Working Poor in Bangladesh: An Attempt at Understanding its Nature and Causes

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A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Economics

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Australia

March 2011

DEDICATION

Dedicated to my late parents:

Abdur Rouf and Sufia Khatun

STATEMENT OF AUTHENTICATION

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in whole or in part, for a degree at this or any other institution.

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2011

ACKNOWLEDGEMENTS

I am grateful to my principal supervisor Dr. Partha Gangopadhyay, Associate Professor, School of Economics and Finance, University of Western Sydney, Australia; and Co-supervisor Dr. Dilip Dutta, Associate Professor, Department of Economics and Political Science, University of Sydney, Australia for their sincere supervision and guidance towards successful completion of the thesis. The work would not have been possible without active support of the staff members of the School of Economics and Finance. I owe Prof. John Lodewijks, Head of the School of Economics and Finance, for his support in conducting the field survey in Bangladesh and for his constant encouragement.

The thesis is a direct outcome of an intensive field survey conducted in Bangladesh. The most important contributors to this research were the workers who responded to our study. I am grateful to the respondents who appeared for interviews despite their busy schedules of work from dawn to dusk, and for their spontaneous help and cooperation in providing the data used in the thesis. Truly speaking, without their active participation it would not have been possible for me to complete the thesis. It should be mentioned here that the respondents provided data without any interest and incentive.

The task of generating a complex set of data of high reliability was accomplished with the help of a committed group of people consisting of Dr. Nasser Elkanj, A. V. Mishra, Atindra Kumar Ghosh, T. I. M. Nurunnabi Khan, M. Ziaul Huq, Shyama Prasad Bepari, Tawhid Ilahi, Azmat Ullah Khan, Aftabuddin Khan, Shanker Chandra Saha, Rezaul Huq Mondal, Lutfor Rahman Patwary, Abdus Samad Akand, Farida Khatun, Kazal Kumar Roy, Md. Golam Robbani, Rabindra Nath Roy, Pabitra Chandra Sharma and Nirmol Roy. Their support helped to carry the research forward. I recognise their help and cooperation with heartfelt gratitude.

I appreciate the patience of my family members, Nusrat Sharmin, Fahim Rahman, Israt Sharmin and Nafis Rahman, who missed me during my studies overseas; and thank them for their sincere support throughout. Heartiest thanks to Margaret Johnson for her professional proofreading of the thesis.

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PREFACE

In developing countries, an overwhelming portion of the total population lives in abject poverty, experiencing deprivations and vulnerabilities. Among them are people who work but remain in poverty; they are known as the working poor. The working poor constitute the vast majority of the total poor population in Bangladesh. The condition of the working poor has become a growing concern for policy makers, demanding urgent interventions for the sake of socioeconomic stability. Necessary policy interventions require understanding and identification of the causes determining the poverty of workers. Identification of a few macroeconomic indicators is not enough to visualise policy interventions. Research studies conducted so far have emphasised macroeconomic aspects of the issue, giving less importance to issues at the household level.

This research is an exception. It provides micro level data which will provide fresh insight into policy options for addressing worker poverty. Addressing the problem of poverty in general and working poverty in particular is not simple. Even identification of the poor and diagnosis of poverty are not enough to address the problems because of their multidimensional nature. Apart from socioeconomic issues, there are technical issues which need to be resolved if we seriously want complete elimination of poverty. Notwithstanding, this research is expected to provide necessary background information which may be useful in conceiving and formulating appropriate and effective policies.

The thesis is concerned with the issues related to working poverty. The research focuses mainly on identifying the nature and causes of working poverty in Bangladesh, and presents a plain picture of the situation of the working poor in that socioeconomic context. A brief but exhaustive description of the working poor and the methodology underpinning the study is provided in chapter 1. Before constructing a picture of the working poor, a review of relevant literature is presented in chapter 2. The salient features of the working poor in both developed and developing countries are considered in the review. Working poverty is a phenomenon of developed countries, which nowadays is gaining importance in developing countries such as Bangladesh.

To construct a complete picture of the working poor needs information on a variety of issues covering almost every aspect of the life and living of poor workers. Obviously, we cannot capture the whole gamut of life and living through a sample survey covering only a small area and a few hundreds of workers. However, with the data obtained from the sample survey, we present a plain picture of the working poor in chapter 3. Issues such as household structure, age, education, training, income, expenditure, consumption, assets, living conditions, and social protection are discussed in this chapter. The picture that appears provides a profile of the working poor in Bangladesh.

The research examines individual cases of poverty, investigating household and labour market issues that affect and sustain poverty. Chapter 4 contains an in-depth analysis of the factors that increase the risk of being poor at household level. The factors taken into consideration for analysing poverty of a household are occupational status, age, education, household status, health status, household size, dependency burden, proportion of female workers to total workers, and sex ratio. Discrimination between men and women is a stark reality of everyday life. The scourge of discrimination is severely felt by women workers, who receive fewer wages than male workers for same work. Discrimination at work, as demonstrated by gender wage gap, is examined in chapter 5.

