanger (2000) found that due to fall in textile production by 7 percent and clothing by 40 percent, European Union countries would face significant employment loss.

From the available data, it could be inferred that employment growth in textiles and clothing sector is directly proportional to growth of export in most of the countries. Data reiterated that growth of employment, whether in formal or informal sector, was reported only with an increase in production and export. It is also seen that employment is perpetually vulnerable with regard to fluctuations in export in the developing countries, especially in the context of absence of guaranteed market access after quota elimination. This could reflect on labour relations, wages and working condition of workers in the sector in many ways. Major contestable ramifications could be informalisation of labour in these countries for reducing cost of production and work intensification due to the pressure from the buyers.

Table, 4.6: Evolution of employment and evolution of employment share in clothing compared to manufacturing employment, selected countries, 1995 -2005

Country	Year	Value	Share (%)	Year	Value	Share (%)
Bangladesh	1998	1049360	49.9	2004	2000000	N.A.
Cambodia	1995	Insignificant	N.A.	2005	250000	38.2
China	1995	14710000	N.A.	2004	19000000	18.9
India	1998	398618	5.0	2001	463319	6.2
Pakistan	1996	26915	4.8	2001	2300000	42.9
Sri Lanka	1997	154542	34.9	2000	165388	34.2
Mexico	1997	72660	5.2	2005	460000	12.3
Guatemala	1997	66800	N.A.	2005	104464	23.0
Romania	1997	286300	14.1	2002	403400	25.3
Turkey	1997	142554	12.6	2000	164353	14.6
Mauritius	1997	69423	65.6	2004	75000	65.3
Morocco	1997	131995	16.1	2002	176894	17.8
Madagascar	1999	83000	44.9	2001	87000	44.8

Source: Ernst et al (2005), p. 9



Possible other significant factor contributing to the increase in production as well as export and consequent increase in employment in the developing countries could be the relocation of production or off shoring of production processes to places where cost of production, especially labour cost and unit cost, is relatively low (Nordas, 2005). This is found to be relevant while examining the labour cost in some of the Asian countries, which showed an increase in export. For instance, in most of the Asian countries, average hourly labour cost in the garment sector is less than US \$ 1 (Table, 4.7). The association is found to be strong when it is corroborated with the individual country export performance. For instance, in China, India, Bangladesh and Pakistan, which showed increase in garment and textiles export compared to other Asian countries, labour cost is relatively low, costing, 0.25, 0.29 0.25 and 0.29 US \$ respectively per hour per worker. Whereas, hourly labour cost is 13.96, 3.05 and 3.22 US \$ for Japan, Hong Kong and South Korea, respectively which marked decline in export (Table, 4.7). However, low labour cost could not be taken as a necessary condition for increased export. Conversely, it is observed that export growth, while increasing the share of employment in the sector, tends to constrict wages of workers. This could be better explained in the purview of the rearrangement in the production and labour relations and prevailing wage structure in the sector.

Table 4.7: Labour cost in garment sector, selected Asian countries (in average)

S.No	Country	Hourly labour cost (US \$)
1	China	0.25
2	Bangladesh	0.20
3	Viet Nam	0.29
4	India	0.29
5	Pakistan	0.29
6	Sri Lanka	0.41
7	The Philippines	0.72
8	Japan	13.96
9	Hong Kong	3.05
10	South Korea	3.22

Source: CAW, (2007); AEPC, (2005), complied

Examination of the evolution of wages in the textiles and clothing sector prior and subsequent to quota elimination in the major exporting countries brings forth the trend of decline of wages in the textile and clothing sector. While wages in the organised sector showed a slight increase corresponding to increase in export, it showed declining trend in the unorganised sectors. A survey based on the secondary

evidences on wages in textiles and clothing in comparison with the average wages in manufacturing reveals that there is a slight increase in wages in the sector for some countries where exports marked an increase, except for Pakistan (Table, 4.8). However, data given here is of organised employment and there is little evidence to prove that it is applicable to the entire sector and production chain in these countries where major share of production is carried out in the informal sector. Countries where wages were increased are India, Bangladesh and China. However, it must be noted that a considerable chunk of production is taking place in the informal sector in these countries. Micro level studies conducted in these countries evidenced that in sharp contrast with the increase in wages in the formal textiles and clothing sector, there is a declining trend in wages, especially real wages for workers in the informal sector. For instance, a study conducted in the Guangdong, Jiangsu and Shanghai provinces of China showed that wages of garment workers in the special economic zones and home based settings are considerably lower than that of the formal sector (CAW, 2007; *op. cit.*: p. 48). Contradictory to the reported trend of increase in wages in textiles and clothing sector in Bangladesh, UBINIG (2002) study found that wages for workers, especially for women workers in the sector has declined. Likewise, in contrast to the trend of increase of wages in organised employment, India witnessed decline in real wages for workers in the informal settings (Mazumdar, 2007). In short, wages for workers as whole showed decline even in the countries, which recorded growth in export after quota elimination.

The inverse relationship between export and workers' wages could be better explained with the case of Pakistan where wages declined both in the formal and informal sector. Table 4.8 shows that wages for workers as a percentage to the total manufacturing decreased to 57.2 percent in 2001 from 90.3 percent in 1996 in the clothing sector. Correspondingly, it decreased to 56.2 percent in 2001 from 69.1 percent in 1996 in the textile sector. Other major exporting countries, including Sri Lanka, Mexico, Guatemala, Mauritius, Morocco, Romania and Turkey, where export showed downturns, wages declined considerably. These mixed results on the relationship between export and wages for workers point to the fact that, increase in export may not be a necessary condition for better wages in textiles and garment sector as long as the industry relies on cheap labour. Moreover, it indicates that export performance is largely supplemented by the informal sector where cost of

production is considerably low due to absence of regulation. Country case studies showed that increase in export could further worsen wages and conditions of workers taking advantage of the informal sector.

Table, 4.8: Evolution of wages in textiles and clothing compared with average, manufacturing wages in selected exporting countries, 1995-2005

Countries	Clothing				Textile			
	Year	Wc/ Wtot	Year	Wc/ Wtot	Year	Wt/ Wtot	Year	Wt/ Wtot
Bangladesh	1998	76.7%		N.A.	1998	90.2%	2000	N.A.
Cambodia	1995	80.7%	2000	99.8%	1995	89.1%	2000	123.1%
China	1997	N.A	2003	38.7%	1997	N.A.	2003	43.3%
India	1998	16.2%	2003	58.7%	1997	80.3%	2001	76.1%
Pakistan	1996	90.3%	2001	57.2%	1996	69.1%	2001	56.2%
Sri Lanka	1997	96.0%	2000	95.1%	1997	86.2%	2000	82.8%
Mexico	1997	51.5%	2000	50.6%	1997	63.9%	2000	64.3%
Guatemala	1997	74.8%			1997	67.6%	2000	N.A.
Mauritius	1997	80.1%	2000	84.1%	1997	101.3 %	2000	71.7%
Morocco	1997	62.4%	2002	53.4%	1997	77.4%	2002	73.5%
Romania	1997	74.6%	2002	54.0%	1997	74.5%	2002	61.3%
Turkey	1997	61.8%	2000	50.4%	1997	73.3%	2000	66.0%

Note: Wt/Wtot: average wage in textile (Wt) compared with average wage in manufacturing (Wtot) as a share value. Wc = average wage in clothing.

Source: Ernst et al (2005),<sup>20</sup> p.12

### **Implications for Production Organisation, Labour Relations and Conditions of Work in India**

Textiles and Clothing industry in India has undergone significant rearrangements in terms of production organisation with reference to the changes in the global apparel trade and resultant policy level rearrangements in the country in the WTO regime. The garment export sector entered into a new phase where quota system existed under MFA expired and full fledged free trade centre stages in the global market under the new Agreement on Textiles and Clothing. There are conflicting views on the impacts of MFA and ATC on the Indian garment sector. Given this background, it seeks to examine how trade in the regulatory and non-regulatory phases affects the rearrangement of labour relations in the Indian garment export sector. The following sections look at the implications of pre and post quota regime for Indian garment

<sup>20</sup> Data as extracted from UNIDO and ILO by Ernst et al. (2005). For details see, Christopher. Ernst. Alfons Hernández, Ferrer and Daan. Zult (2005).

industry and for workers in the purview of its structure, production organisation, labour relations, work force composition, wages and conditions of work.

### **Garment Industry in India: Structure, Production Organisation and Value Chain**

India has a traditional textile and garment industry, which encompasses the entire value and supply chain from raw material production to garment manufacturing and export. The supply chain gives a fair understanding of the garment and textile sector in India. Production is mainly organised along the supply chain that consists of raw material production, spinning, weaving/knitting, processing, and garment manufacturing and exporting. There are classifications within each segment depending upon the nature of production, technology used and its market i.e. whether domestic or export. Under each segment, production is carried out in big manufacturing factories, small manufacturing factories, small factory units, home based units, depending upon the level of sub-contracting in the production chain.

Supply chain of garment production in India could be traced from raw materials to exporting and retailing. Raw material base for India is its vast base of cotton farm and ginning sector. The Man-Made Fibre (MMF) and Synthetic Fibre Filament is another segment in the industry, which is a capital-intensive sector and India ranks fifth in the world production of synthetic fibre (viscose, polyester, and acrylic staple fibres) and third in cellulose fibre (World Trade Report, 2007). Weaving and knitting are other two major segments in fabric production. Mill and non-mill sectors are significant segments in the sector as it constituted a major share of production (Table, 4.11). However, share of production of cloths in mill sector has steadily declined during nineties (Table, 4.9). In 1990-91 the mills produced 11.1 percent of the cloth but by the end of the decade this had more than halved to 4.2 percent (Bagchi, 1998). The non-mill sector is referred to as the decentralized sector and includes powerlooms, handlooms, and the knitting or hosiery sector. This sector produces around 95 percent of the total cloth in India and is the major employer, income generator, as well as export earner for the weaving and knitting industry (Anubhai and Mote, 1994).

Another important segment of the value chain is the processing sector, which is considered as one of the weak links in the textile supply chain (Bagchi, 1998; *op. cit.*). The processing industry is divided into hand processors and power processors. The hand processing segment constitutes the major share in the total number of processing units (Table, 4.11). Power processing units are further segmented into independent process houses that do job-work and those have to composite mills that process their own fabric are independent processing houses (Ibid). Garment manufacturing forms the most diverse sector in the production chain. Garments in India are primarily manufactured in three stages. First stage involves cutting the fabric to patterns, usually by power-operated cutting machines and second stage subsumes making or sewing the garment on sewing machines either foot operated or power operated. This is the most labour intensive part of the process. Third stage is finishing the garment by trimming, checking for dimensions, washing, ironing and packing. This part of the value chain is highly fragmented and manufacturing is being carried out from big factories to home based settings, involving multiple levels of sub-contracting.

It is well noted that the major share of garment manufacturing both for domestic and export in India is carried out in sub-contracted informal production environments. Garment export industry in India has its production base in small scale units, located mainly in major metropolitan and a few other cities, centralised production centres, home based sectors, firm based sectors and production units in export processing and special economic zones (Kathuria and Bharadwaj, 2001). While the factory based clothing industries owned by the major textile mills use power driven specialised machinery for producing mostly standard garments for the domestic market, a subcontracting system of small tailoring and fabrication units with a division of production into different subcontractors with specified functions was seen to characterise the export industry (Chatterjee and Mohan, 1993). It is estimated that apparel firms in India subcontracted 74 percent of their output, compared with only 11 percent for Hong Kong, 18 percent for China, 20 percent for Thailand, 28 percent for South Korea and 36 percent for Taiwan, evidencing the extent of sub-contracting in India (Kathuria and Bharadwaj, 2001; *op. cit.*). This

allows the garment export industry to obtain the benefits of a flexible labour base and reduces labour and overhead costs.

Garment export and retailing is another important segment in the value and supply chain. India's garment exporters can be broadly divided into manufacturers and merchant exporters. Manufacturers have production facilities, ranging from big factories to medium and small size units as per the criteria laid down by the Government.<sup>21</sup> The latter, on the other hand, has no production facilities but secure orders, purchase the fabric and contract out the work to other units (Kalpagam, 1994).

Tables, 4.9 and 4.10 detail the present status of different segments in the garment value chain in terms of capacity installed from 1998-1999 to 2005-2006. It is difficult to estimate the capacity installed in the garment and textile sector in India as there is no comprehensible estimation on the number of production units at various levels of sub-contracting available due to its informal nature. Official estimates, which are based on the number of units registered, give a general picture of the structure and organisation of the industry in India. Table, 4.9 gives the official estimation of capacity installed in the Indian garment and textile sector till 2006. As per the official estimations<sup>22</sup>, garment production in India configured under spindles, rotors, looms, powerlooms, handloom, man made fibres, man made filaments, worsted spindles and non-worsted spindles spread across both organised and unorganised sectors. Production units, except looms in the organised sector in India show a slight increasing trend in terms of number over years from 1998-99 to 2005-06.

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<sup>21</sup> The norms laid down by the government for quota entitlement as a manufacturer exporter prescribe that the manufacturer exporters should have installed a minimum of 100 non power operated sewing machines or 50 power operated sewing machines and should be employing at least 150 workers for non power operated units for woven garments and 75 workers for power operated units, or should have installed a minimum of 25 flat lock/over lock machines and should be employing at least 40 workers for knitted garments. For details, see, National Textile Policy (2000).

<sup>22</sup> For more details, see, Annual Report 2007-08, Ministry of Textiles Govt. of India.

Table, 4.9: Capacity Installed in Indian garment and textile sector

Item	Unit	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 (P)
Spindles (SSI + Non SSI)	Million No	36.67	37.08	37.91	38.33	39.03	37.03	37.47	37.51
Rotors (SSI + Non SSI)	Lakh No.	4.34	4.44	4.54	4.8	4.68	4.82	5.00	5.20
Looms (Organised Sector)	Lakh No.	1.40	1.40	1.40	1.41	1.37	1.05	1.03	0.92
Powerloom	Lakh No.	15.99	16.30	16.62	16.66	16.93	18.37	19.03	19.44
Handloom	Lakh No.	34.87	34.87	34.87	34.87	34.87	34.87	34.87	34.87
Man-Made Fibres	Million Kg	1064	1066	1081	1090	1096	1101	1189	1191
Man-made Filament	Million Kg	1033	1078	1128	1135	1191	1228	1337	1374
Worsted Spindles (Woollen)	Thousand No.	575	585	598	598	604	604	604	604
Non-Worsted Spindles (Woollen)	Thousand No.	412	419	426	426	437	437	437	437

Source: Compendium of Textile Statistics, 2005

Table, 4.10 gives the status of textiles mills in India after the trade policy reforms. Textile mills, excluding the Small Scale Industry (SSI) sector, do not show a notable increase in terms of number in India subsequent to quota elimination. Though, there is an overall increase in export of textile and garment in India, the share of mill sector, however, has decreased considerably. It could be attributable to the decline in the number of spinning and composite mills in India due to the closure of mills during 1990s. Number of mills in the non SSI sector has declined to 1780 during 2005-06 from 1824 in 1998-99 (Table, 4.10). The decline in the number of textile mills also indicates the abrupt shift of textile production from the formal to the informal sector. Many scholars in India attribute the decline of mill sector to the trade policies and its implications on the domestic textiles policies. Breman (2001) argued that the new textile policy, which is accompanied by the elimination of government regulations, removed the restrictions on the organisation of production in the sector and led to the closure of many textiles mills in the country. It is

estimated that in Ahmedabad itself the closure of textile mills accounted for the loss of 10,000 jobs in the nineties (Ibid, p. 4804). Also the closing down of the textile mills in Mumbai has led to the expansion of the informal sector to some extent as job losers from the textile industry started finding employment in the informal sector (Mahadevia, 2001). Exclusive weaving mills, spinning mills and powerlooms in the non-SSI sector, however, shows an increase in number over years.

Table, 4.10: Textile mills (Non - SSI)

Item	Unit	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 (P)
Spinning Mills (Non-SSI)	No.	1543	1565	1565	1579	1599	1564	1566	1570
Composite Mills (Non-SSI)	No.	281	285	281	281	276	223	223	210
Total	No.	1824	1850	1846	1860	1875	1787	1789	1780
Exclusive Weaving Mills (Non-SSI)	No.	199	202	203	207	209	206	202	204
Spinning Mills (SSI)	No.	901	921	996	1046	1146	1135	1161	1173
Powerloom Units	Lakh No.	3.58	3.67	3.74	3.75	3.80	4.13	4.26	4.34

Source: Compendium of Textile Statistics, 2005

### Trends in Production and Export

Production of textiles and garments in India is largely carried out in the in mill sector, handlooms, powerlooms, hosiery and *khadi*, wool and silk segments of the supply chain. Table, 4.11 gives the trend of production of clothes in India under these segments from 1990 to 2006. Production of clothing in India shows an overall increasing trend and it is estimated that total production increased to 48826 million square metres in 2005-06 from 23330 in 1990. Among various segments, power loom sector accounts for the major share of production. It is obvious from the table 4.11 that much of the production in clothing in India is carried out in the power loom sector followed by hosiery and handlooms. As indicated above, the mill sector, which constituted a major share in production and organised employment, shows a



declining trend in production. As per the official sources, production of clothes in the mill sector declined to 1673 million during 2005-06 from 2589 during 1990-91.

Table, 4.11: Sector wise production of cloth (Million Sq.Mtrs)

Year	Mill	Handloom	Powerloom	Hosiery	Khadi, Wool & Silk	Total
1990-91	2589	4295	13348	2696	402	23330
1991-92	2376	4123	13262	2827	390	22978
1992-93	2000	5219	14644	3182	430	25475
1993-94	1990	5851	15994	3637	426	27898
1994-95	2271*	6180	15976	3748	431	28606
1995-96	2019*	7202	17201	5038	498	31958
1996-97	1957*	7456	19352	5533	540	34838
1997-98	1948*	7603	20951	6394	545	37441
1998-99	1785*	6792	20689	6277	584	36127
1999-00	1714*	7352	23187	6374	581	39208
2000-01	1670*	7506	23803	6277	581	40256
2001-02	1546*	7585	25192	7067	644	42034
2002-03	1496	5989	26109	7868	-	41462
2003-04	1433	5581	28045	7874	-	42933
2004-05	1493	5705	28704	9089	-	44991
2005-06 (April-March)	1673	6108	30627	10418	-	48826
2006-07 (April-March)	1673	6108	30627	10418	-	48826

\*including viewing units

Source: Textile Commissioner, Govt. of India, various years

Tables, 4.12 and 4.13 detail the trends in garment export from India from the period of quotas and import restrictions to quota elimination (1960-61 to 2006-07). Table, 4.12 shows that export recorded a sluggish growth however steady growth from 1960-61 to 1980-81. The rapid surge in export in all segments of garments occurred between 1990 and 2000, which is the phase of progressive quota elimination under MFA. However, export subsequent to the period of complete phase out of MFA shows mixed results. It is estimated that there is an overall increase in export from India for textiles and clothing together (See table, 4.3). Although export marked an increase in the post quota regime, segment wise data reveals that export of ready made garments, cotton textiles, silk and handicrafts declined during 2006-07.

Table 4.12: Exports of textiles-I (US\$ million)

	1960-61	1970-71	1980-81	1990-91	1999-2000	2000-2001
Textile Fabrics & Manufactures (excluding handmade garments)	153	192	1179	3807	9272	10908
Cotton yarn, Fabrics, Made-ups etc	136	188	516	1170	3090	3509
Readymade Garments of all Textile Materials	2	39	696	2236	4765	5577
% of RMG to Exports of Manufactured Goods	0.33	3.82	14.69	16.9	16.19	15.8

Source: Economic Survey, 2001-02

Table, 4.13: Export of textiles-II (US\$ million)

Item	2004-05	2005-06	2006-07 (P)	April- October April-Oct'07 (P)		Growth 2006-07 (%)
Ready-made garments	6,024.5	7,986.4	8,075.6	4643.6	4413.9	-4.95
Cotton textiles	3,544.2	4600.8	5,485.0	2817.0	2816.3	-0.03
Wool & woollen textiles	417.1	455.9	445.5	271.3	377.5	39.14
Man-made textiles	2,050.7	2,039.6	2,361.2	1328.5	1689.9	27.20
Silk	594.6	693.3	689.6	395.4	384.8	-2.68
Handicrafts	1,013.9	1,314.5	1,259.2	803.8	719.2	-10.52
Coir & coir manufactures	105.6	133.4	156.4	80.5	92.2	14.62
Jute goods	276.3	296.3	257.5	176.4	179.0	1.48
Grand Total	14,026.7	17,520.1	18,729.9	10,516.5	10,672.8	1.49

Source: DGCIS (2008)

The mixed results in the trends in production and export of textiles and clothing indicate the intra-sectoral shift in the industry in terms of production organisation. Decline of mill sector evidences the shift of focus of production from formal to informal sector and the process of casualisation of labour. Likewise, negative growth in the production and export of traditional textile sectors of silk and handlooms indicates the decline of traditional garment sector, which provides employment for a considerable number of people. This shift is also followed by notable changes in labour relations as workforce in the sector often has been changed to wage workers, largely in the informal sector, from self employed. Likewise, workers in the formal mill sector have been relocated to informal sectors. The impact on labour relations due to the changes in production organisation in the sector after MFA phase out could be better analysed with the macro and micro level data on workforce composition, wages and conditions of work.

## Employment and Workforce Composition

Textile and garment industry in India is a highly labour intensive one, which provides employment to a large number of workers. The Wage Survey of the Textile and Garments Industry by the Labour Bureau, Government of India, in 1994-95, estimated the total workforce in textile and garments to be about 2.46 lakhs of which 45.27 per cent were men and 54.73 percent women. In 1992-93, the Indian Institute of Foreign Trade (IIFT) had estimated the direct employment in the apparel industry in India as around 20 lakh in 1992-93. Table, 4.14 gives the official overall estimation of employment in the textile sector in India as on March 2006. As per the official estimates, total number of workers in the textile sector across all categories is 33.17 million as on March 2006. Employment in the garment sector (ready made garments, including knit wear), has been estimated as 5.57 million. Handloom, powerloom and handicraft are the other labour intensive (in terms of employment) segments in the textile sector in India.

Table, 4.14: Industry-wise employment in textile sector in India-2006

Sector/Industry	Employment (In Million. Nos.)		
	As on March 2006	Projected for the terminal year of the Eleventh Plan	Increase
Cotton/Man-made Fibre/Yarn Textile/Mill Sector (including SSI spinning & exclusive weaving units)	0.94	1.4	0.46
Man-made Fibre/Filament Yarn Industry (including texturising industry)	0.16	0.24	0.08
Decentralised Powerlooms Sector	4.86	5.08	0.22
Handloom Sector	6.5	7	0.5
Knitting Sector	0.43	0.45	0.02
Processing Sector	0.29	0.44	0.15
Woollen Sector	1.5	3.2	1.7
Ready Made Garment Sector (including Knitwear Sector)	5.57	11.22	5.65
Sericulture	5.95	7.7	1.75
Handicraft Sector	6.57	8	1.43
Jute Industry			
(i) Organised Jute Industry	0.26	0.26	0
(ii) Decentralised Jute Industry	0.14	0.2	0.06
Total	33.17	45.19	12.02

Source: Ministry of Textile (2008)

Disaggregate level information of employment in the unorganised and organised textiles and garment sectors can be obtained from the estimations of NSS and Annual Survey of Industries (ASI) respectively. Tables, 4.15 and 4.16 detail employment in the informal sector based on the estimations of NSS under 50<sup>th</sup>, 55<sup>th</sup> and 60<sup>th</sup> rounds. Estimations included all workers who had been working in own account enterprises, establishments, proprietary and partnership enterprises and seasonal enterprises and workers all who participated full time or part time in the activity of the enterprise, who may or may not receive wages, all hired workers, apprentices, paid or unpaid, and all unpaid household workers/helpers who were associated with the activities of the enterprise. Estimations based on principal status of workers<sup>23</sup> revealed that there was a considerable increase in employment between 1993 and 2004 in the unorganised garment sector, indicating the trend of informalisation in the sector.