The inability of workers to eke out a living demands an exploration of the nature of their jobs, the wages they earn, the number of hours they work, their job security, occupational safety and the conditions they work in. All these issues have been addressed in chapter 6. Reduced productivity in turn results in low income, which is an important determinant of the wellbeing of a household. Because of seasonal nature of jobs workers in rural areas tend to migrate to urban areas. Issues related to the nature of employment igniting rural-urban migration have been examined in chapter 7. Chapter 8 analyses how discrimination perpetuates working poverty in the informal sector with special reference to Bangladesh. Chapter 9 concludes with a summary of major findings and recommendations.

Mustafa A. Rahman

March 2011

CHAPTER 1: FRAMEWORK AND METHODOLOGY

Abstract

Despite the popular belief that those who work hard should not remain poor, there exists a vast reserve of labour who work hard but still remain impoverished. This phenomenon is prevalent in both middle income and low income countries, including Bangladesh. The incidence of poverty among the working poor results from low wages, lack of year-round employment, household structure, illiteracy, lack of access to resources, structural rigidities and the absence of pro-poor macroeconomic and labour policies. This research will investigate the phenomenon of the working poor and try to determine why the bulk of the economically active labour force remains poor despite their physical ability and desire to work round the year. It will attempt to provide a plain picture and necessary information on the overall situation of the working poor in order to assist policy makers in formulating pro-poor and pro-active development plans and policies for addressing poverty. The primary means of achieving this goal is through analysis of key issues related to working poverty, and will complement existing programs and policies directed towards development of the working poor who constitute the vast majority of the poor population in Bangladesh.

The thesis is based on primary data obtained from a sample survey conducted in Bangladesh in 2008-09. The survey was conducted in both rural and urban areas. A multi-stage stratified random sampling technique was used to select the sample locations and respondents. We selected 248 households from the rural area and 412 households from the urban area. Corresponding to each household we selected one respondent, thus a total of 660 households were selected as sample. The heads of households constituted our sample respondents. The 660 respondents were the subject of our detailed survey. The respondents were all poor workers. The identification of poor workers was based on an objective assessment i.e., if a worker's income was below $1 a day he was treated as poor. Standard econometric tools such as logistic regression models have been used to examine the impact of socio-economic variables on poverty. Appropriate econometric methods (e.g., OLS, 2SLS, ML etc.) have been applied to estimate econometric models used in the thesis.

The study has tried to identify the nature and causes of the poverty of the workers. Findings of the study reveal that both household and labour market factors cause and perpetuate poverty of the households. Factors such as dependency ratio, household size, household status, illiteracy of the household head, widowhood, disability, low wages, wage discrimination against female workers unhealthy working condition, long hours of work have been found to cause poverty of the workers. We have found discernible impact of female education and income on household size. Data indicate that as the level of female education increases, average number of children per woman decreases. Average size of the children per wage earner women has been found smaller than non-wage earner women. Among other factors, household status determines and shapes poverty of the household. Data reveal that average monthly income of the female-headed households is lower than that of male-

headed household. Likewise, the monthly average income of the single parent household has been found to be lower than double parent household.

Widowhood and disability have a high risk of causing poverty of the household. Data indicate that monthly per capita income is marginally higher for households without widows than having widows. Similarly, per capita income of the members belonging to households having able persons has been found higher than that of those having disabled persons. In our study we have found positive correlation between living condition and economic wellbeing of the households. The incidence of poverty is acute among the landless and asset less households. Our study has provided compelling evidences that women workers are paid less than their male counterparts for equal worth jobs. Moreover, female workers are paid less even though they work more than their male counterparts. During lean season workers amenability to work in the urban area at low wages causes and perpetuates poverty of the workers. If we view the environment at which they work , the condition cannot be termed as decent by any standard.

Policies as envisaged from the above findings have been provided in a nutshell. To check household size, educating the girl children should be emphasised while formulating education policies. As women realises the advantages of small family size, the employment policy of the government should focus on creation of women employment opportunities at all levels. At micro level gender specific social safety net programs should be should be undertaken to assist widows and female disabled persons. At macro level, there should be adequate allocation of resources for social sector in the annual budget every year so that the socially disadvantage people could get access to resources and improve their situation. To address wage discrimination between male and female workers convention like equal pay for equal worth job should be ratified and implemented. Legislations related to rights and privileges of the workers, working condition etc. should be updated and enforced. A sound labour market monitoring system should be introduced and implemented at both micro and macro levels.

1.0 Introduction

Bangladesh is a small country, 144 thousand square kilometres in area, and 89th in the world by size. It is the most populous Least Developed Country (LDC) and contains the eighth largest population in the world. As of July 2008, the population of Bangladesh was 144.66 million (BBS 2008). The magnitude of her poverty, however, is colossal. After China and India, Bangladesh has the largest number of poor people. According to Household Income and Expenditure Survey (HIES, 2010),

population living below the poverty line was 31 percent (BBS, 2010)[1]. With a low level of economic growth, inequitable distribution of income, high rates of unemployment, rapid growth of population and low levels of human resource development, the magnitude and depth of human deprivation are extremely high for these people. The poor in Bangladesh tend to have low levels of education and have limited access to land, and they are highly concentrated in low paying, physically demanding and socially unattractive occupations as casual wage labourers.