In the principal status category, number of male workers increased by 3043804 in absolute numbers between 1993 and 2004 and the corresponding increase of female employment was 1235941 in absolute numbers (Table, 4.15). What is striking here is that though there was an increase in absolute numbers, share of female employment in the principal status declined. Conversely, female employment was high in the estimations of subsidiary status of workers,<sup>24</sup> indicating the trend of concentration of female employment in the non-paid or highly informal conditions of work. Estimations in the 61<sup>st</sup> round also proved to the trend of growing employment in the informal sector. Table, 4.16 reveals that distribution of casual workers in textile products and apparels amounted to 22.7 and 7 percent respectively in 2004-05.

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<sup>23</sup> NSS classification of principal status of workers is based on the status of the activity (or non-activity) on which the person spent a relatively longer time of the preceding year. The activities pursued by a person are grouped into three broad categories: (a) working or employed (b) seeking or available for work (i.e. unemployed) and (c) not in the labour force.

<sup>24</sup> NSS classification of Subsidiary Status of workers refers to those who would be characterised as unemployed according to the usual status definition, but pursued some activity in a subsidiary capacity. As per this definition, the person is referred to as a subsidiary status worker when this is usually the case.

Table, 4.15: Employment in manufacture of garment, India

Year, NSS round and NIC code	Principal status of workers			Subsidiary status of workers		
	Male	Female	% Share of female	Male	Female	% Share of female
1993-94, 50 <sup>th</sup> round, NIC 265	578672	233307	29	10559	58618	85
1999-2000, 55 <sup>th</sup> round, NIC 181	1672491	430831	20	21048	212702	91
2004, 60 <sup>th</sup> round, NIC 181	3622476	1469248	28	10265	693327	99
Change in numbers between 1993 and 2004	(+) 3043804	(+) 1235941		(-) 294	(+) 634709	

Source: NSS 50<sup>th</sup>, 55<sup>th</sup> and 60<sup>th</sup> rounds, Employment-Unemployment Survey, compiled

Table, 4.16: Percentage distribution of unorganised sector casual and regular workers in manufacturing 2004-05

Industry Group	Male		Female		All	
	Casual	Regular	Casual	Regular	Casual	Regular
Food products and beverages	10.1	11.4	10.8	8.7	10.3	11.1
Tobacco products	2.1	0.5	10.2	18.9	3.9	2.3
Textile products	18.6	14.5	36.7	20.4	22.7	15.0
Wearing apparel	7.5	11.5	5.3	10.9	7.0	11.4
Tanning and dressing of leather	2.5	3.3	0.3	3.9	2.0	3.4
Wood and of products	13.9	4.2	3.3	1.8	11.5	4.0
Chemicals and chemical products	1.3	3.0	5.1	7.2	2.1	3.4
Other non-metallic mineral products	18.6	2.3	17.8	1.4	18.4	2.2
Other Manufacturing	25.4	49.3	10.4	26.8	22.0	47.1
All Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0

Source: NSS 61st Round 2004 -2005, Employment-Unemployment Survey, Computed.

Table 4.17 provides information on factories, number of workers and wages to workers in the organised textiles and garment sector (textile products, wearing apparels, dressing and dyeing of fur) based on the estimations of ASI from 2001-02 to 2004-05. Data shows a slight increase in the number of factories, workers and wages to workers in the organised sector from 2001-02 to 2004-05. However, there is little evidence to establish that this increase contributed to the increase in employment in garment production in the organised sector as whole as the ASI data does not provide information at the disaggregate level. Hence it is difficult to estimate the segment and levels in the organised sector, which recorded increase in

employment and wages. It is important to note that the increase in number of factories could be attributable to the increase in investment, both domestic and foreign, subsequent to the trade policy reforms in India. Nevertheless, when the employment in absolute number and percentage share in organised and unorganised textiles and garment sectors is compared, it is seen that unorganised sector holds the major share of employment in garment production.

Table, 4.17: Principal characteristics of organised textiles, wearing apparel, dressing and dyeing, 2001-02 to 2004-05

Description	Textiles products				Wearing Apparel, Dressing & Dyeing of Fur			
	Year				Year			
	2001-02	2002-03	2003-04	2004-05	2001-02	2002-03	2003-04	2004-05
Factories	12557	12764	13035	13521	3283	3307	3190	3397
Workers	1004848	1001251	1027074	1076480	272524	285544	327510	387606
Total persons engaged	1182124	1178520	1210383	1264427	317089	335559	379137	450175
Wages to workers	445017	438814	444493	480456	86647	96242	108957	139024

Note: Value figures in Rs. Lakhs and others in numbers  
Source: ASI (2001-02 to 2004-05), compiled

### **Impacts on Labour Relations in the Post Quota Regime: Emerging Trends of Casualisation and Feminisation**

Declining trend of organised employment in textile sector evidently indicates the changes in labour relations. Employment in textile mills has been considered as organised sector employment in India. It has been estimated that the closure of mills in India over a period of three years (2003-06) led to the loss of 32668 employments approximately (Table 4.18). It is estimated that from 2003 to 2005, 72 mills all over India were closed down (Table 4.18). Employment loss in this context requires a special mention as it is directly linked to the process of informalisation of labour. Number of mills, which were closed down subsequent to the structural rearrangements, mainly in the post MFA context, is more than the mills, which were closed down during the MFA regime. While the number of mills closed down over a

period of thirteen years from 1985 to 1998 was 21,<sup>25</sup> it was 72 over three years from 2003 to 2005. This indicates that the trade and labour policies in general and quota elimination in the post MFA context in particular could to a certain extent be attributable to closure of textile mills in India. For instance, Textiles mills in several concentrated centres of production in Bombay, Ahmedabad and Delhi have either closed down or down sized the labour force due to various reasons.

It should be noted that the maximum number of mills was closed down in the states of concentrated production centres such as Tamil Nadu and Maharashtra. The retrenched workers from these industries eventually enter into the informal labour market. The employment situation in Mumbai, which is one of the major centres of garment production, reveals that it declined substantially over a period of thirty years. The closing down of the textile mills in Mumbai has led to the expansion of the informal sector to some extent as job losers from the textile industry started finding employment in the informal sector (Bhowmik and More: 2001). In 1961, the organised workers in Mumbai accounted for 65 percent of the total work force in the city and the share of unorganised sector in the total employment was 35 percent (Breman, 2001; *op. cit.*). The situation was reversed in 1991 and unorganised sector constituted nearly 65 percent of the total workforce of the city and organised sector employment diminished to 35 percent (Ibid, p. 4823).

The production base, subsequently, was shifted to small scale and unorganised sectors through outsourcing and subcontracting of production where labour regulations are non-existing or weakly enforced due to various reasons. For instance, the Textiles Committee Survey in 1990 revealed that 80 percent of the units in the Indian garment export sector were composed of small and cottage industries in the informal sector which were contracted out by the merchant exporters. In short, the shift of production base of garment export towards the traditional unorganised or the newly created informal sectors rearranged production organisation from centralised

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<sup>25</sup> This has been reported in the report of Standing Committee on Labour, 2005-06. For more details, see Standing Committee on Labour (2005-06).

formal arrangements to decentralised informal arrangements at multiple levels to a greater extent. Production organisation has also rearranged labour relations in the sector, reflected as the shift of status of workers from permanent to casual or contract and gendered division of labour.

Table, 4.18: Number of textile mills closed in India, 2003-06

State	Year/Mills			Approximate number of workers affected
	2003	2004	2005	
Andhra Pradesh	7	-	1	1753
Assam	1	-	-	1318
Haryana	1	1	-	68
Karnataka	1	-	-	990
Kerala	4	-	-	1363
Madhya Pradesh	2	-	-	403
Maharashtra	9	2	2	8337
Orissa	1	1	-	1349
Rajasthan	1	1	-	111
Tamil Nadu	26	7	1	10294
West Bengal	2	-	-	928
Uttar Pradesh	-	-	2	2879
Gujarat	-	5	-	2875
Total	55	17	6	32668

Source: Standing Committee on Labour, GOI, 2005-06

Indications of shift in the status of workers and gendered division of labour in the garment sector could be understood from the work participation rate of male and female workers in the organised and unorganised garment sector. The data at disaggregate level as estimated in NSS 50<sup>th</sup>, 55<sup>th</sup> and 60<sup>th</sup> rounds also showed the increasing trend in male and female work participation in absolute numbers, both in the principal and subsidiary statuses (Tables 4.15 and 4.16). More strikingly, female workforce participation was found to be more in subsidiary status by 2004. It must be noted that share of female workers to total workers in the subsidiary status category increased to 99 percent in 2004, indicating almost complete feminisation in the subsidiary category (Table 4.15). NSS estimations also revealed that female



employment is comparatively high in the informal garment sector as a whole and percentage distribution of casual female workers stood at 36.7, indicating feminisation of labour in the informal garment sector.

Changes in labour relations in the post MFA regime are also found to be tuned largely towards feminisation of labour at the lower strata of work. The division of core-periphery levels in the firm based units exclude women workers from the skilled work. For instance, in the centralised production centres and the home based production settings of Delhi and Bombay, women workers were mostly engaged in specific occupations of checkers, multi purpose helpers and thread cutters (Batra, 1996). Mezzadri (2006), based on the study conducted in Chennai and Bangalore, noted that garment production has always been linked with feminisation of labour. The study examined the assumption that feminisation has often been based on appalling labour conditions and gender wage differentials. In agreement with this assumption, the study accounted that the politics of production in the garment sector is gradually changing and employers are deliberately hiring female workers. It also showed how formation of class solidarity is purposefully resisted by strategies for labour control adopted by the employers. Based on the macro level and micro level data, it could be, hence, argued that there is a gendered division of labour existing in the lower periphery layer of work organisation with a strong preference for women in the garment export sector in India. Also, there exists a linkage between casualisation and feminisation of labour in the sub-contracted informalised production chain of garment export sector in India.

### **Wages and Working and Living Conditions**

Data from various states show that wages in the garment industry are markedly low compared to other manufacturing sectors. Average minimum wages in the sector as per the occupational wage survey conducted in 1995-96 are Rs.55.09 and 40.38 for male and female respectively (Table 4.19). There were variations in wages across states. According to the survey, the highest minimum wages in the industry prevailed in Maharashtra with Rs.81.14 for men and 60.05 for women. Delhi was second highest with Rs.66.26 for both men and women. Lowest wages for workers

were reported from the states of Tamil Nadu with Rs.25.10, Karnataka with Rs.40.26, Gujarat with Rs.45.59 and Uttar Pradesh Rs.49.98.

The overall average maximum daily wages paid to the workers in the garment sector according to the occupational wage survey, 1995-96 was Rs.58.53 (Table 4.19). Highest maximum average daily wages for workers were reported from Maharashtra and Delhi with Rs.99.13 and Rs.81.38 respectively. Tamil Nadu and Karnataka were the two States where the maximum daily wages for workers were less than the national average. The wage data also gives information on the existing male-female wage differential in the sector. Except Delhi region, male-female wage differential were reported to be significantly high in the garment sector. As per the occupational wage survey 1995-96, the differences in average minimum and maximum daily wages were Rs.9.76 and Rs.31.15 respectively.

Table, 4.19: Average daily minimum and maximum wages in the garment industry-  
Reference period 1994-95

State	Average daily minimum wage rate (Rs.)			Average daily maximum wage rate (Rs.)		
	Men	Women	Overall	Men	Women	Overall
Tamil Nadu	33.63	22.37	25.10	52.35	31.71	36.72
Karnataka	48.81	37.12	40.26	68.28	43.89	50.44
Delhi	66.01	67.61	66.26	80.83	85.47	81.38
Uttar Pradesh	49.85	50.24	49.98	58.15	59.32	58.56
Maharashtra	81.54	60.05	74.16	110.72	76.95	99.13
Gujarat	55.09	40.38	45.59	101.18	41.92	62.94
Other States	51.71	42.73	47.80	69.71	51.72	61.88
Total	57.15	35.60	45.36	75.58	44.43	58.53

Source: Compiled from Occupational wage survey, Fifth round and report on Textile and Garment Industry, 1995-96

Table 4.20 gives data at disaggregate level on wages of male and female workers in various categories of occupation in the sector from the Occupational Wage Survey, 1995-96. The survey revealed that piece rated workers received more wages than that of time rated workers for all occupational categories. The male-female wage differential for the same work could also be made evident from the occupational wage survey. Even though, wages for male and female in all categories are notably less, wages for women are found to be substantially lower than men. For instance, in 1995-1996, daily wage based on time rate of specialist tailor was Rs.35.02 for women where as it was 46.35 for men.

Table, 4.20: Average daily wage rates for time rated and piece rated workers by main occupation in textile garment industry (1995-96)

Occupation	Average daily wage rates for time rated workers (Rs.)				Average daily wage rates for piece rated workers (Rs.)			
	Minimum		Maximum		Minimum		Maximum	
	Men	Women	Men	Women	Men	Women	Men	Women
Tailor (specialist)	46.35	35.02	54.43	42.74	68.24	43.45	125.04	64.24
Helper	47.20	30.22	56.58	38.23	61.59	-	66.18	-
Checker	51.37	37.27	60.97	46.31	33.86	17.72	33.86	22.58
All occupations	55.65	35.13	68.98	43.24	67.25	47.63	119.93	74.78

Source: Occupational wage survey, 1995-96, adapted from Mazumdar, 2004

Evidences from relevant literature also reinforces the interconnectedness of changes in the production and labour relations and appalling conditions of work in the garment industry in India. Several studies have indicated the trends of feminisation, fall in real wages and appalling conditions of work in the garment industry in India. Study by National Labour Institute (2003) revealed the trend of feminisation and fall in real wages in the garment units of Special Economic Zone in NOIDA. Similarly, the study by National Applied Council for Economic Research (2003) highlighted the concentration of women workers in the low end jobs in the garment sector in Delhi region. Mazumdar (2004) noted that new technology, increasing imports and the stringent production practices in the sector result to intensification of work in the garment export sector in the post MFA regime in a study on the garment export sector in Delhi. Mazumdar argued that the development such as shift from piece rated to time rated wage system were deliberately organised to cut the wages of women workers in the sector (Ibid, p. 122). Krishnamoorti (2006) revealed that there were prevalence of long working hours without statutory overtime wages, infringement of the provisions of Factory Act including, leave, paid holidays, maternity benefits and bonus in a study conducted in the concentrated garment export centres of Mumbai, Tirupur and Delhi. The working conditions in the units were also reported to be abysmal, especially in sub contracted units. The study also explicated the health risks associated with the employment in the units. Krishnamoorti noted "injuries that occurred due to the nature of the job arose in tailoring and cutting and took the form of 'needle prick injuries' or the finger getting cut. For any kind of workplace injury, except for the 3 percent who were covered under ESI, first aid was the maximum assistance provided. Everything else had to be

taken care of by the workers themselves. Body ache and pain in the legs were frequently reported. Other mentioned occupational health problems besides headache, difficulty in breathing, liver and digestion problem” (Ibid, p. 162).

Swaminathan (2002) noted that workers were assigned large targets like stitching of 800 pieces a day in garment export units, which necessitated over work among the women workers of garment units in Madras Export Processing Zones. Swaminathan highlighted that for most of the workers it led to reduction of salary as they were unable to achieve the targets. The study also reported the prevalence of chronic and acute respiratory problems such as asthma, prolonged cough and other upper respiratory infections in these units due to appalling physical conditions of work that prevailed at the workplace (Ibid). George (2003, a) noted that the enforcement of significant labour laws and facilities such as crèches, canteen, hospitals, toilet, maternity benefits, minimum wages, retrenchment compensation and bonus were absent in the garment production units in the Special Economic Zone in Kochi. The study also revealed that the work in the units involved long hours with huge target. Most of the workers in the unit where the study was conducted were reported to be suffering from acute and chronic disabilities attributable to intensification of work. Reported morbidities of workers in the units ranged from acute problems like cough and cold to chronic diseases like pile and ulcer along with occupational health problems.

Thus both macro and micro level data shows that elimination of quota in the trade of textiles and clothing coupled with trade policy reforms in India further informalised the garment export sector. Though there was an increase in export, much of the portion of employment was generated in the informal sector. Wages, as whole in the sector, is declined along with conditions of work. In short, the data evidences that working and living standards have notably deteriorated in the sector due to higher levels of informalisation.

### **Conclusion**

Examination of trade in textiles and clothing revealed that the implications of quota restrictions and trade under pre and post MFA and ATC environments were different for exporting and importing countries. Quota eliminations have had mixed impacts on export, employment and wages in exporting countries. For underdeveloped

countries, MFA initially imposed either no restrictions or less restriction. Therefore, initial period of MFA had resulted positive impacts on industrial growth and employment in some of the underdeveloped countries like Bangladesh. Nevertheless, restrictions were progressively imposed under MFA as soon as underdeveloped countries such as Bangladesh increased their export share. Employment showed significant variations across exporting countries during the pre and post quota elimination phase. However, it is important to note that, countries where employment showed an increase, a significant chunk was generated in the informal sector largely attributable to the phenomenon of flexibilisation of labour market and the scattered nature of production organisation of the industry in general. Analysis of impacts of quota elimination on employment in various countries leads to the observation that employment growth in textiles and clothing sector is directly proportional to growth of export. Data reiterated that the growth of employment, whether in formal or informal sector was reported invariably with countries, which marked an increase in production and export. Simultaneously, it is also observed that employment is vulnerable to fluctuations in export in the developing countries. This could reflect on labour relations, wages and working condition of workers in the sector in many ways. Major change is the informalisation of labour in these countries for reducing cost of production and work intensification due to the pressure from the buyers.

On impact on wages in general, it is observed that there is an overall trend of decline of wages in the textile and clothing sector, prior and subsequent to quota elimination in the major exporting countries. Also micro level studies conducted in various countries showed that in contrast with the increase in wages in the textiles and clothing sector, there was a declining trend in wages for workers, especially real wages. These mixed results on the relationship between export and wages for workers point to the fact that export increase may not be a necessary condition for better wages in textiles and garment sector as long as the industry relies on cheap labour. Furthermore, it gives an indication that export performance is largely supplemented by the informal sector where cost of production is considerably low due to the less level of regulation.

Garment export sector in India witnessed significant changes in production organisation and production relations in the post MFA period. especially after the

introduction of trade policies. Development such as outsourcing of production from the developed to the developing countries is followed by the introduction of these policies. Government of India, by the introduction of trade policies such as export promotion, trade liberalisation and deregulation of labour gave way to labour market reform through flexibilisation and dismantling of labour laws for gaining from international industrial outsourcing. It evidently resulted in casualisation and feminisation of labour in the sector. Trends in production and export of textiles and garments provided indications with regard to rearrangements in production organisation, labour relations and employment. The post MFA production organisation also showed significant changes in labour process in the sector. Trends in production and export of textiles and clothing indicated the intra-sectoral shift in the industry in terms of production organisation. Decline of mill sector clearly evidenced the shift of focus of production from formal to informal sector and the process of casualisation of labour. Likewise, downward trend in the production and export of traditional textile sectors of silk and handlooms indicated the decline of traditional garment sector, which provided employment for a considerable number of people. This shift is also followed by notable changes in labour relations as status of workforce in the sector has been changed to wage workers from self employed in the informal sectors. Likewise, workers in the formal mill sector have been relocated to informal sectors due to the decline of mill sector.

Estimations of employment based on principle status of workers revealed that there is a considerable increase in employment in the unorganised garment sector, reinforcing the trend of casualisation in the sector. What is notable here is that though there was an increase in absolute number, share of female employment in the principal status has declined. Conversely, female employment was found to be high in the estimations of subsidiary status of workers, indicating the trend of feminisation in the non-paid or informal conditions of work. Higher share of female workforce in the subsidiary status of workers reinforced that women workers are largely working in the informal production settings, especially in the home based settings. These trends possibly justify the argument that labour is in a process of higher level of casualisation in the post MFA period aimed at reducing the cost of production.

Studies reflected on the conditions of work in the garment sector reiterated the associations of informal employment and appalling conditions of work. Impacts on conditions of work were found to be varying at different degrees. It was noted that the work in garment production involved physically dangerous and psychologically stressful conditions due to long hours, huge target, exposure to polluted environment and intrinsic job insecurity. Furthermore, stressful conditions such as pressure of workload, pressure of retaining job and stress due to illness were reported with many workers in the sector. Inadequate food intake and unusual diet were reported to be increasing the vulnerabilities of workers to ill health. Review of relevant studies evidenced that the social determinants of workplace health such as control over the working system, freedom of expression, interaction with co-workers, equity and fairness and level of organisation were also found to be less entitled to workers in the informal garment production environments. In short, it could be reiterated that heightened competition under the new system of trade and flexibilisation of production and labour relations possibly pass the risks of competition to workers. Next chapter examines how such risks in the rubric of an existing flexible labour market in India are translated to informality in labour relations, employment and conditions of work for workers by studying informalisation in the formal garment export units in Delhi.

## **Informality, Labour Practices and Conditions of Work in the Formal Garment Export Units: A Micro Level Analysis**

The phenomenal expansion of export oriented garment sector, subsequent to quota elimination under the Agreement of Textiles and Clothing and the introduction of trade policies in India is well documented. There have been notable changes in labour relations, primarily due to the shift of production from smaller informal units to larger industrial setups, on one hand and to further decentralisation of production to home based and other informal environments, on the other. Though there is a shift of production to larger industrial set-up, such 'centralisation' or 'formalisation' of production is characterised by higher levels of informality, largely by adopting flexible production practices with engaging casual and contract workers. This change in production organisation towards informal environments is grounded on the assumption that informality is the fundamental tool through which employers realise cost minimisation.

Informality in the formal garment export sector here is viewed from the standpoints of the domestic policy reforms towards flexibilising labour market and the integration of production into the international markets through commodity chains,<sup>1</sup> more specifically, buyer driven value chains.<sup>2</sup> It is discussed in the previous chapters that labour market reforms have been an indispensable part of capital investments in India and there have been definite measures towards flexibilising labour market by amending significant legislations. This has accentuated the process of informalisation in general and a larger segment of export oriented production in garment sector has been shifted to informal environments. For instance, trends in

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<sup>1</sup> As originally defined by Hopkins and Wallerstein, a commodity chain is "a network of labour and production processes whose end result is a finished commodity". For details, see. Hopkins, K. Terence and Wallerstein, Immanuel (1986).

<sup>2</sup> Value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. Buyer-driven chains refer to those industries in which large retailers, marketers, and branded manufacturers play the pivotal roles in setting up decentralised production networks in a variety of exporting countries, typically located in the third world. This pattern of trade-led industrialisation has become common in labour-intensive, consumer goods industries such as garments, footwear, toys, handicrafts, and consumer electronics. For more discussion on garment and apparel buyer driven supply chain, see Gereffi (2002).



production and export of textiles and garments indicated informality in production practices, labour relations and employment in the Indian garment sector.<sup>3</sup> Similarly, it is also established that employment is vulnerable to fluctuations in export in the developing countries, which could possibly reflect on labour relations, wages and working condition of workers in the sector in many ways.<sup>4</sup> Integration of the industry into international market furthermore contributes to the process of informalisation for realising cost minimisation.

Given this backdrop, this chapter focuses on informality in organisation of production in the formal garment export units and examines how it is multiplying the vulnerability of workers in the context of changing labour relations and its overriding associations with declining living conditions and well being of workers. By examining production practices, labour practices and ramifications of informality on employment, wages, conditions of work and level of organisation and collective bargaining in the selected formal garment export units from Mangolpuri Industrial area, Delhi, the chapter identifies the associated conditions of adverse health outcomes of casual employment in the formal export oriented garment sector. A primary survey was conducted among workers in the formal export oriented garment production units in Mangolpuri, Delhi. The survey covered 156 workers out of 1680 from five export oriented garment units.<sup>5</sup>

### **Profile of the Workforce**

Garment export sector in Delhi is vastly labour intensive. Workforce in the sector is distributed in the formal centralised production units, small workshops, informal enterprises/establishments and home based settings. The present study focused on the formal export oriented garment production units in the Delhi region. The sample for the study consisted of 156 workers from about five production units in Mangolpuri Industrial area, Phase-I and II, Delhi. Out of 156 workers selected for the study, 99 (63.46 percent) were male and remaining 57 (36.54 percent) were female workers. All workers were migrants and almost half of them were from Sivan, Chapara, Darbhanga, Bhagalpur, West Champaran, Patna, Madhubani and Muzaffarpur districts of Bihar and Bulandshahar, Ghaziabad, Kanpur, Allahabad

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<sup>3</sup> For details, see Chapter 4, pp. 97-99

<sup>4</sup> For details, see Chapter 4, pp 110-113

<sup>5</sup> For details on primary study, see Chapter 2, pp. 31-35

and Gorakhpur districts of Uttar Pradesh. The remaining were from the States of West Bengal, Rajasthan, Orissa, Uttaranchal and a very few from Nepal.

Sample consisted of workers in the age range from 15-20 to 30-35. A significant number of male workers were of the age between 25 and 35. Out of 99 male workers, 42.42 percent were between the age of 25 and 30 and 31.31 percent were between 30 and 35 (Table, 5.1). Similarly, corresponding to the general trend of preference for young female workers, majority of female workers was between the age of 15 and 30. Out of 57 women workers from the sample, 17.53 percent were in the age range of 15 to 20, 24.56 were in the age range of 20 to 25 and 29.82 were between 25 and 30( Table, 5.1). Most of the workers from the sample were married, however, percentage of unmarried workers was found to be relatively high among women workers. While 73.74 percent out of 99 male workers were married, the corresponding percentage was 56.14 out of 57 women workers. It may be due to the fact that around 17 percent of the women workers were in the age group of 15 to 20. It is also important to note here that there is a strong preference for unmarried women as well as women with fewer obligations in the production jobs in garment industry.

Table, 5.1: Age and sex wise distribution

Age of the respondents	Sex of the respondents				Total	
	Male		Female		Count	%
	Count	%	Count	%		
15-20	0	-	10	17.53	10	6.41
20-25	26	26.27	14	24.56	40	25.64
25-30	42	42.42	17	29.82	52	33.33
30-35	31	31.31	16	28.00	54	34.62
Total	99	100.0	57	100.0	156	100.0

Source: Primary Survey, 2006-07

Table, 5.2: Marital status and sex wise distribution

Marital Status	Sex of the respondents				Total	
	Male		Female		Count	%
	Count	%	Count	%		
Never married	26	26.26	23	40.35	49	31.41
Married	73	73.74	32	56.14	105	67.31
Widowed	0	-	2	3.51	2	1.28
Total	99	100.0	57	100.0	156	100.0

Source: Primary Survey, 2006-07

Majority of workers in the sample were literate in terms of formal education and functional knowledge in reading and writing. Out of 156 workers interviewed, 92.95 percent were reported to be literate (Table 5.3). Strikingly, in sharp contrast with the general trends, most of the women workers were literate. For instance, out of 57 women workers in the sample, 84.21 percent were found to be functionally literate. Barely a minute percentage of the women workers in the sample were reported to be non-literate. Table 5.4 details the level of formal education of workers. Most of the workers were formally educated up to secondary level and a few were educated more than secondary level. Out of 145 workers, who had formal education, 29.66 percent completed primary education, 50.34 completed secondary and 18.62 had education up to higher secondary or more. It must be noted that out of 48 women workers who had formal education in the sample, 85.42 were reported to have completed primary education.

Table, 5.3: Education wise distribution-1

Education	Sex of the respondents				Total	
	Male		female		Count	%
	Count	%	Count	%		
Literate	97	97.98	48	84.21	145	92.95
Non-literate	2	2.02	9	15.89	11	7.05
Total	99	100.0	57	100.0	156	100.0

Source: Primary Survey, 2006-07

Table, 5.4: Education wise distribution-2

If literate	Sex of the respondents				Total	
	Male		Female		Count	%
	Count	%	Count	%		
Primary	22	22.69	21	43.75	43	29.66
Secondary	53	54.64	20	41.67	73	50.34
Higher Sec	16	16.49	6	12.5	22	15.17
Above High Sec	4	4.12	1	2.08	5	3.45
Informal	2	2.06	0	-	2	1.38
Total	97	100.0	48	100.0	145	100.0

Source: Primary Survey, 2006-07

Like other sectors, jobs in garment sector could be operationally categorised as 'unskilled', 'semi-skilled', 'skilled' and 'highly skilled'.<sup>6</sup> Unskilled category mostly includes workers who are working as helpers and peons and semiskilled category includes workers who perform jobs such as button holding, button stitching, pattern tracing, ironing and packing. Skilled category includes jobs such as tailoring, over locking, checking, washing and other ancillary jobs such as driving and highly skilled category subsumes a range of workers including master cutters, master tailors, designers and supervisors.

Table 5.5 details the category wise distribution of male and female workers in the sample. Most of the workers in the sample were in the semi-skilled categories. Workers who were engaged in button stitching, button holding, ironing, packing, pattern tracing and packing, which come under the semi-skilled category, jointly formed 50 percent of the total sample workforce. Percentage share of women workers in the semi-skilled category was notably higher than that of men. Out of total women workers, nearly 86 percent were in the semi-skilled category whereas percentage share of male semi-skilled workers to the total male workers was around 38 percent in the sample. In the semi-skilled categories, concentration of women was found in the jobs of button holding and button stitching with 46.86 and 19.23 percent respectively to the total share of women workers. Whereas concentration of men in the semi-skilled categories was found high in the jobs of ironing, pattern tracing and packing with 21.21, 5.05 and 3.03 percent respectively to the total share of male workers. Share of skilled category workers to the total sample was nearly 35 percent. Over-lockers, tailors, checkers and final checkers were the skilled category workers in the sample. It must be noted that concentration of male workers in the skilled categories was particularly high and all most all the workers in the skilled category were males in the sample. Number of male workers was found to be relatively high in unskilled categories of work as well. For instance, out of 156 workers, about 16 percent were unskilled workers (peon and helpers) and share of male workers in the unskilled categories to total male workers was nearly 19 percent. Unskilled female workers constituted nearly 11 percent of the total female workers in the sample.

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<sup>6</sup> Categorisation of unskilled, semi-skilled, skilled and highly skilled workers of Govt. of Delhi for fixing and revising minimum wages is adopted here. As per this classification peon, helper, sweeper, *chowkidar*, thread cutter, layers are unskilled, button-holders, *kaj* operator, button stitcher, over-lockers, pattern tracers, ironing, packers are semi-skilled, tailors, checkers, driver, washer men are skilled and cutter or master tailor and designer and any other worker, more than skilled and non-matriculates clerical & non-technical supervisory staff are highly skilled categories of workers in the garment industry.

The category wise workforce distribution does not provide a clear picture of gender preferences in employment in the sector. In congruence with the traditional male domination in the garment sector in Delhi,<sup>7</sup> strength of male workers was found to be higher than female in the production units in Mangolpuri, except in certain semi-skilled categories of work, which indeed reflected in the sample. However, within the sample, proportion of female workers was high in semi-skilled categories and insignificant in skilled and unskilled categories of work. What is also striking is that concentration of male workers was prominent in all categories of work and high in semi-skilled and very high in unskilled and skilled categories. It leads to the observation that men and women are equally preferred in the semi-skilled jobs in the garment sector; however, given the less concentration of women in skilled and unskilled categories, they are ‘stereotypically’ positioned more in the semi-skilled and monotonous categories of work than men. Men, on the other hand, are ‘stereotypically’ more positioned in the categories of work such as ironing, checking, tailoring which require ‘fast work’ for ‘long hours’. Furthermore, paralleling to gender preferences, factors such as experience, skill level, nature of work and positions of workers in the labour market could significantly determine the labour preferences in the sector. These factors are examined in the following section of the chapter.

Table, 5.5: Category wise distribution

Category of workers	Sex of the respondents				Total	
	Male		Female		Count	%
	Count	%	Count	%		
Helper	15	15.14	6	10.53	21	13.46
Peon	4	4.04	0	-	4	2.56
Button-holders	0	-	25	43.86	25	16.03
Button-stitchers	0	-	11	19.23	11	7.05
over-lockers	7	7.07	0	-	7	4.49
pattern tracers	5	5.05	0	-	5	3.21
Ironing	21	21.21	1	1.75	22	14.10
Packers	3	3.03	12	21.05	15	9.61
Tailors	8	8.08	0	-	8	5.13
Checkers	18	18.18	1	1.75	19	12.18
Final checker	18	18.18	1	1.75	19	12.18
Total	99	100.0	57	100.0	156	100.0

Source: Primary Survey, 2006-07

<sup>7</sup> NSSO (55<sup>th</sup> round) and ASI (2000) estimations of employment in garment sector showed that, men constituted roughly 96.38 percent of total employment in the unorganised sector and 82.13 percent in the organised sector.

## **Production Practices and Organisation of Work: Informality in the Formal Garment Export Units**

The garment export industry in Delhi has been traditionally based on a decentralised system of production, which involves subcontracting of production at multiple levels. Production is primarily carried out along a value chain; encompassing brands and retailers at the upper end and different types of production environments; ranging from large, medium and small manufacturing units to home based production setups at the lower end. There are factories in the formal sector that produce 'standard items' for big retailers and brands on one hand and on the other, there are wide networks of subcontracting arrangements wherein a parent firm contracts out work to small and medium fabrication units (Mazumdar, 2007). In large factories, entire process of production is carried out from cutting, sewing, dry-cleaning, finishing and to packing. In medium and small units also entire process of production is carried out mostly inside the units after the first layer of subcontracting. In some cases, it further subcontracted to small workshops; employing nearly twenty workers under informal contracts. Home-based setting is the last layer of subcontracting in the entire export oriented production chain, where jobs such as embroidery, button stitching, lace stitching for the final products are carried out.

Similar to this pattern of organisation of production in the Delhi region, garment export units in Mangolpuri were found to be integrated into the buyer driven global production system. The units fall in the second level of sub-contracting, i.e. in the supply chain as major share of production in these units were found to be contracted out from large exporters and manufacturers who are supplying to retailers and brands. Most of the units were either medium<sup>8</sup> or small<sup>9</sup> as per the standard categorisation of

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<sup>8</sup> The medium firms, like the large ones seem to be formal in terms of production but again far less with regard to labour contracts. The crucial difference between large and medium ones is their size, which we defined in terms of plant and machinery and production capacity, turnover and labour employment. The production capacity of these firms range between 5 to 10 thousand pieces a day, with 500 to 2500 workers and 500 to 750 machines. The turnover is below 100 crores. These firms have a big share of in-house production while certain operations such as embroidery, dyeing and printing, stone washing and dry cleaning are almost invariably outsourced. The outsourcing of operations lowers the cost of investment as well as the operating costs as these operations are not required for all orders. Medium firms also have a rising share in the export market.

<sup>9</sup> Small firms are under Rs.10 crores turnover firms with a capacity of 1000 to 5000 pieces a day. They use mostly local machinery, or at times imported machines off-loaded by big firms in favour of more advanced models. These firms are responsible for a major share of exports. The items produced range from blouses, skirts, t-shirts, tops and jackets. The employees in these units are largely on mixed contracts such as the office staff is regular on formal contracts but workers are not. Of the regular workers, masters and cutters are often on more regular contract while tailors are hired on contract as and when required. All of these enterprises are registered with the AEPC.

industrial units in the garment sector.<sup>10</sup> The units were essentially formal as all medium and small units were registered under the Factories Act, 1948. Though, the units are apparently in the formal sector, both medium and small registered production units in Mangolpuri Industrial Area were found to be having core and periphery levels in production. This is practised by fragmenting production units to small sub-units inside the main units. In this division, highly skilled workers and management staff constituted the core where as contract workers in the sub-units, which were managed by labour contractors formed the periphery. Hence it can be inferred that larger part of production process in the formal garment units are informalised. Informality in organisation of work could be better understood by examining the process of recruitment and nature of employment and work contract in the units.

### **Recruitment and Nature of Employment**

There was no 'standard' pattern of recruitment of workers for the production jobs in garment units in Mangolpuri. Conversely, recruitment of workers, especially casual and contract workers were found to be largely done by contractors in an informal way in the units. For instance, most of the workers were recruited by labour contractors, either directly or through workers who were working in the particular unit. It was reported that out of 156 workers, 49.36 percent were recruited directly by labour contractors and 40.38 came to know about the job through other workers who were working in the sub-units under the labour contractors (Table 5.6). A small percentage of workers reported that they were recruited directly by the firm.

Table, 5.6: Selection process

No	Selection process	Frequency	Percent
1	Through workers in the unit	63	40.38
2	Directly approached	16	10.26
3	Contractor	77	49.36
Total		156	100.0

Source: Primary Survey, 2006-07

Prior experience was the foremost criterion of selection of workers for most of the categories of work. It is important to note that formal technical trainings and education were not major preferences for the jobs in the peripheral level in the

<sup>10</sup> Information was obtained from discussion with some of the management personnel and trade unionists

sector, except tasks such as tailoring and cutting. For instance, it was reported that none of the respondents had any formal technical training related to work. However, skill level had been a major criterion for skilled jobs like tailoring, pattern tracing and over locking. Most of the workers acquired the necessary skills largely by having been worked in the sector for a long period. It should also be noted that most of the workers had migrated from places like Darbhanga, Bhagalpur, West Champaran, Patna, Chapra, Madhubani, Muzaffarpur, Kanpur, Bairely, which have been traditional locations of garment production.

Category wise distribution of workers against the level of formal education reveals that education was not a necessary condition for obtaining specialised jobs in garment production; possibly due to the nature of work (Table, 5.7). For instance, workers who were educated up to higher secondary level were found in both unskilled and semi-skilled categories of work. Strikingly, out of five workers, who had education more than secondary level, two of them were found to be working in the unskilled category (helpers) and one in semi-skilled category of button holding. Likewise, out of 22 workers, who were educated up to higher secondary level, two of them were found in unskilled category and the remaining were in semi-skilled categories of button stitching, ironing, pattern tracing and packing. On the other hand, most of the workers in the skilled categories of tailoring, checking and over locking were educated less than secondary level, except for two workers in the checking section. Similarly, a large proportion of workers in the semi-skilled categories were educated up to primary level; reinforcing the inference that formal education is not a necessary condition for workers to be absorbed in any category of job in the peripheral level in garment production units. In precise, prior experience and skills were the necessary conditions of selection of workers only in the skilled categories of work.

Less preference for education in the production line jobs could be seen as the means through which employers are practicing informality at the workplace. It can be explained in the rubric of division of work in the production line. As noted earlier in the chapter, production is organised in such a way that each process of work in the entire production is divided as core and periphery and organised in an assembly line; resembling an indistinct form of 'line production'. In this practice, work is divided into unskilled, semi-skilled, skilled and highly skilled categories. Therefore,



production of a single piece (final product) is not based on the skill level of a single worker, nevertheless a combination of unskilled, semi-skilled, skilled and highly skilled workers in the production line. In this practice of production, employers require large number of unskilled or semi-skilled workers in the periphery level, whose education and skill levels are not significant prerequisites.

Table, 5.7: Education wise distribution -3

Category of workers	If literate										Total	
	Primary		Secondary		Higher sec		Above high sec		Informal			
	C	%	C	%	C	%	C	%	C	%	C	%
Helper	7	19.91	8	10.96	2	9.1	2	40.0	0	-	19	13.1
Peon	0	-	4	5.48	0	-	0	-	0	-	4	2.76
Button-holders	10	23.26	8	10.96	1	4.55	1	20.0	0	-	20	13.79
Button-stitchers	5	11.63	0	-	2	9.1	0	-	0	-	7	4.83
Over-lockers	3	6.98	4	5.48	0	-	0	-	0	-	7	4.83
Pattern tracers	0	-	5	6.85	0	-	0	-	0	-	5	3.45
Ironing	8	18.6	7	9.59	6	27.27	0	-	1	50.0	22	15.17
Packers	4	9.3	8	10.96	3	13.64	0	-	0	-	15	10.34
Tailors	1	2.33	4	5.48	3	13.64	0	-	0	-	8	5.52
Checkers	3	6.98	12	16.44	2	9.1	2	40.0	0	-	19	13.10
Final checker	2	4.65	13	17.81	3	13.64	0	-	1	50.0	19	13.10
<b>Total</b>	<b>43</b>	<b>100.0</b>	<b>73</b>	<b>100.0</b>	<b>22</b>	<b>100.0</b>	<b>5</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>	<b>145</b>	<b>100.0</b>

C-Count

Source: Primary Survey, 2006-07

Informality in production can be comprehended from the forms of employment and nature of contract of work in the periphery level. From the nature and category of work, it is clear that workforce up to the level of tailors was casual or contracted for a short period. Furthermore, most of the workers had direct work contract with labour contractors; reinforcing the practice of contract labour in production chain. For instance, out of 156 workers in the sample, nearly 50 percent reported that they had direct work contract with labour contractors (Table, 5.8). A significant proportion of workers (40.88 percent) did not know whom they had been contracted with or for. However, while cross checking with other workers and contractors, it was understood that these workers were contracted to labour contractors. In effect, a major proportion of workers had been contracted with labour contractors for a

stipulated period in all the units. It was reported that contract workers were not given appointment or contract letter or employment card, either by the labour contractor or the principal employer. For instance, 89.1 percent, out of 156 workers reported that they had not been given appointment letter (Table, 5.9). Rest of the workers in the sample did not have any idea about appointment or contract letter. In short, none of the contract workers in the sample were given formal appointment letter or employment card, mentioning the nature, period, compensation and other details of employment as per the provisions of Contract Labour (Regulation and Abolition) Act, 1970.<sup>11</sup> It leads to the conjecture that labour processes with regard to recruitment and employment in the periphery level of garment export units in Mangolpuri are highly casual and there are violations of significant labour laws pertaining to the appointment of contract workers in the units.

Table, 5.8: Contract details

No	Contract	Frequency	Percent
1	Directly with employer	16	10.26
2	Labour contractor	77	49.36
3	No idea/no contract	63	40.38
Total		156	100.0

Source: Primary Survey, 2006-07

Table, 5.9: Appointment letter

No	Letter	Frequency	Percent
1	Not given	139	89.10
2	No idea	17	10.90
Total		156	100.0

Source: Primary Survey, 2006-07

Period of contract and processes of contract renewal also reflect on the practice of informality in the units. Contract period for workers in the periphery level was found to be varying from three months to one year (Table, 5.10). It was reported from the sample that most of the workers had been working for a period of six to nine months during the course of the primary survey. Out of 156 workers interviewed, 53.85 had

<sup>11</sup> As per the Contract Labour (Regulation and Abolition) Act, every contractor should issue an employment card to each worker within three days of the employment of the worker. For more details, see, Chapter VII, Contract Labour (Regulation and Abolition) Act, 1970, No.M.18011 (2)/71-LW.I/Con.II, GOI.

been found working for a period of six to nine months, 25 percent for a period of three to six months, 13.46 percent for nine months to one year and the remaining 7.69 percent for a period less than three months (Table 5. 10). It is significant to note that none of the workers in the sample had been working for a period more than one year continuously in any unit. In some cases, period of contract was found to be renewed as per the requirements of production in the unit. In some other cases, workers were shifted from one unit to another by the labour contractors, who in fact are suppliers of workers to different units. Though in many cases workers were not given contract letters, it has been found out from other sources<sup>12</sup> that most of the units (principal employers) formally entered in to agreements/contracts with the labour contractors. In most of the situations, terms of employment, period of work and determination of wages of workers were solely the discretion of contractors.

Table, 5.10: Period of work in a single unit

No	Period	Frequency	Percent
1	<3 months	12	7.69
2	3 to 6 months	39	25.00
3	6 to 9 months	84	53.85
4	9 months to one year	21	13.46
Total		156	100.0

Source: Primary Survey, 2006-07

Production practices, work organisation and nature of employment that prevailed in the garment units in Mangolpuri sufficiently reiterate the increasing trend of informalisation of labour in the garment export units towards minimising labour cost. It bears wider significance on wages and conditions of work in the sector. The following section examines the prevailing wages and conditions of work in the light of the general trend of deregulation in the informal production environments as well as specific practices at the firm/unit levels to minimise labour cost.

### **Wages and Working Conditions: Labour Cost Minimisation and Transfer of Risks of International Trade**

Garment units in Mangolpuri are producing for the requirements of retailers and brands of which purchasing orders for production are sub-contracted through large exporting firms and buying houses in Delhi. Since the units are integrated into global market through this supply chain, production is susceptible to the fluctuations

<sup>12</sup> Based on the discussion with trade union leaders.

in orders, prices and changes in the purchasing practices of buyers. Consequently, employment, wages and conditions of work are also subject to fluctuations in the international trade, especially in the prevailing circumstances of absence of a guaranteed market for producers from developing countries after the quota elimination. Given these circumstances, wages and conditions of work with regard to specific practices of labour cost reduction and factors such as lead time and extent of regulations in the units in Mangolpuri are examined in the following section.

Garment manufacturing and export has been one of the traditional sectors where wages have been below living wages<sup>13</sup> in India. The average daily wages for workers of all categories in Delhi region as per the NSSO survey, 1995-96 was around Rs.66 amounting to around Rs.1800 per month. The present study for the period of 2006-07 found that most of the workers received wages between Rs.2500 and 3500 per month.<sup>14</sup> For instance, out of 156 workers, 47.44 percent received monthly wages between Rs.2500 and 3500 and 35.26 percent between Rs.1500 and 2500 across all categories of work (Table, 5.11). While 14.1 percent of workers received monthly wages between Rs.3500 and 4500, a minute percentage of workers received between Rs.4500 and 5500, which was the highest reported monthly wages in the sample. Estimations of monthly wages of workers indicate that there was no significance increase in wages for workers from the wages prevailed in 1995-96 in the garment export sector. Conversely, though wages marked a slight increase in absolute value over a period of 10 years, it was not in commensuration with the general increase in cost of living. Evidences from the primary survey, therefore, underscore the general trend of prevalence of low wages in the sector.