These poor are not homogeneous. There are considerable differentiations among the poor themselves. Following Michael Lipton (1977), the poor in Bangladesh may be divided into two categories: moderately poor and ultra-poor. In the context of Bangladesh, the ultra-poor may be defined as those who consume less than 1805 k.cal. per day, which is the basic metabolic calorie requirement. According to this classification, at least 30 percent of the population in Bangladesh is ultra-poor. Only 15 percent of the population is moderately poor. The problem of the ultra-poor in Bangladesh is thus much more poignant and severe than in other countries.The situation of the poor in Bangladesh has not shown any marked improvement over the years; rather, it remains as stark as before if we consider poverty in terms of absolute number of the poor.

Apart from the slow pace of poverty reduction, employment has also lagged. A 1.6 percent annual increase in employment failed to keep up with a workforce growing by 1.9 percent a year (ILO, 2004). This resulted in higher rates of unemployment and persistent underemployment. In the early 1980s, like most developing countries, Bangladesh embarked on structural adjustment policies at both micro and macro levels. At the micro level, trade policies, privatisation and financial deregulation were introduced. The pace and sequencing of trade and industrial sector reforms created an imbalance between the expanding and declining sectors. In most cases, the expanding sectors failed to absorb the workers who lost jobs in the declining sectors, adding to the long queue of those already unemployed.

[1] In terms of calorie intake poverty line has been defined as maximum 2122 calories per day per person.

There is a common belief in industrialised countries that work and poverty are mutually exclusive: that anyone who has a job should be able to live decently. Poverty is traditionally associated with those who are unemployed, and unemployment has been used as the sole labour market factor to explain poverty spells. However, this is not always the case. Changing work patterns and growing polarisation in the labour market across the international arena have created new poverty risks among those who are employed. As a result, the phenomenon of *working poverty*, which originated in the US in the seventies, has become a labour market reality in the world, including Bangladesh. In Bangladesh, the economic situation over the last two decades or so has created a new social category known as the *working poor*, those who are employed but remain below a defined poverty threshold (per capita income below US$ 1 per day). The working poor refer to both wage workers and the self-employed.

As Hess (1994) points out 'it is a cruel irony that individuals (and families) who are fulfilling societal expectations to be employed and self-supporting are struggling to make ends meet'. This is echoed by Leach and Sikora (2003) who emphasise that 'working poor families are families…are playing by the rules by working and contributing to the productivity and prosperity (of the country) but yet struggle day to day to meet their basic needs'. In some instances, not meeting basic needs means lacking food and/or housing. The phenomenon of working poverty is prevalent in both developed and developing countries but acute in the latter, and hence the challenge of addressing poverty of the working poor is enormous, particularly for Bangladesh.

The existence of working poverty is a constraint to decent *and productive* employment, which is the central aim of development. The issue of working poverty has appeared as a key challenge towards poverty eradication, particularly in Bangladesh. The overarching development priority is poverty reduction. This is reflected in the government's Poverty Reduction Strategy Paper (PRSP), which provides a general framework for poverty reduction addressing almost all critical sectors of the economy. The PRSP calls for a more effective employment strategy that promotes opportunities for women and men to obtain decent and productive work in conditions of freedom, equity, security and human dignity. In a country such

as Bangladesh, decent work is not only an objective in its own right but a means of ensuring human rights. It is fundamental to promoting sustainable and poverty-reducing development.

The working poor are one of the fastest growing segments of the impoverished population in LDCs, and their growth is expected to continue (Levitan, Gallo and Shapiro 1993, Caputo 1991). However, there is substantial debate on the factors that contribute to this. A critical part of this debate is whether people are poor because they choose to work too few hours at ruling wage rates, or because the labour market fails to provide them with adequate wages and full-time steady employment. If it is the former, the situation of working poor is *voluntary*, and one needs to know what factors cause people to behave in this apparently irrational manner in a society where there are no social security payments. On the other hand, when poverty is due to labour market imperfections, the situation of working poor is *involuntary*, and requires policy interventions. Schiller (1994) believes that the working poor are poor simply because they do not work enough hours. If they work full-time year-round, Schiller argues, they would lift themselves out of poverty. Others, however, argue that the cause of poverty among those who work is more complex and due to inadequate jobs that fail to provide full-year or full-time work, or to jobs that pay wages that are too low (Katz and Murphy 1992; Phelps 1990; Davis and Huston 1991). Bane and Ellwood (1991), for example, argue that even if they worked more hours, the working poor would remain poor.

Working poverty is the outcome of a complex and interacting set of factors deeply rooted in the broad structure of society. The problem of working poverty has to be viewed in the context of the complex, intertwined relations between the economy and the society. With that end in view, this research will address issues such as individual (occupation, education, skill, age etc.) and household (income, expenditure, size, structure, status etc.) characteristics of the working poor, determinants of working poverty (wages, productivity, nature of employment, working conditions etc.), demand constraints, supply side responses, decency of work, access of the working poor to resources and social security payments, and finally, opinions of the working poor on how to improve their situation. These will have important bearing on the

formulation of policies and strategies to combat working poverty at the national level.

Empirical evidence from research suggests that economic growth is a necessary but insufficient condition for sustained poverty reduction. An isolated policy is not enough to address the problem of poverty of the workers. A set of policies including economic, social and labour market issues is expected to work for the alleviation of poverty of the poor workers. However, macro data on the working poor do not reveal whether individual cases of poverty result from illiteracy, physical inability, inadequate employment, low pay, employment insecurity, long hours of work, discrimination, lack of access to resources, inadequate social protection, hazardous working conditions or one of the many other labour market factors. Micro level data on the issues mentioned above will provide fresh insights into many policy options for addressing poverty of the workers. The thesis intends to fulfil this objective through in-depth analysis of data obtained from a sample survey conducted in Bangladesh.

1.1 Objectives

1.1.1 Broad objective

The broad objective of the thesis is to identify and analyse the nature and causes of the poverty of the workers in Bangladesh.

1.1.2 Specific objectives

Specific objectives of the study are as follows:

- Prepare a profile of the working poor by labour force status – investigate the nature and type of employment of the low-wage earners;
- Identify causes of poverty among those in the labour force with particular emphasis on the employed;
- Explore economic, demographic, educational and occupational characteristics of the working individual and household;

- Capture the impact of family structure, family and social constraints on the poverty of the working household and its members;
- Enumerate reasons for low-wage, intermittent employment and gender discrimination in wages and employment;
- Examine job security, workplace safety, rights and privileges, service benefits, social protection and other decent work attributes related to workers.

1.2 Data and methodology

The research uses both primary and secondary data to analyse the issues under study. Sources of secondary data include *Household income and expenditure survey* (various issues), *Statistical year book of Bangladesh* (various issues), *Labour force survey* (various issues) – all official publications of the Government of Bangladesh; ILO Labour Force Statistics, World Bank publications and documents published by universities and research organisations. The primary data were generated from the field survey while macro data were collected from secondary sources as indicated above.

Data thus obtained was used to analyse issues related to working poverty in the context of Bangladesh. The population is divided into two groups: those who are in the labour force and those who are not. Those belonging to the labour force include both employed and unemployed. Among the employed are a large number of workers who are uneducated, low-paid, unskilled and low-productive. This group of workers is the focus of our investigation.

For a study on poverty, the timing of the study has a crucial bearing on the extent to which the findings can be generalised. The study was conducted during the period from December 2008 to April 2009. This timing was appropriate because it was a 'normal' period: there were no natural disasters such as floods, cyclones etc. during it. This enabled us to present a real and objective picture of the poverty of workers in the study area.

The study was based on a sample survey which adopted a quantitative approach to attain the objectives of the research. It covered both urban and rural areas, because working poor are found in both. *Rural area* refers to the agriculture sector and *urban area* includes manufacturing, transport, construction and service sectors. The manufacturing sector includes five sub-sectors: garments; textiles; steel and engineering; electronics; and leather and footwear. A multi-stage stratified random sampling technique has been used to select the sample locations and respondents.

1.2.1 Sampling design

For the rural area, at the first stage, the sample locations were selected from the profile of districts (the second-level administrative unit from the top) based on head-count index. A poverty profile of the country prepared by the Bangladesh Institute of Development Studies in collaboration with the Bangladesh Bureau of Statistics shows that the North Western districts of Bangladesh are most poverty-prone. Among them the situation is worst in the Nilphamari district in the North West. This district is predominantly rural, and agriculture-based. We concentrated on this district, as it gave us the best picture of the worst poverty in rural Bangladesh. At the second stage, for rural area – one *Thana* (the third-level administrative unit of the government from the top) was picked from the selected district.

At the third stage, one union was selected from the selected Thana. Information on area of land, number of households, total population, landholding and literacy rate was obtained for all villages under the selected union, from the 2005 district census reports published by the Bangladesh Bureau of Statistics. Given resources and time, one village was then selected on the basis of this information so that (a) the selected village was neither too small nor too large – any village with less than 500 households was excluded, and (b) the land–person ratio and the literacy rate of the village were similar to other villages under the selected union. The village contained both poor and non-poor workers, so identification of the working poor was the next task. This was based on an objective assessment: that is, if a worker's income was below $1 a day he was treated as poor (World Bank, 2001). The village selected was an ideal one, comprising 960 households and representing various occupational

groups of people such as farmers, wage labourers, fishermen, transport workers, petty traders and construction workers.

After selecting the village, we prepared a complete list of households, which provided the sample frame for drawing samples. Then we decided to select 248 households as a sample accounting for 23.0 percent of the total households. The 248 households were selected using the stratified random sampling technique, the sample being drawn from each of the six activities (farmers, wage labourers, fishermen, transport workers, petty traders and construction workers) proportionate to the size, as indicated in the population. From each household we selected one worker (respondent) for a detailed interview. The respondents were all heads of their households.