It is also important to note that a significant proportion of women workers received the lowest monthly wages that prevailed in the units. Out of 57, women workers, 66.67 percent were found to have received monthly wages from Rs.1500 to 2500 and all workers who received monthly wages between Rs.500 and 1500 were women. The maximum monthly wages for women was Rs.3500 in the sample across all categories of works. On the other hand, most of the male workers received wages between Rs.2500 and 3500 and the maximum monthly wages for male workers was

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<sup>13</sup> Living wage refers to the income that ensures to enable workers and their family to afford an acceptable standard of living. A living wage is mainly concerned with three criteria; the needs of workers and their families, the cost of living, and social security benefits.

<sup>14</sup> Monthly wage/salary of workers here is the wage/salary received by the worker, including overtime for time rated workers, for the month prior to the month of interview.

Rs.5500 across all categories of work. The male-female wage differential existing in the periphery level of the formal garment export units in Mangolpuri is in congruence with the strong association of informal employment and lower earnings reported for women in India.

Table, 5.11: Monthly earnings of workers

Monthly Earning	Sex of the respondents				Total	
	Male		Female		Count	%
	Count	%	Count	%		
500-1500	0	-	1	1.75	1	0.64
1500-2500	17	17.17	38	66.67	55	35.26
2500-3500	56	56.57	18	31.58	74	47.44
3500-4500	22	22.22	0	-	22	14.1
4500-5500	4	4.04	0	-	4	2.56
Total	99	100.0	57	100.0	156	100.0

Source: Primary Survey, 2006-07

Category wise break-up of monthly wages provides further information on wages of casual workers in the unskilled, semi-skilled and skilled categories of work in the units. Skilled categories of final checkers, tailors and over-lockers in the sample were reported to have received the maximum available salary in the sector. For instance, out of 13 workers, who were in the sections of final checkers, 8 were reported to have received monthly wages of Rs.4500-5500 and remaining five have received Rs.3500 to 4500 (Table, 5.12). Likewise, most of the tailors received monthly wages between Rs.4500 and 5500, which the highest reported monthly wages in the sample. Out of eight tailors in the sample, four received Rs.4500 to 5500 and remaining four received Rs.3500 to 4500 per month. Workers in the unskilled and semi-skilled categories were reported to have received low wages in the sector. Among them, unskilled workers (helpers and peons) received lowest monthly wages. For instance, out of seventeen workers in the 'helper' section, fourteen of them received monthly wages between Rs.1500 and 2500; two of them received between 2500 and 3500 and the remaining one worker received monthly wages between 500 and 1500. Similarly, out of four workers in the section of 'peon', two of them received monthly wages between Rs.1500 and 2500 and the remaining two between 2500 and 3500.

In semi-skilled categories, low wages were found to be prevailing in the sections of button holding, button stitching and ironing. Out of 25 workers in the section of button holding, 24 of them were reported to have received monthly wages between Rs.1500 and 2500. Likewise, in the section of button stitching, most of the workers

received monthly wages between Rs.1500 and 2500. Strikingly, both these sections, where wages were found to be lower than that of other semi-skilled categories, employed only women workers, reinforcing the trend of low wages associated with female employment in the sector. In 'ironing' section where male workers were found to be concentrated in the unskilled category of work, most of the workers received wages between Rs.2500 and 3500. Pattern tracers and packers were reported to have received the maximum available wages in the semi-skilled category of work. For instance, all workers in the section of pattern tracing received monthly wages between Rs.3500 and 4500 and all workers in the section of checkers received monthly wages between Rs.2500 and 3500.

Table, 5.12: Category wise wage distribution of workers

Category of workers	Monthly wages					Total
	500-1500	1500-2500	2500-3500	3500-4500	4500-5500	
Helper	1	19	1	0	0	21
Peon	0	2	2	0	0	4
Button-holders	0	24	1	0	0	25
Button-stitchers	0	7	4	0	0	11
Over-lockers	0	0	5	2	0	7
Pattern tracers	0	0	0	5	0	5
Ironing	0	3	19	0	0	22
Packers	0	0	15	0	0	15
Tailors	0	0	0	4	4	8
Checkers	0	0	19	0	0	19
Final checker	0	0	8	11	0	19
Total	1	55	74	22	4	156

Source: Primary Survey, 2006-07

Monthly wages for workers in unskilled, semi-skilled and skilled categories of work were found to be remarkably less than the stipulated minimum rates of wages applicable in the National Capital Territory (NCT) of Delhi. For instance, the mean of monthly wages of workers<sup>15</sup> in the unskilled category was Rs.2112 in the sample

<sup>15</sup> Mean of monthly earnings for various categories is calculated by taking the actual wages received by each worker in unskilled, semi-skilled and skilled categories in the total sample. Out of 25 workers in the unskilled categories, fifteen workers received Rs.1900, six workers received Rs.2250, three workers received Rs.3250 and the remaining one received Rs.1050. In semi-skilled category, twenty four workers received Rs.1650, ten workers received Rs.2200, nineteen workers received Rs.2750 and twenty received Rs.3250 out of 78 workers. In skilled category, twenty seven workers received Rs.3200, nine workers received Rs.4200, eight workers received Rs.3700, four workers received Rs.5200 and remaining two workers received Rs.2750 out of 53 workers in the sample. In each category, mean is calculated by dividing the sum of the product of number of workers and monthly salary by the total number of workers in the category.

where as the officially fixed minimum wages of unskilled workers in the NCT of Delhi was Rs.3516 per month in 2007 (see tables, 5.13 and 5.14). Similarly, significant differences between officially fixed minimum wages and actual wages of semi-skilled and skilled workers were found in the study. While mean of the wages of the semi-skilled workers in the units were less than Rs.1148.67 of the fixed minimum wages for semi-skilled workers (Rs.3682) in Delhi region, it was less than Rs.386.23 of the stipulated minimum wages for skilled workers (Rs.3940) in the region.

Table, 5.13: Monthly earnings of different categories of workers (Mean)

Category	Number of workers	Minimum wages	Maximum wages	Mean wages
Unskilled	25	1050	3250	2112.00
Semi-skilled	78	1650	4100	2533.33
Skilled	53	2750	5500	3553.77

Source: Primary survey, 2006-07

Table, 5.14: Minimum rates of wages applicable in the National Capital Territory of Delhi, 2007

Category	Rates as on 01.02.2007	Dearness Allowance (Rupees)	Rates from 01.08.2007 (Rupees)	
	(Rupees)		Per-Month	Per-Day
Un-Skilled	3470.00	46.00	3516.00	135.25
Semi-Skilled	3636.00	46.00	3682.00	141.60
Skilled	3894.00	46.00	3940.00	151.50

Source: Govt. of Delhi

Wages of workers in all categories in the units were found to be less than the minimum wages fixed for unskilled, semi-skilled and skilled categories of work in the readymade garment sector in the Delhi region. Comparison of wages that prevailed in the units of Mangolpuri against the minimum wages revised for readymade garments in the years 2003, 2004 and 2004 reveals that wages for all categories of workers in the units were not increased overtime even in congruence with the minimum wages fixed in the sector (See, tables, 5.13 and 5.15). While minimum wage for unskilled workers in the readymade garment sector was Rs.2783.90 in 2003, wages for unskilled workers in the garment export units in Mangolpuri in 2006-07 stood at Rs.2112. Likewise wages of semi-skilled workers in the units of Mangolpuri in 2006-07 were notably less than the minimum wages fixed for semi-skilled workers in the readymade garment sector in the year 2003. What is striking here is that, wages of workers in the garment units of Mangolpuri in 2006-

07 were less than the minimum wages stipulated in 2003, 04 and 05 for readymade garment sector in the Delhi region, reinforcing the extent of deregulation with regard to fixation of wages in the sector. The present study, in congruence with this general trend of decline of wages subsequent to quota elimination and trade liberalisation<sup>16</sup>, found that wages for casual workers were significantly low in the garment production units in Mangolpuri and far less than the minimum wages stipulated for various categories of work in the region.

Table, 5.15: Minimum wages for workers in the ready made garments applicable to Delhi region, 2003-2005

With effective from	Unskilled <sup>17</sup>			Semi-skilled <sup>18</sup>			Skilled <sup>19</sup>		
	DA	Rate (+DA)	Rate Per day	DA	Rate (+DA)	Rate Per day	DA	Rate (+DA)	Rate Per day
1-2-2003	104.20	2783.90	107.10	104.20	2949.90	113.50	104.20	3207.90	123.40
1-2-2004	79.00	2862.90	110.10	79.00	3028.90	116.50	79.00	3286.90	126.40
1-8-2004	32.00	2894.90	111.30	32.00	3060.90	117.70	32.00	3318.90	127.65
1-2-2005	150.00	3044.90	117.10	150.00	3210.90	123.50	150.00	3468.90	133.40

Source: Govt. of Delhi, Notification of Minimum wages, various years, compiled

There was also informality in determination and fixing of wages in the production units in Mangolpuri. Determination of wages was found to be the absolute discretion of contractors and employer in all the units. The space for negotiations or dialogue for revision of wages was found to be completely absent in the units. For instance, though workers received wages less than minimum wages, only a few were reported to have bargained for revision of wages. Out of 156 workers interviewed, 13 percent reported that they demanded for increase of wages. Even though workers knew that wages were not reasonable for the amount of work they did, they did not bargain for higher wages because of various reasons. The reason that maximum number of workers pointed out for not bargaining was fear of loss of job. Out of 156 workers,

<sup>16</sup> Several studies have highlighted the declining trend of wages for workers in the garment export sector in India in the post quota elimination period. For a discussion, see. CSR. 2004. Shimane. 2005. CAW, 2007 and Mazumdar, 2007.

<sup>17</sup> Unskilled workers include peon, helper, sweeper, *chowkidar* and thread cutter.

<sup>18</sup> Semi-skilled workers include button-holders, *kaj* operator, button stitcher, over-lockers, pattern tracers, ironers and packers.

<sup>19</sup> Skilled workers include tailors, checkers, drivers and washer man.



90 reported that they did not demand for better wages for the fear of loss of job (Table 5.16). The second important reason, reported by maximum number of workers was that there was no scope of bargaining since the wages were fixed by the management. Most of the workers reported that there was no space existing for bargaining either with the company or with the contractor. Out of 156 workers, 77 reported that absence of space was the major reason for not bargaining. Reasons such as lack of time and ignorance regarding the wage structure were reported as third and fourth significant reasons for not bargaining for better wages. Some (34 percent) of the workers reported that they had no idea about the prevailing wage structure in the industry.

Table, 5.16: Reasons for not bargaining

No	Reasons	Frequency	Rank
1	Fear of loss of job	90	1
2	No space of bargaining	77	2
3	Lack of time	41	3
4	No knowledge about wages	34	4

Source: Primary Survey, 2006-07

Similarly, there were no 'standard' practices followed in the payment of wages for workers in the periphery level. Wages for workers were found to be both piece rated and time based in the units. Piece rate was found to be prevailing in the sections of stitching, packing and checking in most of the units while wages was time rated in all other sections. However, mode of payment was on monthly basis in all units and for all categories of workers. While wages for piece rated workers were paid on the basis of number of pieces, wages for time based workers were on consolidated basis as detailed above. Nevertheless, it is important to note that there were daily targets for time rated workers, which was to be completed by the workers. It was also reported that salary would be deducted if the workers do not meet the target at the end of the month. In certain cases, there were instances of delay in payments due to the interplays of contractors and sub-contractors.<sup>20</sup>

<sup>20</sup> Based on interviews with workers and discussion with trade unionists.

### **Intensification of Work: Linkages with Purchasing Practices<sup>21</sup>**

Several studies have revealed that export oriented garment sector is characterised by intensification of work and overtime; primarily due to the purchasing practices of buyers.<sup>22</sup> Purchasing practices that contribute to intensification of work are associated with unstable relationships with manufacturers, widely fluctuating orders, demanding shorter time and price setting policies (Merk, 2007). Purchasing practices of buyers can lead to intensification of work when the producing units receive bulk orders from buyers with less lead time.<sup>23</sup> It translates into overwork when the units do not hire more workers for meeting the production requirements in the available lead time. Shorter lead time and production cycle along with limited number of workers therefore results in intensification of work. In such cases, the risks of work intensification, emerging from purchasing practices of buyers coupled with the cost minimisation measures of suppliers are directly passed on to workers.

Interrelationship of reduced lead time and intensification of work was found to be true in the garments units in Mangolpuri. For instance, hours of work was found to be ranging from 56 to 84 a week, depending upon the volume of orders and lead time available in all five units, which were covered in the study. It was found that most of the workers, irrespective of units, worked nine to twelve hours a day though eight hours was the stipulated statutory hours of work a day. Out of 156 workers, 68.59 percent reported that they worked nine to twelve hours a day, excluding compulsory overtime in the week prior to the week of interview (Table, 5.17). It was also reported that there were practices of compulsory overtime up to two hours, depending upon the requirement of production in each unit. For instance, out of 156 workers, 62.82 percent were reported to have worked one-hour and remaining 37.18 were reported to have worked two hours of compulsory overtime in not less than two days in the week, prior to the week of interview (Table 5.18). Working hours, hence, in most of the situations, far exceeded the statutory 48 hours a week and in

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<sup>21</sup> Purchasing practices refer to the way buyers, including brands, retailers and agents (buying houses) organise the purchasing of their products from manufacturers/suppliers/vendors. For a discussion on purchasing practices and its implications on producers and workers, see, Merk (2007)

<sup>22</sup> For a discussion on work intensification in garment export sector in India, see, Das and Panayiotopoulos (1995), Sing and Sapra (2000), NLI (2003) and Mazumdar (2003, 2007).

<sup>23</sup> Lead time is the time available for a unit to supply a certain volume of product to the buyers. It is usually fixed and dictated by the buyers.

most of the cases it prolonged up to 56 to 84 hours; violating the provisions of legislations with regard to regulation of hours of work.<sup>24</sup>

Table, 5.17: Normal hours of work in a day

No	Hours	Frequency	Percent
1	9 hours	49	31.41
2	9-12 hours	107	68.59
	Total	156	100.0

Source: Primary Survey, 2006-07

Table, 5.18: Compulsory overtime

No	Hours	Frequency	Percent
1	1 hour	98	62.82
2	2 hours	58	37.18
	Total	156	100.0

Source: Primary Survey, 2006-07

Intensification of work can be better understood from the organisation of work with regard to time line in the units as well as hours spent for regular work, overtime and travel. It was reported that in all units, normal hours of work were nine; starting from 8.30 am to 5.30 pm, including fifteen minutes break for tea and thirty minutes break for lunch. As explained above, in actual practice, it was ten to twelve hours, including overtime. Most of the workers reported that they did not take lunch or tea due to heavy workload and to achieve targets of the day. It was also reported that most of the workers travelled one to three hours a day to reach the workplace and to go back home. For instance, out of 156 workers, 33.97 percent reported that their travel required two to three hours a day back and forth from workplace, 43.59 percent required one to two hours and 19.23 percent travelled less than an hour (Table 5.19). A small percentage of workers (3.21) were reported to be travelling more than three hours a day. The burden for workers was found to be not merely

<sup>24</sup> Various labour and industry regulations in India (Factories Act 1948; Minimum Wages Act 1948; Shops and Establishments Act 1948) lay down rules that no adult worker shall be required to work for more than 9 hours a day and for more than 48 hours a week. The regulations also restrain the spread over of working period including rest interval not to exceed 10.5 hours in a day. The provisions under Factories Act are as follows. One weekly holiday, and not more than 48 hours in a working week for an adult worker: at least half an hour rest after a stretch of five hours of continuous work; no women should work between 7 p.m. and 6 am (Sections. 51-66); no person less than 14 years of age should work in a factory; no child should work more than four hours a day and should not work between 10 pm and 6 am; one full wage leave should be given to an adult worker for every 20 days of work and one for every 15 days to a child worker; a woman should have 12 weeks of maternity leave.

limited to the time of travel and hours of work as it involved a considerable amount of time for preparation of the day. All the workers reported that they got less than five hours of sleep a day due to long hours spent for work that included an average nine to ten hours of regular work, one to two hours of compulsory overtime and the time required for travel.

Table, 5.19: Hours spent to get to work and from work

No	Hours	Frequency	Percent
1	<1 hour	30	19.23
2	1-2 hours	68	43.59
3	2-3 hours	53	33.97
4	>3 hours	5	3.21
	Total	156	100.0

Source: Primary Survey, 2006-07

### Physically Stressful Conditions of Work

Intensification of work is often manifested in the form of physically stressful conditions for workers. Extent of intensification of work in the units can be assessed in terms of its repercussions on physical strain; stemming from continuous work. Continuous physical movements and sedentary postures of work such as walking, sitting, standing, lifting weights, repeated hand motions and bending over for a long time, which bear significance for physically stressful conditions, are examined here. It was discussed that work in the garment units subsumed variegated activities that involved long hours of work; mostly in a single posture. Similarly, there were also activities that involved continuous movement of body and parts of body. For instance, most of the workers in the units reported that their work involved continuous sitting, walking and movements of body parts for long time. Out of 156 workers interviewed, 32.05 percent, mostly helpers and peons, reported that their work involved walking for long inside the unit, 62.82 percent reported that their work involved 'walking sometimes' and 5.13 percent reported that their work is completely sedentary (Table, 5.20).

Similarly in many cases, work involved sitting for a long time for workers. Workers who were in the category of button holding, button stitching and tailoring reported that their work involved sitting in a same posture throughout the day. Out of 156 workers interviewed, 53.13 percent reported that their work involved sitting for a

long time, 33.97 percent reported that 'sometimes' work involved sitting for a long time and 15.7 percent reported that their work did not involve 'sitting' at all (Table, 5.20). A significant proportion of the workers who were working in the sections of checking, packing and ironing reported that their work involved 'standing' continuously for a long time. Out of 156 workers, 43.59 percent reported that they worked throughout the day in 'standing' posture and 56.41 percent reported that their work involved long hours in 'standing' posture sometimes (Table, 5.20).

Other physically stressful conditions of work as reported by the workers were associated with lifting or carrying weights, repeated hand motion, bending over and twisting around for a longer period of time. Most of the workers reported that they had to carry or lift weights as part of their work. Out of 156 workers interviewed, 28.85 percent reported that they lifted or carried weight for long most of the time of their work while 53.20 percent reported that they had to carry weights sometimes for long hours while they worked (Table, 5.20). All the workers reported that their work involved continuous motion of hands. Out of 156 workers, 83.97 percent reported that their work involved repeated motion of hands through out in their work and remaining 16.03 percent reported that their work involved repeated motion of hand most of the time as part of their work (Table, 5.20). Likewise, work in the garment production units involved stressful body movements for long period of time such as bending over or twist around. Out of 156 workers, 66.66 percent reported that they had to bend over or twist around continuously when they worked and 28.21 percent reported that their work involved bending over or twisting around most of the time as part of the work (Table, 5.20) Similarly, work in the units, especially, in the sections of tailoring, button holding and button stitching, involved concentration for long time. Out of 156 workers, 53.85 percent reported that their work required concentration for a long time through out the work and 42.95 percent reported that their work required concentration for most of the time of their work.

Intensification of work in the units reflects on the possible physical disorders and stressful conditions that stemmed from work. It is evident that work in the units involved physically stressful conditions; largely due to the intense practice of production. In all categories, work required repeated movements of body parts as well as constant physical postures of sitting or standing for long time, which

possibly have long term ramifications on health of the workers. Ramifications of such conditions on health of workers are examined in detail in the next chapter.

Table, 5.20: Physically stressful conditions of work

Conditions	A lot		Sometimes		Not at all		Total	
	F	%	F	%	F	%	F	%
Walk during work	50	32.05	98	62.82	8	5.13	156	100.0
Sit for long period	86	55.13	53	33.97	17	10.9	156	100.0
Standing for long	68	43.59	88	56.41	-	-	156	100.0
Lift or carry weights	45	28.85	83	53.20	28	17.95	156	100.0
Repeated hand motion	131	83.97	25	16.03	-	-	156	100.0
Bend over twist around	104	66.66	44	28.21	8	5.13	156	100.0
Concentrate for a long time	84	53.85	67	42.95	5	3.20	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

### Physical Conditions and Facilities Available at Work Place: Extent of Regulations

Physical conditions at work place and facilities available for workers as per the statutory provisions under the related labour laws and existing codes of conduct<sup>25</sup> in the garment industry were examined to assess the conditions of work and the extent of regulation in the units. Physical conditions, which prevailed in the garment units, were found to have significant bearing on the risks of physically stressful conditions and health of workers. Most of the workers reported that physical conditions with regard to space, volume, ventilation and temperature conditions at the workplace were poor and appalling. For instance, out of 156 workers, 86.54 percent reported that there was no adequate space to work or move around freely at the workplace (Table, 5.21). All workers reported that they worked in high temperature conditions inside the unit. It must be noted that 62.82 percent of workers reported the inadequacy of proper ventilation at their workplace. In certain cases, workers were reported to have worked in dusty environments due to inadequate air exhausting measures. Most of the workers (55 percent) were provided with protective gears like masks and gloves in most of the units, however, nobody was found to be serious

<sup>25</sup> Codes of conduct here refer to standards or principles that are adopted by a corporate utility (brands, retailers), business associates or multiple stakeholders to observe labour standards in the garment export production chain.

about protective gears as the workers found it limiting the speed of their work. All workers reported that there were facilities for first aid in the production units.

Absence of adequate space and ventilations reflects on the extent of violation of significant labour laws with regard to physical conditions of work in the production units<sup>26</sup>. For instance, Factories Act specifies a minimum floor space of 36 square feet per worker and a minimum volume space of 500 cubic feet per worker. However, all units in Mangolpuri were not found to be complying with this standard.

Table, 5.21: Physical conditions at workplace

Physical conditions	Yes		No		Total	
	F	%	F	%	F	%
Adequate working space	21	13.46	135	86.54	156	100.0
Ventilation	58	37.18	98	62.82	156	100.0
High temperature	156	100.00	-	-	156	100.0
Exhaust fans	103	66.03	53	33.97	156	100.0
Protective gears	87	55.77	69	44.23	156	100.0
First aid	156	100.00	-	-	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

Facilities such as canteen, clinics, grievance redress bodies and crèches were reported to be absent in all units. There were considerable discrepancies in the facilities available at the workplace for regular and contract workers in the units. While regular workers had facilities of canteen, insurance, paid leave and compensation on death and permanent disabilities, contract workers were found to be denied of all such facilities (Table, 5.22). Facilities such as toilets and drinking water were available for all workers in the units. However, it should be noted that there were restrictions on the use of such facilities. Most of these facilities were found to be conditional for workers and for instance, workers were provided tokens for using facilities like toilets. It was also found in the primary study that all workers in these units were not entitled to ESI provisions.<sup>27</sup> There were also violation of

<sup>26</sup> Legislations that specify physical condition such as space, ventilation, illumination, temperature, humidity, hygiene and occupational health and safety in the industrial units in India are The Factories Act, 1948, The Dangerous Machine (Regulation) Act, 1983, Inter-State Migrant Workmen Act, 1979, The Building and Construction Workers Act, 1996 and the Beedi and Cigar Workers (Conditions of Employment) Act, 1966.