For the non-farm category of working poor, one location – the metropolitan city of Dhaka located at the central part of Bangladesh – was selected as a sample location. This area constituted the largest industrial belt of the country, and gave the best picture of poverty of workers in the urban area. Hundreds of thousands of non-farm workers work in this area. The first task was the identification of major types of industries, using the Census of Manufacturing Industries database. Out of various industry types, five major types (garments; textiles; steel and engineering; electronics; and leather and footwear) covering 60 percent of the total production workers were selected to identify the working poor employed therein. After selecting the industries, we prepared a list of enterprises not exceeding 30 belonging to each of the industry types mentioned above. The list provided the primary sampling units for drawing samples.

From the list we selected 2 enterprises (industrial units) each from the garments, textiles, and steel and engineering industries, and 3 each from electronics and leather & footwear industries, at random, for intensive survey. We took a smaller number of enterprises from a relatively large number of industries. In a standard garment factory (which is the dominant industry type in Bangladesh), there are about 500 workers on average. In other types of industries, an average industrial unit has 80–100 workers. Based on these rough estimates, the five industries were supposed to contain about 2000 workers in total.

Identification of the working poor in the industries selected was the next task. For this we used information from payrolls. The payroll displays the level of wages and the nature of employment of workers. Generally, we expected production workers to be low-paid, as they constitute the working poor; this perception was supplemented by information provided by local trade union officials. Then we prepared a list of 804 production workers from the payrolls provided by the enterprises selected. This list provided us with the sample frame for drawing samples. The five major industries were classified into five different strata, then we drew 200 production workers from each proportionately, using stratified random sampling technique. All 200 manufacturing workers were subjects of our detailed survey.

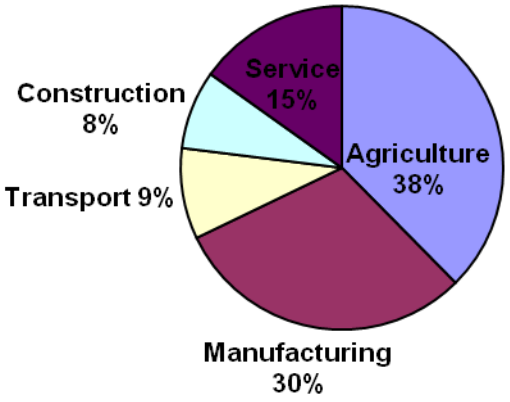
There are poor workers in service, construction and transport sectors, as well as agriculture and industry, so we included these three sectors in our scheme. From the three sectors we selected 212 workers: 100 from the service sector, 60 from the transport sector and 52 from the construction sector. The workers were selected at random from a list of workers (sample frame) collected from relevant organisations and workers' associations. A larger sample was taken from the service sector because of its relative size compared to transport and construction.

A total of 660 households including rural and urban areas, as well as formal and informal sectors were thus selected for the survey (Table 1.1). The sample turned out to be about 25 percent of the population. The distribution of sample households shows that the agriculture sector constitutes the largest sample (38 percent) and construction the lowest at 8 percent (Figure 1.1).

Table 1.1: Distribution of Total and Sample Households

Sector	**Total households (N)**	**Sample households (n)**
Agriculture Sector	980	248
Manufacturing sector	804	200
i) Garments (2)	240	60
ii) Textiles (2)	162	40
iii) Steel & Engineering (2)	160	40
iv) Electronics (3)	120	30
v) Leather & Footwear (3)	122	30
Transport sector	236	60
Construction sector	210	52
Service sector	400	100
Total	**2630**	**660**

Figure 1.1 : Distribution of Sample Households



Source: Drawn from data obtained from the sample survey.

It is possible to think of a number of variables which could influence the probability of a household being poor in terms of income. The variables could be asset-related (e.g., the possession of income generating assets), human capital related (education and skill levels of the working members of the household) or employment related

(e.g., sector, occupation of the workers, wages, productivity etc.). In order to identify whether a particular household belongs to the poor category, standard econometric methods such as the estimation of a LOGIT model were applied to examine the influence of household and labour market-related variables on the probability of a household being poor. Appropriate statistical methods (e.g., OLS, 2SLS, ML etc. have been applied to estimate econometric models. Econometric problems such as multicollinearity and heteroskedasticiy have been addressed before estimating the models. As indicated above, we have drawn our sample applying multi-stage stratified sampling technique with PPS (probability proportionate to size) which keeps sampling error at the minimum.

1.2.2 Instruments of data collection

Data were collected from the study area through a pre-designed open-ended questionnaire covering the objectives of the study. Face-to-face interviews followed. The questionnaire attempted to collect data from the respondents on four areas including pertinent underlying key issues:

1. Household conditions (e.g. size, structure, status of the household and age, sex, health, marital status of household members);
2. Human capital constituents (education, training and experience);
3. Living conditions (e.g. ownership of houses and assets, type of houses, sources of energy and drinking water, income, expenditure);
4. Economic conditions (e.g. occupation, wages, employment, mobility);
5. Working conditions (e.g. hours of work, occupational safety, job security).

1.2.3 Data processing

The administered questionnaires were checked, verified and edited by the Associate Researcher (the author). The questionnaires were then coded by the Investigators, who were expert coders as well. Data thus coded were entered and processed by the Associate Researcher himself. Statistical software packages such as SPSS and

STATA were used to process the data. A personal computer (PC) was used throughout the entire phase of data processing. Data mostly was presented in the form of cross tables.

1.2.4 Problems and limitations

The most serious problem was how to contact respondents for the interview. Our respondents were workers who went out early in the morning and returned in the evening; we had to contact them in the evening when they were naturally tired after working all the day long. They did not have the patience to hear us and give time for an interview. If, they agreed to give an interview, they suggested seeing them in their workplaces – but since they were busy there, they could not afford time for an interview. In many cases, we only managed to get the questionnaire partly administered, and had to approach them again and again to get the work done. As a result the survey took more time than expected.

Some of the respondents asked us to see them at their houses in the evening. This created a different problem for us, particularly if the area was rural. In rural Bangladesh, after sun set the entire locality goes under darkness, given the lack of electricity or other sources of lighting. Except in a very few areas, communication in rural Bangladesh is extremely backward. In most cases one has to move on foot due to lack of adequate transport. Movement at night time in the rural area is risky, and we had to travel long distances with the survey schedules and other belongings to reach the widely scattered interview locations. Working at night in the urban areas was not quite as difficult.

The problem of withdrawal from interview was striking. Roughly one in three withdrew from scheduled interviews citing a change of mind. This created a series of problems for us: we had to contact fresh respondents and prepare interview schedules for them, so we could not finish the field survey on schedule but took a few months more than planned. The field investigators' contracts had to be extended, incurring additional costs. The respondents expected immediate benefits for the time they spent for interview, and as we were not in a position to provide benefits, they showed little interest in the work and little cooperation. Some people viewed our mission

with suspicion. As a result, we did not get the necessary cooperation from a cross-section of the people in the study area.

For some items the respondents were asked to report expenditure incurred over the past month or year. It was often difficult for them to recollect accurately. In some cases, expenditure was underreported: as the costs of short-distance travel, small consumer goods, entertaining guests with light refreshments etc. were overlooked by the respondents. Income was similarly underreported: earnings from home gardening, the sale of eggs or home-made foods, returns from making dresses for neighbours and the like, was not noted by the respondents. This may have caused us to under-calculate income and consumption figures. Some respondents seemed to be confused when asked information about the number of hours worked last week or the number of days worked last month. The estimates of relevant parameters may be biased as a result of consequent under-reporting or over-reporting of figures. Our investigators recorded asset (land) data based on local units. Converting local units to a standard unit may have introduced errors, leading to an overestimation or underestimation of the real figures.

1.3 Justification

According to the World Employment Report 2004–2005 of ILO, in the world, 550 million people who worked still lived on less than US$ 1 a day. These working poor represent 20 percent of total world employment. In spite of the record levels of global employment, the reality for most of the world's poor is that they must labour – often for long hours, in poor working conditions and without basic rights and representation – at work that is not productive enough to enable them to lift themselves and their families out of poverty. While it is clearly the case that employment is central to poverty reduction, it is decent and remunerative employment that matters, not employment alone.

According to the report mentioned above, a substantial portion of poor people in the world is already at work – it is not the absence of economic activity that is the source of their poverty, but the less remunerative nature of that activity. In purely empirical terms, the link between work of low productivity and poverty is starkly clear. It is a

straightforward proposition that if people – in particular, the 550 million people working in poverty – were able to earn more from their work, then poverty would decline. It is not just any work that can raise people out of poverty: what is needed is productive work. The pertinent issue here is that whether men or women earn enough from their work to lift themselves and their families out of poverty. Increasing the productivity of the working people living in poverty removes a restraint on the overall capacity of the economy and stimulates demand by raising the purchasing power of a large group of consumers.

The working poor as a community are unskilled, low productive and ill-paid. Moreover, they lack other sources to supplement their income. Particularly if the household head is the only breadwinner and there are no other sources of income, it is difficult to escape poverty. Empirical evidence suggests that these types of households are characterised by redundant family members and inaccessibility to resources, and very often they are excluded from safety net programmes. Despite their willingness and ability, they are unable to take part in income-generating activities and diversify sources of income due to lack of resources. Planners and policy makers have overlooked the plight of this group of people, who remain beyond the purview of development programs and welfare measures directed towards the wellbeing of the poor in general.

This thesis will analyse issues related to working poverty and identify policies that will address problems faced by the working poor through an objective assessment of their situation. Existing studies do not provide an analytical framework addressing eradication of the poverty of the working poor, who constitute the vast majority of the poor population in Bangladesh. Unless the dynamics of poverty is captured, attempts to eradicate poverty may be futile. Although there is plethora of studies on poverty of the people in general, there is a dearth of studies on workers' poverty. The very few in existence has provided necessary and adequate information; but any program to eradicate poverty will require issue-specific information from which an analytical framework may be developed.