<sup>27</sup> The Employees' State Insurance Act, 1948 ensures integrated needs-based social insurance scheme that protects the interest of workers in contingencies such as sickness, maternity, temporary or permanent physical disablement and death due to employment injury resulting in loss of wages or earning capacity. Employees of covered units and establishments drawing wages up to Rs.6, 500 per month come under the purview of the scheme for social security benefits. For details see The Employees State Insurance Act, 1948, Govt. of India.

provisions of the Factories Act<sup>28</sup> and Industrial Disputes Act pertaining to hospital facilities, annual leave provisions, compensation for permanent and temporary disabilities and compensation for lay off in terms of facilities available in these units (Table, 5.22). However, medical facilities in all these units were restricted to merely first aid services. Likewise there were instances of dismissals as reported by workers and trade unionists in some of the units without compensation, violating the provisions of Industrial Dispute Act.<sup>29</sup>

Similarly there were violations of the Contract labour (Regulation and Abolition) Act with reference to the facilities available for the contract workers in units. For instance, contract workers were not provided with facilities such as canteen facilities, crèches, paid leave, insurance, advance payment and compensation for industrial accidents in any of the companies; violating the provisions of the Contract Labour (Regulation and Abolition) Act. Under the provisions of the Act, contract workers are entitled facilities of canteen and rest rooms either by the contractor or principal employer. Infringing these provisions, casual workers in these units were denied of canteen and rest room facilities.<sup>30</sup>

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<sup>28</sup> The Factories Act, 1948, applies to all premises where any manufacturing process is carried on and where ten or more workers are working with the aid of power or twenty or more without the aid of power. Various aspect of working condition such as health, safety, welfare, working hours, annual leave provisions and restrictions on employment of women and young persons are covered here.

<sup>29</sup> The Industrial Dispute Act entitles workers to settle disputes through works committees, conciliation officers, boards of conciliation, courts of enquiry, labour courts, tribunals and voluntary arbitration in industrial settings. Similarly it ensures payment of wages to workers pending proceedings in high courts, rights of appeal, settlements in outside conciliation, notice of change in employment conditions, protection of workers during delay of proceedings, strike and lockout procedures, lay-off compensation and retrenchment compensation. For details see The Industrial Dispute Act, 1947, Act No. 14 of 1947 GOI.

<sup>30</sup> In every establishment to which the Act applies and wherein work regarding the employment of contract labour is likely to continue for six months and where one hundred or more workers are ordinarily employed an adequate canteen shall be provided by the contractor for the use of such contract labour within 60 days of the date of coming into force of the rules in the case of the existing establishments and within 60 days of the commencement of the employment of contract labour in the case of new establishments. Similarly in every place where contract labour is required to halt at night in connection with the working of the establishment to which the Act applies and in which employment of contract labour is likely to continue for three months or more the contractor shall provide and maintain rest rooms or suitable alternative accommodation within 15 days of the coming into force of the rules in the case of existing establishments. and within 15 days of the commencement of the employment of contract labour in new establishments.



Table, 5.22: Facilities available for workers in the units

No	Facilities	Regular	Contract
1	Canteen	Yes (with charges)	Yes (limited to tea only)
2	Hospital facilities	No	No
3	Grievance redress mechanisms	No	No
4	Crèches	No	No
5	Drinking water	Yes	Yes
6	Toilets	Yes (limited use)	Yes (limited use)
7	Transportation	No	No
8	Advance payments	Yes	No
9	DA/FDA	Yes	No
10	Annual leave	14 days	No
11	Insurance	ESI	No
12	Maternity leave	Three months	No
13	Compensation for permanent disability	Yes	No
14	Compensation for temporary disability	Bearing of hospital charges	No
15	Lay off compensation	No	No
16	Retrenchment compensation	No	No
17	Rest room	Yes	No

Source: Primary Survey, 2006-07<sup>31</sup>

As discussed above, there were violations of labour laws with regard to remuneration at work, duration and timing of work and use of contract labour in the production lines in the garment units of Mangolpuri. For instance, the present study found that wages for casual workers in the garment production units in Mangolpuri were far below the stipulated minimum wages for various categories of work in the garment sector in Delhi region and wages for female workers were less than that of males for the same job; violating the provisions of significant labour laws pertaining to remuneration at work.<sup>32</sup> Similarly, as discussed earlier in the chapter, hours of work for contract workers in the units far exceeded forty eight hours against the provisions of applicable labour laws with regard to duration and timing of work.<sup>33</sup>

<sup>31</sup> Information regarding facilities for regular workers was gathered from trade union leaders and other contract workers. Likewise information on lay off compensation and retrenchment compensation was based on the reports of trade unions. These were further cross checked with the contractors in the units.

<sup>32</sup> Applicable labour laws with regard to remuneration at work, including, wages, wage forms, pay period, advances, bonus, gratuity, pension and provident fund are, The Minimum Wages Act, 1948, Interstate Migrant Workmen Act, 1979, The Equal Remuneration Act, 1976 and The Payment of Wages Act, 1936 here.

<sup>33</sup> Labour laws that specify duration and timing of work, including, hours of work, spread over, hours of rest, overtime work, hours of works per week, night work and paid holidays, are The Minimum Wages Act, 1948 and Interstate Migrant Workmen Act, 1979 here.

In addition to domestic regulations, there are certain voluntary initiatives in the form of code of conduct to regulate working and environmental conditions in the garment sector, which are often, developed by brands, industry, civil society organisations or multi stakeholder initiatives. These voluntary initiatives may be unilaterally pushed by industry, designed and run by government, jointly developed by government and industry, or developed and run by non-governmental organisations; operating within India, internationally or both through joint arrangements (Singh and Sapra, 2003). The dominant codes of conduct, which were found to be followed in the Delhi region, are the multi stakeholder initiatives by Ethical Trading Initiative (ETI)<sup>34</sup> and Clean Clothes Campaign (CCC).<sup>35</sup> It was revealed from the discussions with the management of some of the units in Mangolpuri that exporters, who contract out production to the units in Mangolpuri were signatories to the ETI codes of conduct. Out of various provisions such as freedom of association and collective bargaining, living wages, safe and hygienic working conditions, the production units in Mangolpuri were found to be following only the regulations with regard to child labour. For instance, in sharp contrast to the directions in the ETI codes on wages and benefits for workers, which is articulated as “wages and benefits paid for a standard working week meet, at a minimum, national legal standards or industry benchmark standards, whichever is higher”, wages in the units in Mangolpuri were below the minimum wages fixed for the garment industry in Delhi (See tables, 5.13

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<sup>34</sup>The Ethical Trading Initiative (ETI) is an alliance of companies, trade union and non-government organisations (NGOs) aims to improve working conditions in global supply chains. As per the agreement, the ETI, companies should commit to implementing the ETI Base Code, which is a code of practice based on international labour standards-in all or part of their supply chain. ETI Base Code and the accompanying Principles of Implementation, both of which were negotiated and agreed by the founding trade union, NGO and corporate members of ETI. The Base Code contains nine clauses which reflect the most relevant international standards with respect to labour practices based on ILO Conventions. ETI codes specify rights of workers on freedom of association and collective bargaining, safe and hygienic working conditions, elimination of child labour, assurance of living wages, regulation of employment, hours of work and working conditions and non-discrimination at the workplace. For details, see, The Base Code, Ethical Trading Initiatives, available at [http://www.ethicaltrade.org/Z/lib/base/code\\_en.shtml](http://www.ethicaltrade.org/Z/lib/base/code_en.shtml), accessed on 2 January, 2008.

<sup>35</sup> Code of Conduct of Clean Clothes Campaign is a set of codes of labour practice, which sets forth minimum standards for wages, working time and working conditions and provides for observance of all of the core standards of the International Labour Organisation including Conventions 29, 87, 98, 100, 105, 111 and 138. The CCC codes specify rights of workers with regard to freedom of employment, non-discrimination, freedom of association, living wages, fair working condition and statutory hours of work as well as elimination of child labour. The code, in principle, applies to all of the companies, contractors, subcontractors, suppliers and licensees world-wide. For details on CCC code of conduct, see Clean Clothes Campaign (1998), Code of Labour Practices for the Apparel Industry including Sportswear, available at <http://www.cleanclothes.org/codes/ccccode.html>, accessed on 2 January 2008.

and 5.15). Likewise, contrary to the directions with regard to working hours, which is articulated in the code of conduct as “in any event, workers shall not on a regular basis be required to work in excess of 48 hours per week and shall be provided with at least one day off for every 7 day period on average; overtime shall be voluntary, shall not exceed 12 hours per week, shall not be demanded on a regular basis and shall always be compensated at a premium rate”, there were instances of compulsory overtime and more than twelve hours of overtime in a week in the garment units in Mangolpuri (See tables, 5.17 and 5.18). Other non-compliances of codes in the units were with regard to the rights to freedom of association and collective bargaining and safe and hygienic conditions of work. In short, regulations pertaining to employment, wages and conditions of work, which are bound by domestic labour legislations and complimented by voluntary codes of conduct, are found to be deliberately undermined for reducing labour cost and cost of production in the context of the existing nature of employment, labour practices, lower wage levels and abysmal conditions of work in the periphery level of garment production units in Mangolpuri.

### **Unionisation and Collective Bargaining: Disciplining of Labour Space**

Though unionisation was one of the parameters of selection of sample units for the study, it was found that none of the units were completely unionised. Two units out of five were partially unionised and a few regular workers were reported to be the members of a trade union in the units.<sup>36</sup> Conversely, casual and contract workers in the production line did not belong to any trade unions. It is important to note that trade unions could not make much inroads into informal work arrangements in India due to various reasons; ranging from the complexities to establish employer-employee relationships to temporary work contract and the scattered nature of workforce. Nevertheless, conventional arguments on the essential conditions of unionisation are not found to be fully valid in the garment production units studied in Mangolpuri. For instance, employer-employee relationships can be established with the physical presence of manufacturers and contractors in the garment production units in Mangolpuri. Likewise, contract workers in the units were not found to be scattered as the production was unit based. Given these circumstances, it

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<sup>36</sup> Based on the interviews with Mr. Rampal, Local Secretary, Centre of Indian Trade Unions (CITU), Keerti Nagar, Delhi and Mr. Aravind, Member, garment workers' union, CITU, Mangolpuri.

is attempted to explain the issues that curtail unionisation and collective bargaining of contract workers in the rubrics of prevailing practices of informality with regard to work organisation and labour practices in the units.

As discussed earlier in the chapter, work organisation in the garment units was in such a way that a significant proportion of the production jobs are performed by contract workers. The workers, though in principle were the employees of either the principal employer or contractors, it was found that workers, by any means, were not formally bound to principal employer or contractors. For instance, it was found that most of the contract workers were not given appointment letters or employment cards (See tables, 5.8 and 5.9). Furthermore, it was reported that contractors kept on changing workers from one unit to another, without renewing or extending the contracts after the initial contract for a very short period of time. In effect, employer-employee relationships can not be straightforwardly established in most of the situations. Arguably, workers' rights to form and join trade unions were denied or suppressed by the deliberate use of casual and contract employment in the production line.

Labour practices with regard to recruitment, monitoring and termination of employment were also found to be organised in such a way to discourage unionisation and collective resistance of workers. For instance, workers in the units were migrants who were segregated primarily along the lines of region and language. This has been found to be significantly limiting the interactions among workers. Preferences for women and less educated workers in certain sections of unskilled and semi-skilled works could also be viewed as deliberate practices of employers and contractors to discourage unionisation. It is important to note that a significant proportion of workers in the unskilled and semi-skilled categories of work in the units were consisted of women and workers with less education and skill levels (See tables, 5.5 and 5.7). It should be viewed in the purview of the fact that contract employment in the unskilled and semi-skilled categories of work is often associated with higher level of job insecurity. Arguably, the 'disadvantageous position of workers' by being women,<sup>37</sup> less educated and 'less informed' workers

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<sup>37</sup> Several studies have noted that women, who are being constructed as 'disciplined, patient and docile' workers, comparatively do not engage in organised activities, largely due to the fear of loss of jobs. For a discussion, see: Banerjee (1999); Unni and Uma(1999); Ghosh (2001 and George (2007. c).

together with the intrinsic job insecurity associated with contract employment could limit their organised engagements. Likewise, constant monitoring in the production lines was reported to be adding to the fear of job insecurity for contract workers and as reported by the workers, joining trade unions might lead to victimisation and termination of employment. It is also important to note that employers deliberately avoided the spread of disgruntlement among workers out of terminations and dismissals of fellow workers. For instance, terminations and suspensions, which could trigger the collective class consciousness of workers, were reported to be dealt with in isolation so that the retrenched workers did not seek grievances collectively<sup>38</sup>. In this backdrop, it is argued that work organisation and labour processes are practised in the periphery level of the garment production units in Mangolpuri in such way to discipline the labour space and to maintain a disciplined workforce. The process of disciplining in these units was found to be operating through the disadvantageous position of the workers with reference to their bondage with contractors and job insecurity.

Absence of the space for collective bargaining was found to be severely limiting workers' ability to negotiate wages and better conditions of work. For instance, most of the workers were dissatisfied with their wages; however did not seek to negotiate with employers and contractors due to lack of space or platform for bargaining (See table, 5.16). Likewise, extreme forms of exploitations such as termination of job without proper notice and compensation, long working hours and absence of statutory benefits like minimum wages, workmen's compensation, maternity benefits and paid leave were reported to be prevailing in the units. Trade unions could not adequately organise workers in these units, primarily because of the 'constructed' weaker positions of workers, stemming from job insecurity. It is also important to note that workers were reported to be strictly warned by the management against associating with trade unions. In short, absence of space for collective bargaining in the units in Mangolpuri significantly limits the possibilities of improving wages, working conditions and workplace health and safety as well as defending the rights of workers against undue labour practices.

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<sup>38</sup> Based on the interview with Mr. Rampal, Local Secretary, Centre of Indian Trade Unions (CITU), Keerti Nagar, Delhi.

## **Conclusion**

The **production** organisation and labour relations prevailed in the formal export oriented garment units in Mangolpuri substantially indicate informalisation of labour. **Informality** in labour relations was visible from the use of casual and contract employment in the production line as well as labour practices with regard to organisation of work. Interconnectedness of informal labour relations with declining living conditions and welfare of workers in the units studied, are manifested through its associations with low wages, appalling working conditions, low level of regulation and low level of organisation of workers. The case of informalisation of formal employment examined here found that in the larger context of labour market flexibilisation, specific practices at the micro level (workplace) with regard to production organisation, division of labour, work organisation and labour practices are tuned towards informalising production and labour relations.

These practices prevailed in the garment export units in Mangolpuri were examined in detail to understand the specific process through which informality is practised at the unit level. The units examined here were part of an international garment and apparel supply chain. The units were apparently centralised and formal in nature, however, production was distinguishably organised in to core and periphery levels, in which the core constituted the management staff and the periphery constituted contract workers under labour contractors. By such division, manufacturers/employers accomplish large requirements of production with less labour costs. The employer-employee relationship in the units was informal and it was found to be difficult to establish an employer-employee relationship even between workers and labour contractors due to the informal work contracts in the units. In such cases, regulations with regard to wages and statutory benefits of workers are non-enforceable. Arguably, the emerged forms of informalisation in the centralised formal units in Mangolpuri are aimed at furthering the flexible production practices of employers towards minimising labour cost and increasing productivity with increased labour control.

Less preference for education and skill levels in the semi-skilled and unskilled production line jobs, stereotypical positioning of women in the semi-skilled and men in the unskilled and semi-skilled jobs, which required long hours of fast work and recruitment of migrant workers who were segregated along the lines of region and

language are some of the labour practices by which employers pursued informality at the workplace. The division of work in the units was in such a way that the production was fragmented in to a combination of unskilled, semi-skilled and skilled works and organised in an assembly line. By doing so, work is largely deskilled, which enables the employers to employ unskilled labour that is cheap as well as abundantly available. In short, deskilling of work was one of the predominant practices for furthering informality at the workplace. Informality at workplace was also evident from the extent of deregulation in the units. It was found that regulations based on significant legislations pertaining to duration and timing of work, hours of rest, overtime work, remuneration at work and physical conditions of work were absent in the units. Similarly, standards based on voluntary codes of conduct with regard to living wages, hours of work and freedom of association, prevailing in the garment industry was also not followed in the units.

The increasing informality in the garment export units together with the spill over of risk of international trade, bears significance on employment, wages and conditions of work in the sector. It is also important to mention that increased international competition subsequent to the elimination of quota, to certain extent, is accountable for increased informality in production relation in the garment sector as practice of informality in production is primarily grounded on the requirements of minimisation of labour cost, aimed at enhancing competitiveness. Job insecurity has been found widely prevalent in the units, especially for casual and contract workers due to the informal labour relations and uncertainty of work. Paralleling to the trend of low wages in the sector, the study has found the prevalence of low wages, strikingly below minimum wages fixed for the industry, in the units of Mangolpuri. Similarly, male-female wage differentials in congruence with the overall trend in the informal sector have been found in the units. Conditions of work have been found appalling in the units with regard to intensification and unfavourable physical conditions of work. Over work and compulsory overtime, which can be attributable to purchasing practices of buyers and frequent instances of regulatory failure, have been found in the units. Likewise, work in the units involved physically stressful conditions; attributable to intensification of work.

Practices of informality have been found curtailing the space of collective bargaining of workers. It has been found that work organisation and labour

processes in the periphery level of units are aimed at disciplining the labour space and maintaining a disciplined and docile workforce. Trade unions could not make inroads into the units. Absence of collective bargaining in the units in Mangolpuri therefore significantly limits the negotiations between workers and employers for the statutory rights of workers with regard to better wages, working conditions and workplace health and safety.

Informal labour relations and its ramifications on employment, wages, conditions of work and collective bargaining in the formal garment export units in Mangolpuri divulged the associated conditions of adverse health outcomes of casual employment in the formal export oriented garment sector. Identified associations of informal employment and adverse health outcomes of workers are the low economic opportunities and poor living conditions of workers, less freedom of work, absence of control on own work and lower level of organisation, physically dangerous and psychologically stressful conditions of work, reduced access to health care and work induced health behaviour. Among these associated conditions, the micro level analyses established the prevalence of lower wages, absence of control on own work, absence of collective bargaining and risks of physically stressful conditions at the workplace. Implications of informality on living conditions, access to health care, health seeking and work induced health behaviour, behavioural risk factors of health, physically dangerous and psychologically stressful conditions are explored in the following chapter.



## Chapter 6

### **Informal Employment, Living Conditions and Health Outcomes: Perceptions of Workers**

The case of informalisation of production jobs in the formal export oriented garment manufacturing units in Mangolpuri evidenced the interconnectedness of informality, low wages and appalling conditions of work with the practices of labour cost minimisation. Ramifications of such practices were manifested in the forms of intensification of work, increased levels of job insecurity, deskilling and physically stressful conditions of work for workers. The status of workers was often 'casual' and their position in the work hierarchy was 'far inferior' in such an extremely informal production relation. Arguably, the casual status and the inferior position of workers, which are constructed from the flexible production practices, leaves little space for workers to negotiate their rights. As of the standpoint of work and well being, the aforesaid interconnectedness and its manifestations along with the absence of heedful labour space have significant corollaries on the health of workers. It is reflected on the conditions of living and welfare of the workers and at the micro level, possibly, it has direct consequences on workplace health, physical and mental morbidity and health behaviour of workers.

These direct and indirect health consequences of informal employment are examined here in the backdrop of the identified associations of informal employment and adverse health outcomes for workers in the previous chapter. This chapter examines how direct and indirect associations of adverse health outcomes such as low economic opportunities, less freedom of work, absence of control on own work, intensified and physically stressful conditions of work, absence of space for collective bargaining, regulatory failure and practices of labour control are related to poor conditions of living, physically dangerous and psychologically stressful conditions, reduced access to healthcare, health seeking behaviour and work induced health behaviour of workers in the garment export units in Mangolpuri. In order to obtain an understanding of the living conditions, indicators such as physical conditions of living, including housing and consumption pattern with regard to the availability and accessibility of amenities such as food, water and healthcare

services are examined. Employing the conceptual premise of social determinants of workplace health, and work-related determinants of health, workers' perceptions on morbidity, physically dangerous and psychologically stressful conditions of work are analysed. Furthermore, by examining the prioritisation, availability and accessibility of services and the 'forms' of work, it seeks to test the hypothesis that health behaviour and health seeking behaviour of workers are associated with their employment, its nature, demands and economic rewards, which largely depend upon the production and labour relations. It is also attempted to examine how financial burden of healthcare is passed on to workers by exploring the employer responsibility of healthcare and the economic costs of healthcare of workers.

### **Living Conditions of Workers**

As noted in the previous chapter, all workers interviewed for the study were migrants and were staying in rented houses. A significant proportion of workers were reported to be staying in unauthorised arrangements, known as *Jhuggi Jhopdi* (JJ).<sup>1</sup> Out of 156 workers, 78.85 percent were reported to be staying in JJ clusters. Some of the workers (14.10 percent) were staying in rented *Janata*<sup>2</sup> flats and a very few (7.05 percent) were reported to be staying in the rented private apartments (Table, 6.1). All unmarried (31.41 percent) and some of the married workers were reported to be staying with friends in rented rooms/houses. It is important to note that though proportion of married workers constituted 67.71 percent of the sample, only 40.38 percent were found to be staying with their families. Out of 156 workers, 53.83 percent were found to be sharing room/house with friends, 40.38 percent were with family in rented house and small percentage ( 5.77) were reported to be staying alone (Table, 6.2). As reported by the workers, rent and proximity to the workplace were the major concerns for choosing the place of stay.

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<sup>1</sup> *Jhuggi Jhopdi*(JJ) clusters are described as poor informal settlements lacking basic services or access to clean water. where housing is poorly built and overcrowded with no legal land tenure. An estimated 45 percent of Delhi's population resides in slums that include informal settlements, squatter settlements and illegal sub-divisions as also unauthorised colonies. For details, see, *Delhi Human Development Report, 2006*, Govt. of NCT of Delhi ( 2006).

<sup>2</sup> *Janata* Flats are single room flats constructed in 26 square metre plots by Delhi Development Authority (DDA) to provide low-cost housing for the poor. The allotment is done under the *Janata* Housing Registration Scheme- 96.

Table, 6.1: Type of housing

No	Type	Frequency	Percentage
1	<i>Janata Flats</i>	22	14.10
2	<i>Jhuggi Jhopdi</i>	123	78.85
3	Private rented house	11	7.05
Total		156	100.0

Source: Primary Survey, 2006-07

Table, 6.2: Staying arrangements

No	Staying arrangement	Male		Female		Total	
		Count	%	Count	%	Count	%
1	With family in rented house	39	39.39	24	42.11	63	40.38
2	With friends in rented house	51	51.52	33	57.89	84	53.85
3	Alone in rented house	09	9.09	-	-	09	5.77
4	Own house	-	-	-	-	-	-
Total		99	100.0	57	100.0	156	100.0

Source: Primary Survey, 2006-07

The physical conditions of JJ clusters and other unauthorised settlements in Delhi are well documented. Rooms/houses in the JJ clusters and other unauthorised settlements where the workers were staying were observed to be dense and closely packed. These arrangements had only one room with or without separate kitchen, toilet facilities and bathroom. Out of 156 workers, 94.87 percent reported that they did not have separate bedrooms, 73.72 percent reported absence of separate kitchen and 78.85 percent reported absence of toilet and bathroom facilities attached to their staying arrangements (Table, 6.3). Most of the workers (78.85 percent) were reported to have relied on taps, hand pumps and water supply in tanks by Municipal Corporation of Delhi (MCD) for water for drinking and other household purposes since they did not have water connection at their residence.

The number of persons living in a room or house varied from one to more than five. Out of 156 workers, 21.79 percent stayed with five and more persons, 19.88 percent with four persons, 32 percent with three and a small percentage of workers (5.77) stayed alone in their room or house. The physical conditions of rooms/house and facilities available clearly indicate the poor conditions of living of workers. In most of the situations, workers stayed in single rooms, which had no separate kitchen, toilet/bathroom with more than one person or with family.

Table, 6.3: Facilities available

Facilities	Yes		No		Total	
	F	%	F	%	F	%
Separate bedrooms	08	5.13	148	94.87	156	100.0
Separate kitchen	41	26.28	115	73.72	156	100.0
Attached toilet/bathroom	33	21.15	123	78.85	156	100.0
Water connection	33	21.15	123	78.85	156	100.0
Electricity	156	100.0	-	-	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

Table, 6.4: Number of people staying in a house/room

No	No. of people	Frequency	Percentage
1	One	09	5.77
2	Up to 2	32	20.51
3	Up to 3	50	32.05
4	Up to 4	31	19.88
5	Five and above	34	21.79
Total		156	100.0

Source: Primary Survey, 2006-07

### Income and Consumption Expenditure

Living conditions and standard of living of workers could be better understood from their financial accessibility to amenities, including food, non-food and other significant consumption expenditures. It was found that earning from the present job was the principal source of income for all workers/workers' family except for a few women workers. It is also important to mention that earnings of the family members of workers who were single were not included here since it was not directly supplementing those workers expenditure. Conversely, in most of the cases, workers' earnings were supplementing the expenditure of the family at their native places. Nevertheless, in most of the cases, except for some married workers who were staying alone (27.33 percent), earning from the present job was not the principal source of income of the workers' family at their native place. Hence, the analysis of consumption expenditure is limited to workers alone and to workers who were staying in Delhi with their families. Out of 156 workers, 74.49 percent reported that their present job was the single and principal source of income. For remaining 25.51 percent, other family members also supplemented the family income; however

earning from the present occupation was the principal source of income of the family.

Table, 6.5 details the monthly income of workers/workers' families from all sources. It is clear from the table below that there was no substantial upward mobility in income category for most of the workers, irrespective of the supplementary income available in certain cases. Out of 156, nine workers were found to have moved upward from the monthly income category of 1500-2500 and seven from 2500-3500. As a result there were corresponding increases in the number of workers in the income categories of 3500-4500 and 4500-5500. A few workers also moved to monthly income category of 5500-6500 (2.56 percent) and 6500-7500 (1.28 percent) with the income of other family members. However, the increase was not substantial as in all cases supplementary sources did not contribute to a notable increase in the overall income of the family. In short, as noted earlier, the present occupation was the main source of income for most of the workers and worker families.

Table, 6.5: Monthly earnings from all sources

No	Monthly earning	Present job		Present job + other sources	
		Frequency	%	Frequency	%
1	500-1500	1	0.64	1	0.64
2	1500-2500	55	35.26	46	29.49
3	2500-3500	74	47.44	67	42.95
4	3500-4500	22	14.1	24	15.38
5	4500-5500	4	2.56	12	7.69
6	5500-6500	-	-	4	2.56
7	6500-7500	-	-	2	1.28
Total		156	100.0	156	100.0

Source: Primary Survey, 2006-07

Expenditure of the worker/worker family on food<sup>3</sup> and non-food items<sup>4</sup> was estimated in order to get an understanding of the consumption pattern and standard of living. The estimations were based on the reported expenditure pattern of the workers for a reference period of one month prior to the month of interview. The average monthly expenditure<sup>5</sup> of workers/workers' family on food and non-food items showed variations across income classes. Consumption expenditure on food

<sup>3</sup> Food items included cereals, pulses and products, milk and milk products, edible oil, egg, fish and meat, vegetables, fruits, sugar, salt, spices and beverage.

<sup>4</sup> Non-Food included fuel, electricity, clothing, footwear, education, medical and articles like pan and tobacco.

<sup>5</sup> Average monthly family expenditure is computed from the average monthly expenditure of each worker family on food items, non-food items and miscellaneous consumer goods.

items was found to be more than non-food items, which included fuel, electricity, clothing, footwear, education and medical care for monthly income classes up to Rs.3500-4500 (Table, 6.6). It is in sharp contrast with the pattern of consumption expenditure for the lower Monthly Per Capita Expenditure classes in Delhi region, which showed higher spending on non-food items than food items for the same set of consumption and services in the non-food items noted above.<sup>6</sup> However, monthly spending on food items for the workers/workers' family was higher than the spending of the corresponding expenditure classes in the Delhi region. In the monthly income classes of Rs.4500-5500 to 6500-7500, spending on non-food items were reported to be higher than food items (Table, 6.6). Expenditure other than food and non-food items included room/house rent and miscellaneous consumption expenditure, including transport and entertainment. Room/house rent was a major expenditure for all classes. There was also a corresponding monthly income class-wise increase in the miscellaneous consumption expenditure.

The less spending on food items as compared to non-food items of the lower expenditure classes in the Delhi region and the comparatively high spending on food items of the lower income classes in the study sample lead to various propositions. Firstly, it contests the assumption that higher spending on non-food items than food items are indicators of better standard of living. The pattern of consumption expenditure of lower expenditure classes in the Delhi region leads to the conjecture that higher expenditure on non-food items may be due to other reasons like the general increase in prices and prioritisation of consumption. In such cases, lower spending on food items enables to assume that food needs of the family in the lower expenditure classes may be compromised for other essential non-food items like medical care in many cases. Secondly, there are no adequate evidences to presume that higher spending on food items than non-food items by the lower income categories in the sample sufficiently covers the food needs of workers/workers' family. Nevertheless, higher spending on food items than non-food items leads to an inference that income of the family may be catering merely to the basic needs of workers/workers' family. Arguably, the general assumptions of the

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<sup>6</sup> Level and pattern of the household expenditure in Delhi based on the State sample of NSS 61<sup>st</sup> round revealed that out of population who were in the MPCE class of Rs.501 to 1000 and 1001 to 1500 in Delhi region, 36.63 percent spent around Rs.577.96 on food items and 63.37 percent spent Rs.999.82 on non-food items. For details, see Level and Pattern of Household Consumer Expenditure in Delhi. Govt. of NCT of Delhi (2007).

interconnectedness of higher spending on non-food items than food items and standard of living are not fully valid in the case of lower monthly income classes in the sample. Conversely, prioritisation of needs could be determining the pattern of spending in these classes. As noted above, in many cases, since the income is limited, there could be possibilities of compromising food needs over other essential expenditure like medical treatment and vice versa.

Table, 6.6: Average monthly family expenditure based on monthly income class (Rs)

Item	Monthly income class						
	500-1500 (1 person)	1500- 2500	2500- 3500	3500- 4500	4500- 5500	5500- 6500	6500- 7500
Food items	590	900	1150	1350	1450	1640	1800
Non-food items	325	640	876	1150	1650	1850	2100
Rent	450	620	800	1000	1200	1500	1800
Miscellaneous consumer services	75	300	425	475	550	700	750

Source: Primary Survey, 2006-07

Pattern of food intake could probably explicate whether the workers sufficiently met their food needs. Information with regard to food intake of the worker for a reference period of one week prior to the day of interview is given in table, 6.7 below. It should be noted that the food intake pattern for the reference period of one week may not give the complete picture of food intake pattern of workers. This is primarily due to the fact that there could be variations in consumption in every week/day for a worker, depending upon the liquid money available with them. For instance, spending on food could be less in the week before the day of payment of wages. Nonetheless, a general understanding of the food intake pattern of workers could be obtained from table, 6.7.

Rice, wheat/*atta* and any variety of pulses (often called as *dal*) composed the principal diet of all the workers. For instance, out of 156, 62.18 percent of the workers were reported to have consumed wheat/*atta* based food twice a day and the remaining 37.82 percent consumed at least once a day in the week prior to the day of interview. Similarly, rice was reported to have consumed at least once in a day by 77.56 percent of the workers. Along with that, 91.67 percent of workers were reported to have taken any variety of pulses (*dal*) at least once in a day. In short, rice and *dal* or *rotty* and *dal* constituted the principal diet of the workers.

Out of 156 workers, 49.36 percent were reported to have consumed vegetables (*subzi*) once in a day whereas consumption of vegetables was quite irregular in the week for 21.15 percent of workers in the sample. The proportion of workers who consumed vegetables (*subzi*) twice in a day was relatively less (26.28). It is important to note that 3.21 percent of workers reported that they had not consumed vegetables in any of the days of the week. Most of the workers (58.97) were reported to have taken milk (mostly milk tea) at least once in a day. Other food items such as fruits, meat (any), fish and egg were not reported to be consumed at all in a week by most of the workers or occasionally consumed by some workers. For instance, out of 156 workers, 65.38 percent reported that fruits were not a priority food item. Similarly, 89.10 percent did not consume meat (any), 92.95 percent did not consume fish and 75.64 percent did not prioritise egg in their food consumption.

What is evident from the food intake pattern of the workers is that for most of the workers 'food' was a bare minimum meal consisted of rice, *rotty* and *dal* or sometimes one *subzi*. Furthermore, a significant proportion of the food expenditure was on rice, wheat/atta, edible oil, pulse and vegetables, which were the minimum food requirements. It is also important to note that food constituted the single largest consumption expenditure for the workers in the monthly income classes up to Rs.3500 to 4500 (See table, 6.6). It could hence be inferred that earnings from the present job were insufficient to meet the 'adequate' food need of the worker/worker family.

Table, 6.7: Food intake pattern for the reference period of one week

Items	Daily 2 items		Once in a day		Some days in the week		Never in the week		Total	
	F	%	F	%	F	%	F	%	F	%
Rice	20	12.82	121	77.56	15	9.62	-	-	156	100.0
Wheat/Atta	97	62.18	59	37.82	-	-	-	-	156	100.0
Vegetables (other than onion and chilli)	41	26.28	77	49.36	33	21.15	5	3.21	156	100.0
Pulses	71	45.52	72	46.15	13	8.33	-	-	156	100.0
Fruits	-	-	18	12.18	36	23.08	102	65.38	156	100.0
Milk/ milk tea	-	-	92	58.97	33	21.15	31	19.87	156	100.0
Meat (any)	-	-	-	-	17	10.90	139	89.10	156	100.0
Fish	-	-	-	-	11	7.05	145	92.95	156	100.0
Egg	-	-	12	7.69	26	16.67	118	75.64	156	100.0

F-Frequency

Source: Primary Survey, 2006-07



All the workers interviewed were reported to be buying food items and non-food items including fuel and kerosene from the open market. This may be one of the reasons of increased spending on food items than non-food items. Most of the workers did not buy rice, *atta*, sugar or kerosene from Public Distribution System (PDS) shops due to two reasons reportedly. First was the lack of proper address, which were required for the *ration cards* and next was the “unavailability of good rice and *atta*” as reported by many of the workers. Some of the workers also noted that “there were no significant price differences for food grains between the open market and the PDS shops”. It is also important to note that people in the low income categories in the Delhi region relied less on PDS for the purchase of rice, wheat and sugar. The NSS consumption expenditure survey during 2004-05 revealed that the off take from PDS in Delhi region was notably less except for kerosene. As per the survey, merely 3.69 percent of the total population of Delhi bought rice, 3.43 bought *atta*, 7.72 bought sugar and 35.38 percent bought kerosene from PDS in 2004-05 (Table, 6.8).

Table, 6.8: Off-take from Public Distribution System and Other Sources in Delhi (Percentage)

Item	Rural		Urban		Combined	
	PDS	Other Sources	PDS	Other Sources	PDS	Other Sources
Rice	3.69	96.31	2.98	97.02	3.05	96.95
Wheat/Atta	3.43	96.57	2.68	97.32	2.76	97.24
Sugar	7.71	92.29	3.13	96.87	3.60	96.40
Kerosene	35.38	64.62	28.64	71.36	29.09	70.91

Source: NSS 61<sup>st</sup> round (2004-05), Level and Pattern of Household Consumer Expenditure in Delhi

The physical conditions of living and the consumption pattern of food and non-food items of the workers reflect their poor state of living. It is important to note here that wages of workers in the units were far less than the minimum wages (based on the minimum requirement of living) in the Delhi region. (See, Chapter 5, p.133). Therefore earnings below minimum wages imply that workers could not sufficiently meet their needs for a ‘minimum’ living with the earnings from the present job. The study found that workers were prioritising their needs within their limited earnings. In such a situation, workers were often in a predicament to choose between their basic needs of food, housing and clothing and other equally pertinent needs such as quality food, medical care and education of children. Arguably, employment for

most of the workers in the units could not make a qualitative improvement in their standard of living; conversely, in many cases, it required the workers to live in abysmal conditions thereby compromising their needs of food, clothing, housing, education and health.

### **Conditions of Work and Workplace Health**

The study has employed an analysis based on workers' perceptions on some of the conditions of work-related and social determinants of health<sup>7</sup> in order to comprehend the unfavourable conditions of health at the workplace. The significant work-related determinants of health, which were examined included intensification and overwork, fast work, compulsory overtime, multi tasking and work-induced compromises of health needs of the workers. Workers were asked to respond as 'agree strongly', 'agree somewhat', 'disagree strongly' and 'disagree somewhat' to the aforementioned conditions. Agreeing strongly to the conditions of intensification and overwork, 80.13 percent out of 156 workers noted that the time available for completing the work was less and they had to overwork eventually to achieve targets. Remaining 19.87 percent agreed somewhat to this condition and nobody disagreed 'strongly' or 'somewhat' to it. Most of the workers agreed strongly that their work required fast work without breaks. Out 156 workers, 64.74 percent agreed 'strongly' and 20.51 agreed 'somewhat' to it. A small percentage (14.74) disagreed 'somewhat' to the condition of fast work without break in their work. All workers strongly agreed to the frequent episodes of compulsory overtime and compensatory work for leave. Most of the workers reported that there were no instances of multitasking during their work. This may be due to the fact that most of the units practiced assembly line production. However, some workers (34.61) noted that they had to do multitasking during their work in the units. Agreeing strongly to the proposition that 'work demanded compromise of health concerns', 75 percent of the workers noted that they neglected or less prioritised health concerns. Remaining 25 percent agreed 'somewhat' to it. In short, most of the workers agreed 'strongly' or 'somewhat' to the frequent episodes of the unfavourable conditions of work-related

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<sup>7</sup> The social determinant of workplace health as defined by Wilkinson is "a position developed from the understanding that a health potential can be maximised through the reorganisation of the individual and organisational needs. As per this concept, the wellness-illness dichotomy can be balanced if needs of both are balanced in terms of desires and expectations. At the same time emphasising the fact that specific requirements and situations need to be created in order for the individual to achieve optimal health and maintain an equilibrium as a result of work and enhance their quality of working life". For a discussion, see Wilkinson (2001).

determinants of health such as intensification and overwork, fast work, compulsory overtime and work-demanded compromise of health concerns.

Table, 6.9: Workers' perceptions on work related determinants of health

Conditions	Agree strongly		Agree somewhat		Disagree strongly		Disagree somewhat		Total	
	F	%	F	%	F	%	F	%	F	%
Time to get the work done is not enough	125	80.13	31	19.87	-	-	-	-	156	100.0
Job requires fast work without break	101	64.74	32	20.51	-	-	23	14.74	156	100.0
Frequent episodes of compulsory overtime	156	100.0	-	-	-	-	-	-	156	100.0
Episodes of compensatory work for leave	156	100.0	-	-	-	-	-	-	156	100.0
Episodes of multi tasking at workplace	-	-	54	34.61	70	44.87	32	20.51	156	100.0
Work demanded compromise of health concerns	117	75.0	39	25.0	-	-	-	-	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

Social determinants of workplace health<sup>8</sup>, which were examined here, subsumed control on own work, position of workers in the hierarchy, interactions with co-workers and space for collective bargaining in the units. Majority of the workers agreed 'strongly' (63.46 percent) that they did not have a control on their work with regard to hours of work, physical conditions, targets, leave and break during work. In such cases, workers were reported with adhering to the practices, which were decided by the employer or contractor in the units. For instance, it was reported that target setting was solely done by contractor or supervisors in the units. In many situations, it was reported that targets were imposed upon the workers, when there were more requirements of production. Lack of freedom of workers to decide and control their work is thus translated into overwork in such situations. Remaining 36.54 percent agreed somewhat that they did not have a control on their work or working environment.

<sup>8</sup> Exercising control over working system and own work, demonstrating ability to use skills, ability to unwind and freedom of expression, participation, reduce emotional labour, interaction with others, support with work problems/ work process, equity and fairness and freedom from personal injury are the social determinants of workplace health identified by Wilkinson. For details see, Wilkinson (2001).

All workers agreed 'strongly' that the workplace and job was highly hierarchical in nature. The organisation of production and labour and production practices in the units showed that work was organised in assembly lines with distinct hierarchies with contractor or supervisor at the top and unskilled workers at the bottom (See Chapter 5, pp.121-122). Majority of the workers (81.41 percent) also agreed 'strongly' that their job involved constant monitoring by the supervisors. Level of monitoring may be less for skilled workers as some workers (7.05) agreed 'somewhat' that their job involved constant monitoring while some others disagreed 'somewhat' (8.97 percent) and a few (2.56 percent) disagreed 'strongly' to it. Since, major proportion of the sample consisted of semiskilled and unskilled workers (66.03 percent), the corresponding higher percentage of reporting of the practice of monitoring at workplace leaves to assume that labour control was high on workers at the lower end of the production jobs. Other significant determinants of workplace health such as 'interaction among the workers' and 'space for negotiations' were reported to be less or absent in the units by most of the workers. Out of 156 workers, 64.74 percent noted that they did not interact with co-workers on issues with regard to work or any other matter. Similarly, majority of the workers (84.62 percent) agreed 'strongly' that space for negotiations at the workplace was less or absent.

Perceptions of workers on the determinants of workplace health evidence that workers were in an inferior position to demand better conditions of work and workplace health. For instance, most of the workers were well informed that they were working under unfavourable physical and physically stressful conditions and their work demanded less prioritisation of own health. The reasons of the inferior position and inability of workers to negotiate favourable conditions of work relate largely to their powerlessness, which originate from the lack of control of workers on own work, stringent practices of labour control, episodes of regulatory failures and absence of space for negotiations and collective bargaining. This relationship of powerlessness of workers and prevalence of unfavourable working conditions could be understood from the extent of risks of occupational safety and health as well as psychologically stressful conditions of work in the units.

Table, 6.10: Workers' perceptions on social determinants of workplace health

Conditions	Agree strongly		Agree somewhat		Disagree strongly		Disagree somewhat		Total	
	F	%	F	%	F	%	F	%	F	%
Little control on own work	99	63.46	57	36.54	-	-	-	-	156	100.0
Job is highly hierarchical	156	100.0	-	-	-	-	-	-	156	100.0
Job involves constant monitoring	127	81.41	11	7.05	4	2.56	14	8.97	156	100.0
Less interaction with co-workers	101	64.74	55	35.26	-	-	-	-	156	100.0
Less space for negotiation	132	84.62	24	15.38	-	-	-	-	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

### Physically Dangerous Conditions of Work

As noted in chapter 5, physical conditions, which prevailed in the garment units, were found to have significant bearing on the risks of physically stressful conditions and health of workers. Most of the workers reported that physical conditions with regard to space, volume, ventilation, sound and temperature conditions at the workplace were unfavourable (See, Chapter 5, p. 139). Furthermore, workers reported risks of occupational safety in the units, including fire, electric shocks, exposure to dust, fumes, chemicals and loud noise, burns, cuts and injuries and needle prick. Table, 6.11 shows that out of 156 workers, 62.18 percent reported the risks of catching fire at their workplace, based on the previous instances of fire in the units. A few workers (17.31 percent) reported the risk of exposure to fumes and chemicals and 39.10 percent reported exposure to loud noise at their workplace. All the workers reported the risk of exposure to dust in the units. It should be mentioned here that most of the workers reported the absence of proper ventilation and air exhausting mechanisms at their workplace. Risks of electric shock and burn were reported by 14.10 percent of the workers; mostly workers in the ironing section. It was observed that intensification of work has been linked with increased accident and injury rates in the unit. For instance, instances of cut and injuries of fingers were reported by 23.72 percent and occurrences of needle prick were reported by workers in the sections of button stitching, button holding and tailoring (32.69 percent). Likewise, other physically stressful conditions such as exhaustion, backache,

headache, muscle and joints pains were reported by workers. These are discussed in detail in the section of self-reported morbidity in the chapter.

Table, 6.11: Reported occupational health risks

Risks	Yes		No		Total	
	F	%	F	%	F	%
Risk of catching fire	97	62.18	59	37.82	156	100.0
Exposure to fumes and chemicals	27	17.31	129	82.69	156	100.0
Exposure to dust	156	100.0	-	-	156	100.0
Exposure to loud noise	61	39.10	95	60.90	156	100.0
Risk of electric shock	22	14.10	137	85.90	156	100.0
Needle prick	51	32.69	105	67.31	156	100.0
Cut and injury	37	23.72	119	76.28	156	100.0
Burn	22	14.10	137	60.90	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

### Psychologically Stressful Conditions of Work

The nature of work, production and labour practices at the workplace and job insecurity are some of the significant factors of psychologically stressful conditions of workers.<sup>9</sup> Based on the perceptions of workers, the probable contributing conditions of stress at the workplace in the units of Mangolpuri are examined here. The conditions examined here included achieving of targets, job insecurity, deteriorating conditions of health and intensification of work as given in table, 6.12 below. With regard to achieving targets, out of 156 workers, 79.79 percent strongly agreed that they were always worried of achieving targets. It is primarily because of the practice of deduction of salary for the work that was not completed and the possibility of termination due to the repeated failure of achieving targets as noted in the previous chapter. Job insecurity was reported as one of the major factors, which is multiplying the stress of the workers. It should be noted here that most of the unskilled, semi-skilled and to a certain extent skilled workers in the units were on contract basis (See, chapter 5, p.). Similarly, in most of the cases, workers were not given contract letters or employment cards. Out of 156 workers, 53.21 percent agreed 'strongly' and remaining 46.79 agreed 'somewhat' that they were 'anxious' about security of job.

<sup>9</sup> Several studies have established the linkages of changes in technology, forms and types of work and workplace practices to stress, burnout and depression among workers. For a discussion, see, Heaney et al. (1994), Nelson et al. (1995), Gabriel and Liimatainen (2000) and Landsbergis (2003).

Deteriorating state of health due to overwork was a major factor, which increased the stress level for most of the workers. Nearly, 40 percent of workers in the sample agreed 'strongly' and 51.92 agreed 'somewhat' that they were 'anxious' about their conditions of health. It should also be mentioned that for 7.69 percent of workers, condition of health was not a major factor of stress. Similarly, all the workers found intense work in the unit was a factor which multiplied stress by 65.38 percent agreeing 'strongly' and the remaining 34.62 agreeing 'somewhat' to it.