This research is an attempt to close the gap and to bring the issue of poverty of the workers squarely into the focus of all development programs and policies. By

providing an analytical framework, the study will create a basis for undertaking action programmes for eradicating poverty of the working poor in Bangladesh. Its findings will help develop the insights of those who are or will be working in this area and provide guidelines for adopting a pragmatic strategy to combat poverty at grassroots level. It will also add to the existing literature on poverty and related issues, which will be useful to researchers, teachers, students, planners, policy makers and development activists.

1.4 Research questions

In the light of the above discussion, the main research questions are:

(i) Why are people poor even though they work?

(ii) What are the determinants of poverty?

(iii) What are the characteristics of the working poor?

Questions related to the above main research questions are as follows:

(i) In which sectors and occupations do the poor work?
(ii) What factors cause and shape poverty of the household?
(iii) What is the level of wages?
(iv) What are the determinants of wages and employment?
(v) What is the relationship between skill, productivity, wages and poverty?
(vi) What factors are responsible for wage differentials across genders, occupations and sectors?
(vii) Why do workers fail to work additional hours, and for how long do they remain unemployed in a year? Is their failure/ irregular employment due to insufficient demand or personal/ family constraints?
(viii) What is the nature and pattern of employment of the working poor?
(ix) Do the working poor have access to safety net programmes, social security payments or other benefits that assist the escape from poverty?
(x) Does the work of the poor conform to the basic attributes of decent work (job security, work place safety, legal protection etc.)?

1.5 Conceptual framework

Working poverty is a complex issue, a combination of both individual and household characteristics; this study addressed these two separate but complementary levels – the individual worker and the household to which the worker belongs. In the first approach, the focus was mainly on the individual worker's situation, in terms of low wages or personal characteristics such as age, education and skill. The second approach took into consideration the household, focusing on its income, size and other characteristics. The issue of working poverty was analysed within the socio-economic context of Bangladesh.

From the labour market point of view, the issue of poverty has been addressed from the perspectives of both demand and supply. The link between labour market demand and excess supply of labour can be conceptualised in terms of casual employment of low skilled labour force, which in turn is reflected in the low levels of real wages and low levels of earnings. Inadequate aggregate demand arising from either inappropriate economic policies and/or exogenous shocks can result in the lack of full-time productive employment and the prevalence of low wages. Historically, an acceptable reason for not working full-time and year-round has been the lack of available jobs, especially for those with fewer skills who are more likely to be the working poor (Denziger and Gottschalk 1986). At the same time, supply side factors such as low levels of skill (human capital) and constraints imposed by family circumstances and/or socio-religious values may inhibit an individual from fully and gainfully participating in the labour market.

The influence of demand and supply side factors on working poverty can be illustrated with the help of the following diagrams.

Figure 1.2: Demand Side Factors Determining Working Poverty

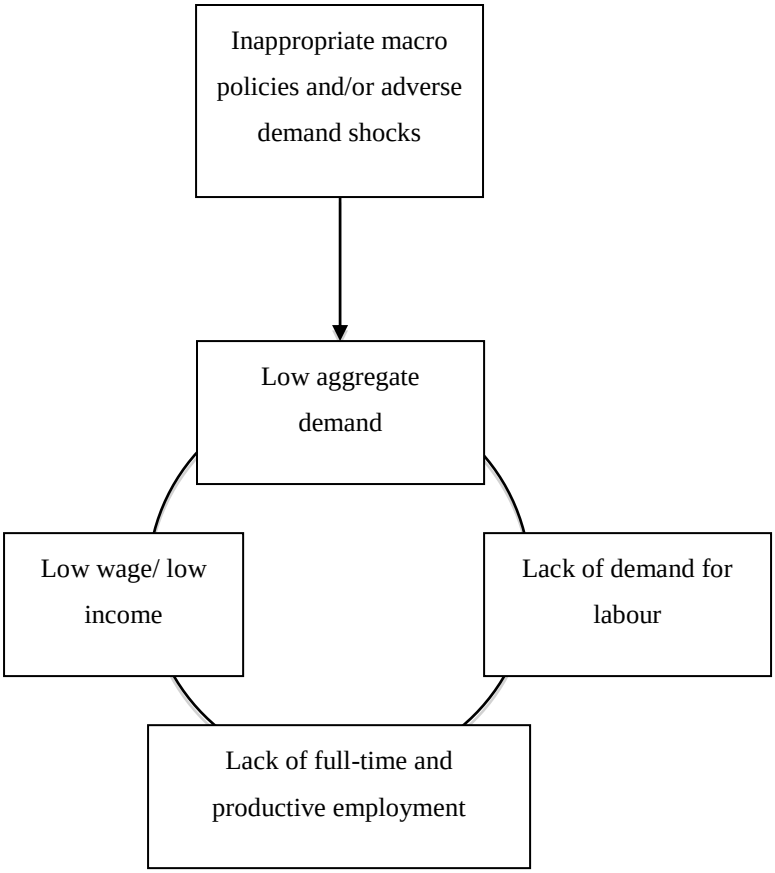
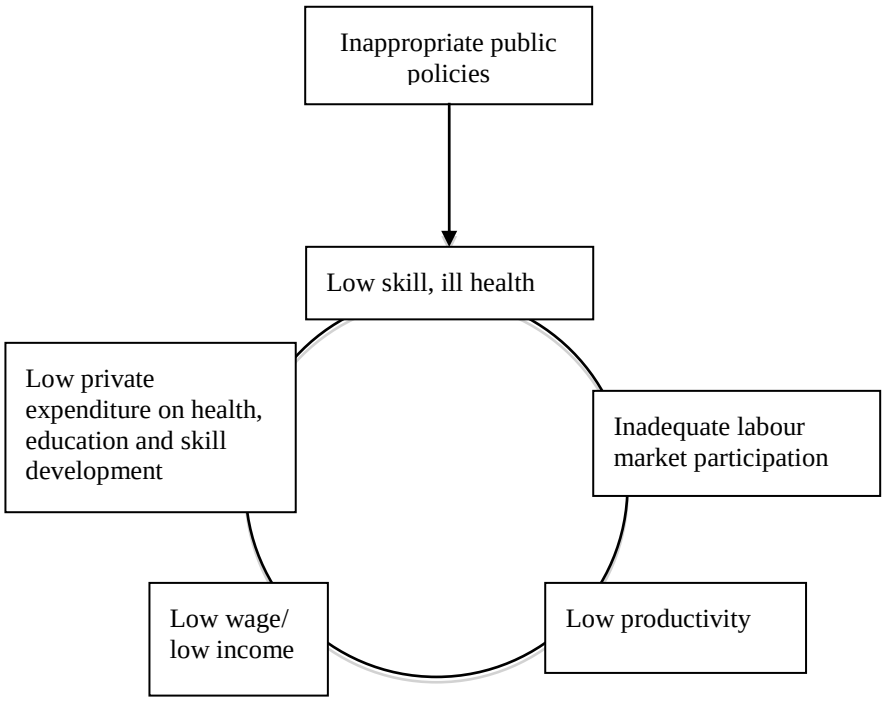