Table, 6.12: Reported psychologically stressful conditions of work

Conditions	Agree strongly		Agree somewhat		Disagree strongly		Disagree somewhat		Total	
	F	%	F	%	F	%	F	%	F	%
Worried of achieving targets	112	71.79	39	25.0	-	-	5	3.21	156	100.0
Anxious about job security	83	53.21	73	46.79	-	-			156	100.0
Anxious about deteriorating health conditions	63	40.39	81	51.92	-	-	12	7.69	156	100.0
Stressed of intense work	102	65.38	54	34.62	-	-	-	-	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

In short, the conditions that contribute to the inferior health outcomes of workers such as production practices,<sup>10</sup> labour control,<sup>11</sup> regulatory failures,<sup>12</sup> job insecurity, powerlessness of workers, exposure to physically dangerous conditions and intensification of work were noticeably prevailing in the garment production units in Mangolpuri. Furthermore, most of the workers perceived that unfavourable physical conditions and intensified work in the units increased the risks of work-related health hazards (See, table, 6. 11). Similarly, most of the workers were reported to be stressed or anxious about the issues with regard to achieving targets, job security and their deteriorating conditions of health. Hence, it can be assumed that much of the health problems of workers could be attributed to the conditions of work in the units.

<sup>10</sup> It included division of production line into core and periphery to reduce labour cost on welfare measures. ambiguity in rules and procedures and hidden changes in work practices like deployment of proxy owners or contractors.

<sup>11</sup> Practices of labour control in the units often involved stringent monitoring and line management.

<sup>12</sup> Regulations pertaining to employment, wages and conditions of work, which are bound by domestic labour legislations and complimented by voluntary code of conduct, were found to be failed in the garment production units in Mangolpuri. For a discussion, see, Chapter 5, pp. 141-144

In order to validate this assumption, morbidity patterns and treatment seeking of the workers are examined here.

### **Reported Morbidity and Treatment Seeking**

Reported acute ailments by the workers in the units, apart from accidents and injuries, were ringing ears/hearing problems, watery eyes, headache, backache, stomach upset, stiffness, swelling, muscle and joint pains and physical exhaustion (Table, 6.13). Among these, most commonly reported problems were physical exhaustion (100 percent), muscle/joint pain (94.23 percent), stiffness (85.23 percent) and backache (87.82 percent). It should be noted that most of the workers were reported with multiple problems of which some were headache, backache, cough and cold or stomach problems. Strikingly, all acute problems were found proportionately high among women workers. Out of various problems reported, problems of watery eyes and headache were reported significantly high by women workers than men. While out of 57 women workers, 56.14 percent reported watery eyes and 68.42 percent reported headache, corresponding percentage of reporting among men were 13.13 and 40.40 out of 99 workers. It could be due to the fact that women were more engaged in works such as button-holding, button-stitching and checking, which require concentrated work for long time.

Acute health problems reported by the workers could be attributed to conditions of work, while examining the physically stressful conditions of work in the units. It must be noted that in all categories, work required repeated movements of body such as bending over, twisting around and lifting or carrying of weights as well as constant physical postures of sitting, standing and concentrating for long time. As noted in chapter 5, out of 156 workers, 32.05 percent reported that their work involved walking for long, 55.13 percent reported that their work required sitting for long, 43.59 percent reported that their worked involved standing for long , 28.85 percent reported that they had to lift and carry weights as part of the work, 83.97 percent reported that their work involved repeated hand motion, 66.66 percent reported that their work required bending over and twisting around for long and 53.85 percent reported that their work required concentration for long (See, table, 5.20, Chapter, 5). Hence, for most of the workers, who reported acute ailments such as watery eyes, hearing problems, headache, backache, joint pain, stiffness and physical exhaustion, work involved the aforementioned physically stressful



conditions. Arguably, acute health problems reported by the workers hence can be attributable to physical conditions at workplace and stressful conditions of work to a certain extent.

Table, 6.13: Reported acute health problems

Reported morbidity	Male (N=99)		Female (N=57)		Total (N=156)	
	F	%	F	%	F	%
Ringing ears/hearing loss	2	2.02	3	5.26	5	3.21
Watery eyes	13	13.13	32	56.14	45	28.85
Headache	40	40.40	39	68.42	79	50.64
Back ache	83	83.84	54	94.74	137	87.82
Stomach upset/acidity	44	44.44	41	71.93	85	54.49
Stiffness	76	76.77	57	100.0	133	85.26
Swelling of body parts	31	31.31	27	47.37	58	37.18
Muscle/joint pain	90	90.90	57	100.0	147	94.23
Physical exhaustion	99	100.0	57	100.0	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

Chronic ailments, which were reported by the workers included hypertension, asthma, migraine, ulcer, anaemia and piles. Among these, largest reported ailment was migraine and severe headache (Table, 6.14). Out of 156 workers, 27.56 percent were reported to be suffering from migraine. Cases of migraine and severe headache were reported almost proportionally equal among men and women. Anaemia and asthma were the major chronic ailments among women workers other than migraine. Out of 57 women workers, 33.33 percent were reported to have anaemia and 19.30 percent were suffering from asthma. Among men, ulcer and piles were the largest reported ailments after migraine. Out of 156 workers, 18.18 percent reported that they had been suffering from the problems of ulcer and nearly 16 percent reported that they suffered from piles. Among men, a few workers (2.02 percent) were reported to be suffering from hypertension and nearly 7 percent from asthma.

Although, it may be complex to attribute the chronic health problems to the conditions of work, the physical conditions and physically stressful conditions of work were potential risks factors of increasing susceptibility to diseases. For instance, unfavourable physical conditions of dust, fumes and heat, which were reported to be prevailed in the units, could multiply the risks of asthma and migraine. Continuous speedy work could be risk multiplier for hypertension. Sedentary work and irregular diet might increase the risks of piles and ulcer. It is

also important to note that workers did not report their health problems to contractors or employers because of the fear of non-renewal of contract and loss of jobs.

Table, 6.14: Reported chronic health problems

Reported morbidity	Male (N=99)		Female (N=57)		Total (N=156)	
	F	%	F	%	F	%
Hypertension	2	2.02	-	-	2	1.28
Asthma	7	7.07	11	19.30	18	11.54
Migraine/severe headache	29	29.99	14	24.56	43	27.56
Ulcer	18	18.18	-	-	18	11.54
Anaemia	-	-	19	33.33	19	12.18
Piles	16	16.16	-	-	16	10.26

F-Frequency

Source: Primary Survey, 2006-07

It should also be mentioned that workers were reported to have developed certain risks related to behavioural factors, which were closely associated with work. For instance workers reported changes in their habits with regard to food intake, sleep and social relations due to the pressure and demand of work. All workers reported that their food intake was quite irregular due to the pressure of work (Table, 6.15). Out of 156 workers, 58.97 percent reported that pressure due to overwork affected their sleep. It is important to note here that working hours in the units, in most of the situation ranged from nine to twelve hours a day, including overtime (See, chapter, 5, p.137). For most of the workers, long duration of work significantly limited their social life. For instance, out of 156 workers, 90.39 percent reported that they 'very often' or 'often' avoided social ceremonies.

Table, 6.15: Work induced behavioural risk factors

Characteristics	Very often		Often		Rarely		Total	
	F	%	F	%	F	%	F	%
Irregular mode of food intake	156	100.0	-	-	-	-	156	100.0
Irregular mode of sleep	92	58.97	58	37.18	6	3.85	156	100.0
Avoid social ceremonies	77	49.36	64	41.03	15	9.61	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

### Treatment Seeking

Among the workers, who were reported with various acute and chronic disease problems, majority did not seek treatment or continue treatment. Table, 6.16 shows

that proportion of workers who sought full course treatment for the abovementioned acute problems constituted barely 16.67 percent of the sample. Majority (69.87 percent) did not seek treatment from any system of medicine at all. A few workers (13.46 percent) reported that they sought treatment, however, discontinued largely because of various constraints such as time, leave and expenditure. It is important to note that, percentage of workers who sought treatment for acute ailments were relatively high among women than men. It was generally reported that workers used to manage the acute health problems by themselves as they felt that these problems were not serious.

Table, 6.16: History of treatment, acute ailments

Treatment	Male		Female		Total	
	F	%	F	%	F	%
Taken full treatment	15	15.16	11	19.30	26	16.67
Not taken treatment	72	72.72	37	64.91	109	69.87
Taken for a period	12	12.12	09	15.79	21	13.46
Total	99	100.0	57	100.0	156	100.0

F-Frequency

Source: Primary Survey, 2006-07

Proportion of persons who sought treatment for chronic ailments was relatively higher than person who sought treatment for acute problems. Table, 6.17 shows that out of 116 cases of chronic ailments, 24.12 percent sought full course treatment whereas 53.45 percent sought treatment for a while and discontinued. The percentage of persons who had not sought treatment for chronic ailments constituted 22.42 percent of the sample. Strikingly, in sharp contrast to the treatment seeking for acute problems, 34.09 percent of women workers out of 44 cases of chronic ailments reported, did not seek treatment. Whereas, percentage of men who had not sought treatment for chronic ailments was 15.28, out of 72 cases, which were reported among men. Similarly, percentage of men who sought treatment as well as discontinued was also proportionately higher for men. These relative differences in treatment seeking for acute and chronic problems between men and women workers lead to the assumptions that women could be less prioritising their health needs as compared to men. Economic costs of treatment might be a priority concern for women workers than men and men might be more concerned about their chronic diseases than acute.

Table, 6.17: History of treatment, chronic ailments

Treatment	Male (C=72)		Female (C=44)		Total (C=116)	
	F	%	F	%	F	%
Taken full treatment	15	20.83	13	29.55	28	24.14
Not taken treatment	11	15.28	15	34.09	26	22.41
Taken for a period	46	63.89	16	36.36	62	53.45
Total	72	100.0	44	100.0	116	100.0

C-Cases, F-Frequency

Source: Primary Survey, 2006-07

Reasons for not seeking or discontinuing treatment for the chronic ailments, to a certain extent explain the differences in treatment seeking behaviour of men and women. For men and women, opportunity cost with regard to loss of wages was the first priority reason for not seeking or discontinuing treatment (Table, 6.18). However, for women, high cost of medical treatment was also the first priority reason whereas it was second for men. For 42 men, out of 57 and 27 women out of 31 fear of loss of job was one of the significant reasons for not seeking or discontinuing treatment. Since the workers were on contract basis, prolonged absence from work would lead to loss of jobs. Similarly, 36 men and 24 women reported that they did not take their ailments seriously.

Table, 6.18: Reasons for not taking/discontinuing treatment for chronic ailments

No	Reasons	Male (C=57)		Female (C=31)	
		Frequency	Rank	Frequency	Rank
1	Loss of wages	54	1	31	1
2	High medical care cost	49	2	31	1
3	Fear of loss of job	41	3	27	2
4	Not taking seriously	36	4	24	3

C-Cases, F-Frequency

Source: Primary Survey, 2006-07

Treatment seeking and perceptions of workers towards physically dangerous conditions of work enables us to assume that nature of work and lower economic conditions of workers significantly affected their health behaviour and health seeking behaviour. Hence, the hypothesis that health behaviour and health seeking behaviour of workers are associated with their employment, its nature, demands and economic rewards, which largely depend upon the production and labour relations, which the study attempted to test is valid in this particular context. The study

revealed that workers did not complaint about occupational risks at the work place or did not report the acute and chronic ailments for the fear that information about their health and sickness would be used in decisions about the renewal of contract and severance. Arguably, in many cases, health needs of workers were often compromised over other concerns of job, financial constraints and huge opportunity cost associated with treatment and hospitalisation. This in turn, aggravated their already deteriorated health conditions and affected further employability. In short, there is a vicious cycle of interrelated associations of informality and inferior health outcomes existing in the units as informal conditions of work were significantly attributable to adverse conditions of health at workplace and adverse conditions of health of workers affected their employability.

### **Service Availability, Utilisation and Healthcare Spending**

As noted in the previous chapter, employer responsibility or financial support did not exist in the garment production units in Mangolpuri. Furthermore, contract workers did not have social security or coverage of health insurance. Hence, healthcare was the sole responsibility of the worker or worker's family. Therefore, most of the workers sought treatment in public hospitals since cost of medical care and hospitalisation is less in public hospitals.<sup>13</sup> Out of 90 workers who sought treatment for chronic ailments, 65.56 percent depended on government/public hospitals (Table, 6.19). Barely a small percentage sought treatment in private hospitals (5.55 percent) and charity hospitals (10 percent). It should be noted that 18.89 percent of workers depended on Registered Medical Practitioners (RMP)/quacks<sup>14</sup> for the treatment of their chronic ailments. Convenience, accessibility and less cost were the major reasons for consulting RMPs.

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<sup>13</sup> NSS 60<sup>th</sup> round (2004-05) on Morbidity, Healthcare and Conditions of the Aged Persons, Delhi State Sample revealed that the average medical expenditure for hospitalised treatment from a public sector hospital was much lower than that from a private sector hospital in both rural and urban areas in the Delhi region. While the rural population spent, on an average, Rs.14447 for a hospitalised treatment in a public sector hospital whereas it was Rs.22375 for one in a private sector hospital. Likewise, the average total medical expenditure of the urban population for a hospitalised treatment in a public and private hospital was Rs.6829 and Rs.35295 respectively.

<sup>14</sup> Registered Medical Practitioners are qualified/unqualified practitioners, who may or may not have certified degree or training. Quacks, on the other hand are unqualified practitioners, without any formal training, who often practice in poor areas. In practice, they are often the first line of healthcare, performing first aid, or taking care of minor ailments, and referring patients to qualified doctors for more serious cases.

Table, 6.19: Place where treated for chronic ailments (N=90)

No	Place	Frequency	Percent
	Government hospital	59	65.56
	Private clinics/hospitals	05	5.55
	Charity hospital	09	10.0
	Registered medical practitioners/Quacks	17	18.89
Total		90	100.0

Source: Primary Survey, 2006-07

### Spending on Healthcare

Healthcare expenditure of workers on medicines (over the counter), treatment and hospitalisation for the period of one month (month, prior to the month of interview) were examined to reflect on the financial burden of healthcare for workers. As noted earlier in the chapter, monthly non-food expenditure of the workers across various monthly income classes varied from Rs.325 to 2100 (See table, 6.6). Expenditure on healthcare, including medicines, which were bought over the counter<sup>15</sup> and outpatient treatment<sup>16</sup> constituted a notable share, though not high, of the non-food expenditure of the workers. Instances of hospitalisation considerably increased the healthcare expenditure of workers.

Table, 6.20 gives the monthly healthcare expenditures<sup>17</sup> of various monthly income classes of workers. Monthly healthcare expenditure, excluding hospitalisation, constituted 32.03 percent of the non-food expenditure of the 'Rs.500-1500 monthly income class'. There was only one worker in this income class and outpatient treatment constituted the major share of the monthly healthcare spending. For monthly income classes of Rs.2500-3500 and 3500-4500, healthcare expenditure constituted 58.14 and 53.56 percents of the non-food expenditure respectively, which was a major share. Outpatient treatment was the major expenditure among these income categories as well. Similarly, healthcare expenditure constituted a notable share of non-food expenditure among the monthly income classes of

<sup>15</sup> Over the counter buying implies, buying of medicines from medical shops without the prescription of a certified medical practitioner.

<sup>16</sup> Cost of out-patient treatment included, consultation fees, charges of diagnostic tests, wherever applicable, expenditure on medicines and transportation.

<sup>17</sup> Healthcare expenditure for various monthly income classes were calculated as follows. Firstly, healthcare expenditures on various heads for the workers were extracted under each monthly income class. Secondly, the average of the spending on each head of all workers in each monthly income class was calculated.

Rs.3500-4500 and 5500-6500. Healthcare expenditure showed a sudden leap in the monthly income classes where there were instances of hospitalisation. For instance, cases of hospitalisation in the monthly income classes of Rs.4500-5500 and 6500-7500 amplified the monthly healthcare expenditure to 149.39 and 193.33 percents of the non-food expenditure respectively in each class. In short, mere outpatient treatment and over the counter buying of medicine constituted a major share of non-food expenditure of workers across all monthly income classes and instances of hospitalisation in fact multiplied the expenditure many folds, far exceeding total income of workers from all sources.

Table, 6.20: Monthly healthcare spending by monthly expenditure class

Monthly income class	All non-food items <sup>18</sup> (Rs.)	Healthcare spending (approximate reporting) (Rs.)			
		Over the counter medicines	Outpatient treatment	Hospitalisation	% to non-food expenditure
500-1500(N=1)	325	15	90	-	32.03
1500-2500 (N=46)	640	75	300	-	58.14
2500-3500 (N=67)	876	125	345	-	53.65
3500-4500 (N=24)	1150	90	470	-	48.70
4500-5500 (N=12)	1650	145	640	1500 (1 case)	149.39
5500-6500 (N=4)	1850	190	630	-	44.77
6500-7500 (N=2)	2100	240	500	2500 (1 case)	193.33

Source: Primary Survey, 2006-07

Although most of the workers were reported to have met their healthcare expenditure with household/individual income, instances of hospitalisation required workers to rely on other sources. Table, 6.21 shows that out of 156 workers, household/individual income was the major source of healthcare expenditure for nearly 73 percent. However, 15.39 percent of workers reported that apart from the family/individual income they had to borrow from friends and relatives in order meet the expenditure of healthcare. Similarly, 12.82 percent of the workers were reported to have sold their assets, mostly ornaments and wrist watches, for meeting healthcare expenditure.

<sup>18</sup> Please refer to table. 6.6

## **Conclusion**

The conditions of living of workers evidenced that the social cost of informal employment was found to be larger for workers. Low earnings from the work adversely affected their living conditions and wellbeing. A significant proportion of workers stayed in unauthorised arrangements without facilities like separate kitchen, toilet and bathroom. In many cases, more than two workers and the entire family of the workers stayed in a single room. The physical conditions of rooms/house and facilities available clearly indicated the poor conditions of living of workers. Earnings below minimum wages often limited the workers to sufficiently meet their needs of a 'minimum' living. The study found that workers were prioritising their needs within their limited earnings. Hence, employment for most of the workers in the units could not make a qualitative improvement in their standard of living; conversely, in many cases, it required the workers to live in appalling conditions compromising their needs of food, clothing, housing, education and health.

Conditions of work and workplace health revealed that the frequent episodes of the unfavourable conditions of work-related determinants of health such as intensification and overwork, fast work and compulsory overtime made workers to compromise their health concerns. Social determinants of workplace health, subsuming control on own work, position of workers in the hierarchy, interactions with co-workers and space for collective bargaining in the units were found to have significant impact on determining the health conditions of workers. Perceptions of workers on the determinants of workplace health evidenced their inferior position to demand better conditions of work and workplace health. For instance, most of the workers were well informed that they were working under unfavourable physical and physically stressful conditions and their work demanded less prioritisation of own health. The reasons of the inferior position and inability of workers to negotiate favourable conditions of work largely related to their powerlessness, which stemmed from the lack of control of workers on own work, stringent practices of labour control, episodes of regulatory failures and absence of space for negotiations and collective bargaining. These conditions were found to be reflected on the workplace health with higher prevalence and risks of occupational safety and health as well as physically dangerous and psychologically stressful conditions of health.



The study has found that much of the health problems of the workers can be attributable to the unfavourable conditions of work in the units. It has been established that the acute health problems such as watery eyes, hearing problems, headache, backache, joint pain, stiffness and physical exhaustion had association with the physical conditions of workplace and the physically stressful conditions of the particular work. Similarly, some of the chronic health problems such as migraine, asthma and piles had direct significance on conditions of health. Also, the physical conditions and physically stressful conditions of work were found to be aggravating the chronic disease problems of workers. Inadequate diet and sleep, long travel time to work due to pressure of work and drudgery were some of the other factors that compounded their declining health conditions.

Health and treatment seeking behaviour of the workers were found to have significant corollaries on their conditions of work and earnings from the work. In this context the hypothesis that health behaviour and health seeking behaviour of workers are associated with their employment, its nature, demands and economic rewards, which largely depend upon the production and labour relations, which the study has put forward, is proven to be valid. It was also found that workers often less prioritised their healthcare needs over the needs of food and living and factors such as job security, financial constraints and huge opportunity costs associated with treatment and hospitalisation significantly limited their healthcare needs. Most of the workers did not seek treatment for their diseases and those who sought treatment discontinued due to the higher economic costs associated with treatment. Given these backgrounds, the study has found that there is a vicious cycle of interrelated associations of informality and inferior health outcomes existing in the units since informal conditions of work were significantly attributable to adverse conditions of health at workplace and adverse conditions of health of workers affected workers' employability.

The study has found that expenditure on healthcare with regard to over the counter purchase of medicines, outpatient treatment and hospitalisation constituted a major share of the non-food expenditure of workers. Also, instances of hospitalisation notably increased the spending. It was also found that the economic cost of health multiplied the financial burden of workers/workers' family since the workers were not protected by social security or health insurances by the employers and much of

the healthcare expenditure was met with individual/household income, borrowings and sale of assets. Therefore, in the context of the existing employer-employee relationships for the contract workers in the units, the risks and costs of health and welfare were found to be transferred from employer to the worker in the garment production units of Mangolpuri.

In short, the direct and indirect associations of adverse health outcomes such as low economic opportunities, less freedom of work, absence of control on own work, intensified and physically stressful conditions of work, absence of space for collective bargaining, regulatory failure and practices of labour control are related to poor conditions of living, physically dangerous and psychologically stressful conditions, reduced access to healthcare, health seeking behaviour and work induced health behaviour of workers in the garment export units in Mangolpuri.

the identified unorganised sectors in many states and marginal increase in some states in the post reform period.

Decline of wages had subsequent implications on the living conditions of workers in the informal non-farm and manufacturing sectors. Situation of poverty among the informal sector workers in general and non-farm and manufacturing segments in particular showed a positive association between poverty and informal sector employment. This association was found to be true for all segments of informal sector and it was noted that across industries and sectors, in line with the trends shown during the initial years of reform, higher levels of prevalence of poverty was found among the informal sector workers. Within informal sectors and workers, poverty ratio was found to be higher in the non-farm and manufacturing sector, notably in urban India. Evidences of gender implications in the association between informal sector employment and poverty were also noted in the study. In every segment of the informal sector, wages for female workers were found substantially lower than that of males. Hence the incidents of working in the informal sector and being poor were found to be more for women than men and situations of poverty were found to be intense in female-headed households than male-headed.

The declining trend of wellbeing of workers in the informal sector was reinforced with the pattern of consumption expenditure. It was found that across all expenditure classes in the informal sector, share of expenditure on food had been higher than non-food expenditure. Another significant finding was that health expenditure held a major share of non-food expenditure and household income or saving and borrowing constituted a major share in the expenditure on treatment and hospitalisation of the workers. Hence, expenditures on medical treatment and hospitalisation plunged more households into debt and selling of assets in the context of declining family income and rising health care expenditure. The study found that the financial burden of health care increased in the post reform period for informal sector workers due to the decline in real wages and absence of social support mechanisms in the informal sector.

The general trends in the informal sector with regard to production organisation, labour relations and wellbeing of workers were analysed with special focus on export oriented garment manufacturing sector. Export oriented garment sector worldwide has witnessed notable rearrangements in the transitional phase and post

phase of MFA. Quota eliminations have had mixed impacts on export, production organisation, employment and wages in exporting countries. Most of the producing and exporting countries, except Mexico, United States, Romania and Tunisia, were reported with positive growth rate in export. However, there had been rearrangements in production organisation with the practices of relocation and international sub-contracting within and across regions. It was found that production of textiles and clothing witnessed relocation/subcontracting and sourcing patterns from the developed to the developing world where cost of production is comparatively low and in most of the producing countries, production had been shifted to informal arrangements.

Employment in the sector showed significant variations across exporting countries during the pre and post quota elimination phase. Employment in textiles and clothing worldwide showed a decline, however, growth of employment witnessed an increase in some developing countries. Countries that reported increase in employment in textiles and clothing production were China, Pakistan, Romania, Guatemala, Mexico and Turkey whereas it declined in Sri Lanka and Bangladesh, as well as in Africa, apart from Madagascar. However, it was found that countries where employment showed an increase, a significant portion was in the informal sector largely attributable to the phenomenon of flexibilisation of labour market and the scattered nature of production organisation of the industry in general.

The other side of this trend was that employment was found to be vulnerable to fluctuations in export. However, there were no indications of increase in real wages in the pre and post quota elimination periods in the exporting countries. It was also seen that there was slight increase in the wages over years for the organised sector workers in the textiles, clothing and garment sectors, however, evidences from various countries showed that it had not contributed to the increase in real wages in the sector. The explanation of this inverse relationship between employment growth and wages largely lied in the fact that export growth in all countries were supplemented by the informal sector where cost of production was considerably low due to the less level of regulation.

In India, it was found that in the transitional and post MFA phase, much of the export increase was associated with informalisation of production. The trends, which the study identified, were shift of production to decentralised arrangements on one

hand and on the other informalisation of the formal centralised production arrangements. Along with that the transitional and post MFA phase witnessed the decline of traditional sectors, including organised mill sector. These shifts were followed by notable changes in labour relations as status of workforce in the sector had been changed to wage workers from self employed in the informal sectors. Though, garment sector in India witnessed growth in employment, estimations based on principle status of workers revealed that the larger share of increase was in the unorganised garment sector, reinforcing the trend of casualisation in the sector. Along with that there were comprehensible trends of feminisation in the casual jobs in the sector with an increase in female employment in the subsidiary status.

There was no increase in wages in the garment sector in India in the post quota phase. Conversely, it was found that wages in the sector were relatively less than that of wages prevalent in other manufacturing sectors. Significant variations in wages were found across States as well. Similarly, the male-female wage differential in the sector was also high, paralleling to the general trend in India. The conclusion that the study put forward to explain informalisation of production in the sector is that the rearrangements in the sector subsequent to quota elimination by the industry emphasised more on reduction of production and labour costs to be competitive in international trade. Hence, the heightened competition under the new system of trade and flexibilisation of production directly transfer the risks of trade to workers. Structural changes in the garment export industry after trade policy reforms, hence, were found to have significant corollaries in the living conditions and wellbeing of workers.

Given this background, the associations of informality and adverse health outcomes, which have evident linkages with trade, organisation of production and labour relations were explored in the export oriented garment manufacturing industry in Mangolpuri, Delhi, employing a primary survey. The production organisation and labour relations that prevailed in the formal export oriented garment units in Mangolpuri showed informalisation of labour. Informality in labour relations was evident from the practices of casual and contract employment in the production line as well as specific labour practices with regard to organisation of work. Interconnectedness of informal labour relations with declining living conditions and

instance, the risks of work intensification, emerging from purchasing practices of buyers coupled with the cost minimisation measures of suppliers were found to be directly passed on to workers. Other identified risk of international trade for workers was increasing uncertainty in job security since the units relied on sourcing from international retailers and brands.

Practices of informality were also evident in the wage structure and conditions of work in the units. Paralleling to the overall trend of low wages in the sector, the study noted the prevalence of low wages, strikingly below minimum wages fixed for the industry, in the units of Mangolpuri. Similarly, male-female wage differentials in congruence with the overall trend in the informal sector were also found in the units. Conditions of work were found appalling in the units with regard to intensification and unfavourable physical conditions of work. Similarly, work involved physically stressful conditions in the units, attributable to intensification of work.

Informality was found to be associated with the conditions of adverse health outcomes of workers in the units. Informality multiplied the significance of the associations of low economic opportunities and poor living conditions of workers, less freedom of work, absence of control on own work and lower level of organisation with the conditions of living and wellbeing, physical dangerous and psychologically stressful conditions of work, reduced access to health care and work induced health behaviour of workers.

With regard to conditions of living, the primary study found that a significant proportion of workers stayed in unauthorised arrangements without facilities of separate kitchen, toilet and bathroom. Low earnings from work (below minimum wages) limited the workers to meet their needs of minimum living sufficiently. The study found that workers were prioritising their needs within their limited earnings. Hence, employment for most of the workers in the units could not improve their standard of living; conversely, in many cases, it required the workers to live in appalling conditions; compromising their needs of food, clothing, housing, education and health. The conditions of living of workers indicated that the social cost of informal employment was found to be larger for workers.

Conditions of work and workplace health revealed the unfavourable conditions of work-related determinants of health such as intensification and overwork, fast work

and compulsory overtime, which often made workers to compromise their health concerns. Perceptions of workers on the determinants of workplace health indicated their inferior position to demand better conditions of work and workplace health. The reasons of the inferior position and inability of workers to negotiate favourable conditions of work was largely situated in their state of powerlessness, which stemmed from the lack of control of workers on own work, stringent practices of labour control, episodes of regulatory failures and absence of space for negotiations and collective bargaining. These conditions were found to be reflected on the workplace health, resulting higher prevalence and risks of occupational safety and health as well as physically dangerous and psychologically stressful conditions of health. The study found that much of the health problems of the workers can be attributable to the unfavourable conditions of work in the units in the context of high prevalence of work related acute ailments and deteriorating conditions of the chronic disease problems.

Health and treatment seeking behaviour of the workers were found to have significant corollaries on their conditions of work and earnings from the work. In most of the cases, expenditure on healthcare with regard to over the counter purchase of medicines, outpatient treatment and hospitalisation constituted a major share of the non-food expenditure of workers and instances of hospitalisation considerably increased the spending. It was also found that the economic costs of health multiplied the financial burden of workers/workers' family since the workers were not protected by social security or health insurances by the employers and much of the healthcare expenditure was met with individual/household income, borrowings and sale of assets. With these evidences, the study established that the existing employer-employee relationships in the units, the risks and costs of health and welfare were transferred from employer to the worker.

Flexible production practices with the objectives of reducing production and labour costs therefore informalise labour relations and largely undermines labour rights. Contingencies of flexible production practices such as low economic opportunities, less freedom of work, absence of control on own work, intensified and physically stressful conditions of work, absence of space for collective bargaining, regulatory failure and labour control are invariably translated into poor conditions of living, physically dangerous and psychologically stressful conditions, reduced access to

healthcare, health seeking behaviour and work induced health behaviour of workers in the informal sector. Hence, it is argued that though the expansion of manufacturing sector towards informal arrangements, especially export oriented ones, contributed to employment generation, it has not brought about qualitative improvements in the wellbeing of workers. Conversely, it exacerbates the economic burden of living by transferring the costs and risks of informal employment wholly to workers. Organisation of production in the export oriented garment supply chains therefore seriously contests the flexible specialisation paradigm of production relations and its overriding assumption that greater flexibility and non-regulation leads to better production and conditions of living. Though, flexibility resulted in increased production, it has seriously hampered employment relations and undermined workers' social and economic costs of work.



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*The Special Economic Zone Act, 2005*, Government of India

*The Trade Union Act, 1956*, Government of India

*The Workmen's Compensation Act, 1923*, Government of India

*Annexure*

**Interview Schedule for the Casual Workers in the Formal Garment Export Units in Delhi**

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Sample Sl. No....

**I. Personal Profile**

1. Name
2. Address
3. Sex M.... (0) F.... (1) Other.... (2)
4. Age 10 to 15... (1) 15 to 20.... (2)  
20to 25.... (3) 25 to 30.... (4)  
30 to 35.... (5) 35 and above.... (6)
5. Marital status Never married.... (0) Married.... (1)  
Widowed..... (2) Divorced/Separated.... (3)
6. Religion (if willing to answer)
7. Caste (if willing to answer)
8. Education Literate.... (0) Illiterate.... (1)
9. If literate Primary.... (0) Secondary.... (1)  
Higher Secondary.... (2) Above Higher  
secondary.... (3)  
Informal.... (4)
10. Technical Education required for the Job: Yes.... (0) No.... (1)
11. If yes, Give details
12. Living Arrangements Own House.... (0) Rented House.... (1)
13. Staying arrangement  
With family in rented house Yes.... (0) No.... (1)  
With friends in rented house Yes.... (0) No.... (1)  
Alone in rented house Yes.... (0) No.... (1)
14. Facilities available at house  
Separate bedrooms Yes.... (0) No.... (1)  
Separate kitchen Yes.... (0) No.... (1)  
Attached toilet/bathroom Yes.... (0) No.... (1)  
Water connection Yes.... (0) No.... (1)  
Electricity Yes.... (0) No.... (1)

15. Number of people staying in house/room (please tick)

- One
- Up to 2
- Up to 3
- Up to 4
- Five and above

## II. Preliminary Employment Information

1. Name of the company:
2. Nature of Job:            Regular..... (0)      Contract..... (1)
3. How long have you been working here?
  - <3 months..... (0)
  - 3 to 6 months..... (1)
  - 6 to 9 months..... (2)
  - 9 months to 1 year.... (3)
  - 1 to 2 years.....(4)
  - 2 to 3 years.....(5)
  - > 3 years.....(6)
4. How did you get the present job?
  - Through Employment exchange.... (0)
  - Responded to the advertisement through media.... (1)
  - Through someone already working.... (2)
  - Directly approached.... (3)
  - Any other (please specify)
5. Did you get an appointment letter after your selection?
  - Yes.... (0)                      No.... (1)
6. If yes, what is the duration of contract mentioned in the letter?
  - For three months.... (0)
  - Period of six months.... (1)
  - Period for one year.... (2)
  - More than one year.... (3)
  - Permanent job.... (4)
  - Don't know.... (DK)
  - Any other (specify)
7. With whom is your contract?
  - Directly with the employer.... (0)
  - With a contractor.... (1)
  - Self-employed.... (2)

Don't know.... (DK)

8. What is the average number of working days in a month?.....days  
9. How many months in a year you get work?..... months  
10. Will you get this job once your contract is over? [Applicable to contract and scheduled workers only] Yes.... (0) No.... (1)  
11. Which section are you working in?

*Unskilled Skilled Category*

Helper.... (0), Peon.... (1)

*Semiskilled Category*

Button Holders/operator.... (2) Button Stitcher... (3)  
Over Lockers.... (4) Pattern Tracers.... (5)  
Ironing.... (6) Packers.... (7)

*Skilled Category*

Tailors.... (8) Checkers.... (9) Washer man.... (10)  
Driver.... (11)

*Highly Skilled Category*

Master Cutter.... (12) Master Tailor.... (13)  
Designer..... (14) Final Checker.... (15)  
Store-in-charge/ Supervisor..... (16)  
Any other (specify)

**III. Wages**

1. On what basis are you paid?  
Piece Rate.... (0) Per Shift/time based.... (1) Any Other (specify)

*If Piece rate*

2. What is the rate per piece for your work?..... (Rs.)

*If time/shift based*

3. What is the rate of wage per hour/shift?.....(Rs.)  
4. Can you roughly say how much do you get out of this work?

Daily	
Weekly	
Monthly	

5. Is this your principal income? Yes..... (0) No..... (1)  
6. Can you roughly say your annual family income from all sources?.....(Rs.)

7. Do you get the following benefits/incentives?

No	Particular	Yes (0)	No (1)	If yes, how much	No idea
i	Bonus				
ii	Provident Fund				
iii	ESI				
iv	Gratuity				
v	Shift allowance				
vi	Overtime wages				
vii	Performance allowances				
viii	Compensation for permanent disability				
ix	Compensation for temporary disability				
x	Lay off compensation				
xi	Retrenchment compensation				
xii	Annual leave				
xiii	Maternity leave				
xiv	Insurance				

8. What is the usual mode of payment of your wages?

Daily.... (0) Weekly.... (1) Monthly..... (2)  
Irregularly.... (3)

9. Are these system being maintained strictly (Can avoid this q, if the answer of q. no. 3 is irregularly)

Regularly.... (0) Not so regularly.... (1)  
Highly irregular.... (2)

10. What was your daily/weekly/monthly wages at the time of joining the company?..... (Rs.)

9. Do you bargain over the wages you receive?

Yes.... (0) No.... (1)

10. If 'no', why?

No time.... (0) No knowledge of wages..... (1)  
Wages are fixed.... (2) Fear of losing Job.... (3)  
Others (specify)

11. Can you say your total monthly earning from all sources last month?

12. Can you say your approximate monthly expenditure last month for the following items?

Food.....(Rs.)

(Including cereals, pulses and products, milk and milk products, edible oil, egg, fish and meat, vegetables, fruits, sugar, salt, spices and beverage)

Non-Food.....(Rs.)

(Including fuel, electricity, clothing, footwear, education, medical and articles like pan and tobacco)

Rent.....(Rs..)

Miscellaneous.....(Rs.)

#### IV Working Conditions

1. Normal Working hours in a day:.....hrs

2. Overtime, if any:.....hrs

3. Total days of work in a week

< Three days..... (0)

Four days..... (1)

Five Days..... (2)

Six Days..... (3)

All day week..... (4)

4. Targets to be achieved (if any).....pieces a day

5. Work timings

No.	Particulars	Timings/Hours
1	Arrival	
2	Reporting	
3	Tea break	
4	Lunch break	
5	Check out	

6. In your work, do you usually work during the daytime, during evening, during night time or do you work on a rotating shift?

Daytime..... (0)

Evening..... (1)

Night time.... (2)

Rotating.....(3)

7 Physical conditions at workplace

Adequate working space Yes..... (0) No..... (1)

High temperature Yes..... (0) No..... (1)

Exhaust fans Yes..... (0) No..... (1)

Protective gears Yes..... (0) No..... (1)

First aid Yes..... (0) No..... (1)

8. How long does it usually take you round-trip to get to and from work?.....  
Hours

9. How much of the following things do you have to do as part of the duties of your Job?

No	Particulars	A lot (0)	Sometimes (1)	Not at all (2)
a.	Walk			
b.	Sit for a long period			
c.	Stoop, crouch or kneel			
d.	Lift or carry weights			
e.	Repeats the hand motion at least 30 times per hour			
f.	Bend over or twist around			
g.	Use hand tools			
h.	Concentrate for long periods			
I	Any other			

10. Are you provided with any of the following safety measures at your work place?

- a) Mask      Yes.....(0)      No.....(1)
- b) Apron      Yes.....(0)      No.....(1)
- c) Gloves      Yes.....(0)      No.....(1)
- d) Any other (specify)

11. Had there been any episode of accidents in your section?

Yes.... (0)      No..... (1)

12. If yes how did it happen?

13. What are the risks of accidents in your unit?

14. Do your employer take care of the medical expenses      Yes..... (0)      No..... (1)

15. Do you have the following facilities at your work site?

Facilities	Yes...(0)/ No....(1)/ Don't Know....(DK)	Present Condition
Canteen Hospital Facilities Grievance Redress Body Crèches Drinking Water Toilets Rest rooms Transportation Others (Specify)		

## V Social Determinants of Workplace Health

1. Do you strongly agree, agree somewhat, disagree somewhat or strongly disagree to the following characteristics associated with your job?

No	Characteristics	Agree Strongly (0)	Agree somewhat (1)	Disagree Strongly (2)	Disagree somewhat (3)	Don't Know (DK)
a.	Job involves constant monitoring by a supervisor					
b.	Very little freedom to decide how I do my					

	work					
c.	Time to get the work done is not enough					
d.	Job does not allow to take lot of decisions of my own					
e.	Job requires fast work with out breaks					
f.	There is compulsory overtime					
g.	Compensatory work for leave					
h.	Multi tasking at the worksite					
i.	I do not learn new things					
j.	My job is hierarchical					
k.	I have no role in setting the target to be achieved in the work					
l.	My work demands to compromise my health conditions					
m.	There are hidden changes of work practices					

## VI Job Security

1. In the past three years (or from the date of working) did you ever lose a job?  
Yes, Lost a job.....(0)  
No, Did not.....(1)
2. If yes, what was the duration between losing and finding a job?  
.....days/months/years
3. Do you think that your present job is secure?  
Yes..... (0)  
No..... (1)  
Don't know..... (2)
4. How times have you changed the jobs of the present nature (garment) so far? .....  
Times.
5. Did you leave a job specifically because you expected to be laid off?  
Yes..... (0)  
No..... (1)

## VII Collective Bargaining

1. Are your unit/firm unionised? Yes..... (0) No..... (1) Don't know.... (DK)
2. If yes, are you a member? Yes..... (0) No..... (1)
3. Are you being assisted by them through any of these ways?
  - c) Bargaining for higher wages Yes... (0) No.... (1)
  - b) Lobbying for Better working conditions Yes... (0) No.... (1)
  - c) Resisting anti worker management practices Yes... ..(0) No.... (1)
  - a) Loans schemes Yes... (0) No.... (1)



- b) Housing schemes Yes... (0) No.... (1)
- d) Health care insurance/other schemes Yes... (0) No.... (1)
- e) Educational support for children Yes... (0) No.... (1)
- f) Grievances redress Yes... (0) No.... (1)
- (g) Any Other

4. How many of such incidents happened in your company/firm  
 .....Times.....bargaining/lobbying
5. If not, unionised, do you or your colleagues bargaining over wages/better working conditions etc? Yes... (0) No.... (1)
6. If no, Why? (Please give reasons)

**VI. Food Accessibility**

- 1 Place of purchase of food grain/oil etc.
- PDS shops.... (0) Open market.... (1)  
 Co-operative shops..... (2)  
 Any Other

(If purchasing from PDS)

- 2 What all items are you purchasing from PDS?
- 3 Is your family income sufficient to meet the food requirements of your family?  
 Yes..... (0) No..... (1)
- 4 If 'No' what are the other alternatives [specify]
- 5 Can you say how often did you take the following food items last week? [please tick]

Items	Daily 2 items	Once in a Day	Sometimes	Never
Rice				
Starch food				
Other than rice				
Vegetables				
Pulses				
Fruits				
Milk				
Meat				
Fish				
Egg				
Others				

6. How many times did you and your family members take meals yesterday?

Person	Once	Twice	Three times	Didn't Take
Respondent				
Spouse				
Parents				
Children				
Siblings				

7. Can you roughly say the total family expenditure on food last Month?  
 Food/Non-Food

## VIII. DISEASE PATTERN AND HEALTH SEEKING

1. Have you suffered/been suffering from any of the following illness (as told by a doctor/medical practitioner)
  - a. High blood pressure or hypertension Yes... (0) No.... (1) Don't Know.... (DK)
  - b. Heart disease Yes... (0) No....(1) Don't Know.... (DK)
  - c. Diabetes (any type) Yes... (0) No....(1) Don't Know.... (DK)
  - d. Cancer (any form) Yes... (0) No....(1) Don't Know.... (DK)
  - e. Asthma Yes... (0) No....(1) Don't Know.... (DK)
  - f. Migraine or severe headache Yes... (0) No....(1) Don't Know.... (DK)
  - g. Chronic lung disease Yes... (0) No... (1) Don't Know.... (DK)
  - h. Ulcer Yes... (0) No....(1) Don't Know.... (DK)
  - i. Backache Yes... (0) No... (1) Don't Know.... (DK)
  - j. Arthritis Yes... (0) No.... (1) Don't Know....(DK)
  - k. Severe visual impairment/ blindness Yes... (0) No.....(1) Don't Know... (DK)
  - l. Hearing impairment/ loss of hearing Yes... (0) No....(1) Don't Know... (DK)
  - m. Anaemia Yes... (0) No.... (1) Don't Know... (DK)

Any other (specify)
2. Have you suffered/ been suffering from any of the illness (reported morbidity)
  - a. Have/had pain in back or spine Yes... (0) No....(1) Don't Know.... (DK)
  - b. Have/had stiffness, swelling or aching in any joint or muscle  
Yes... (0) No...(1) Don't Know. (DK)
  - c. Have/had trouble breathing or shortness of breath  
Yes...(0) No...(1) Don't Know. (DK)
  - d. Getting tired in a short time Yes... (0) No (1) Don't Know....(DK)
  - e. Have/had problems with feet that cause pain or limit movement  
Yes... (0) No...(1) Don't Know. (DK)
3. Have you sought treatment? Yes... (0) No.... (1)
4. If 'No', why, please give reason
  - Not taking seriously..... (0)
  - Loss of wages..... (1)
  - No hospitals/Clinics at the vicinity.... (2)
  - Fear of loss of job..... (3)
  - Lack of money..... (4)
  - Others (Specify)
5. If yes, where did you seek treatment?
  - Public health centres/Government hospitals..... (0)

- Private clinics/hospitals..... (1)
- Residence of the Govt. Doctor..... (2)
- Charity Hospitals..... (3)
- Self-medication..... (4)
- Local doctors (Bengali doctors!!)..... (5)
- Others (Specify)

6. System of treatment taking (Sought)

- Allopathic..... (0)
- Ayurvedic..... (1)
- Siddha ..... (2)
- Yunani.....(3)
- Traditional.....(4)
- Any Other (specify)

7. Reasons for taking the particular system of treatment

- Less expensive ..... (0)
- Near the place of residence ..... (1)
- Fast recovery..... (2)
- Others (specify)

8. Were you hospitalised? Yes... (0) No.... (1)

9. If yes, for how many days?

10. Number of working days and amount of Wages lost due to medication/hospitalisation last month:

No of working days:..... days  
 Wages:.....Rs.

11. Monthly health care expenditure

Particulars	Amount
Hospitalisation	
Outpatient treatment	
Over the counter buying	
Transport	
Others	

12. What were your financial sources of health care expenditure

13. Present situation

- Recovered..... (0)
- Recovering ..... (1)
- Deteriorating..... (2)
- No significant Change..... (3)

14. How often do you consult the doctor?

- Once in a week..... (0)
- Once in a fortnight..... (1)
- Once in a month..... (2)
- Once in Three Months..... (3)
- Rarely..... (4)
- Never..... (5)

15. How much did you spend for your treatment last month?
16. Have you had any accident at your work place Yes... (0) No.... (1)
17. If 'yes', did you get any assistance from your employer for the treatment?
18. What are the major health problems you face at your work place?

**IX. Psychologically Stressful Conditions**

1. Do you strongly agree, somewhat agree, some what disagree or strongly disagree to the following attributes associated with your work?

No	Characteristics	Agree Strongly (0)	Agree somewhat (1)	Disagree Strongly (2)	Disagree somewhat (3)	Don't Know (DK)
a.	I am anxious about the security of my job					
b.	I am stressed of the intensity of the work					
c.	I am worried of achieving targets					
d.	I am anxious about the deteriorating health conditions					
e.	I loss temper very often					
f.	I feel helpless very often					
g.	Any other					

**X. Behavioural Pattern (Risk Factors)**

1. How many hours do you sleep a day?
  - a) Working Days.....hrs.
  - b) Holidays.....hrs.
2. Are there any changes/irregularities very often, often, rarely or never occurring in your following personal characteristics?

No	Characteristics	Very often (0)	Often (1)	Rarely (2)	Never (3)	Don't Know (DK)
a.	Irregular mode of food intake					
b.	Irregular mode of sleep					
c.	Not attentive of diseases					
d.	Avoid social ceremonies					

3. Do you have any of the following habits?

Habits	Regularly/daily	Often	Rarely	Never
Smoking Chewing Tobacco Snuff Consumption of Alcohol				