Figure 1.3: Supply Side Factors Determining Working poverty



At the individual level, the link between the labour market and the poverty of the workforce operates through the low level of economic activities the workers perform, and the low level of human capital they offer due to lack of skill and education. The link at the household level can be explained in terms of the dependency burden, the nature of household (single parent, female headed household, disability of family members etc.) and socio-religious values that inhibit participation in gainful economic activities.

The link between productivity and income can be conceptualised in terms of the average productivity of the workforce, which in turn is reflected in the low levels of real wages and earnings. A low average productivity of a workforce can be the result of a deficiency of capital relative to labour. Low levels of earnings, whatever their cause; compel households to spend less on the education and skill formation of their children, thus lowering the productive capacity of the potential labour force. In addition, inappropriate health and education policies at national level provide inadequate opportunities for workers developing skills required by employers.

With the growth of an economy there is a tendency to replace low-skilled, low-productive labour with technology. Following technological change, the economy shifts to the next level of economic activity while the demand for workers changes both quantitatively and qualitatively. As a simple arithmetical proposition, then, if output growth follows growth in productivity, then fewer inputs such as labour are required to produce a given level of output. Labour-saving technological changes often allow firms to achieve the same or greater output with less labour input.

Bernstein (1999) shows that the labour demand in the US labour market has moved, or shifted, away from low-skilled workers over the past two decades, which in turn added to the plight of the working poor. The evidence for this shift in demand is based on the relative movement of prices and quantities of workers at different skill levels. Those at the bottom of the wage/ skill distribution have seen both their supplies and wages fall steeply. Studies such as Autor, Katz and Kruegr (1998) and, Berman, Bound and Machin (1998) find that technological changes have favoured the wage prospects of skilled workers in the US. Berman, Bound and Manchin (1998) and, Machin and Reenen (1998) confirm a similar pattern in other developed

countries. In Korea, Hur, Seo and Lee (2002) found a positive relationship between technological diffusion and the demand for skilled workers during the mid 1990s.

Due to the factors and relationships mentioned above, relative demand for workers (especially those with low skill) falls faster than relative supply. The poor are unable to gain access to the labour market and there occur shifts in the structure of employment along with shifts in demand for workers. Apart from technological issues, inadequate aggregate demand in the economy exerts a dampening effect on the demand for labour in terms of curtailing production and trimming workers. Low aggregate demand originates from inappropriate macroeconomic policies and demand shocks. Developing countries are vulnerable to demand shocks because of their low resource base and lack of alternative sources of income.

Since the early 1980s, most developing countries have embarked on structural adjustment policies at both micro and macro levels. At the macro level, tight fiscal and monetary policies were introduced, resulting in low or balanced budgets and low inflation. Contrary to expectations, this policy failed in most cases to generate economic growth high enough to reduce poverty. At the micro level, trade and privatisation policies and financial deregulation were introduced. The pace and sequencing of trade and industrial sector reforms created an imbalance between expanding and declining sectors. In most cases, the expanding sectors failed to absorb the workers who lost jobs in the declining sectors. Two factors contributed to this situation: first, the rate of growth of the expanding sectors (and their employment elasticity) was less than the rate at which other sectors declined; secondly, the workers who lost jobs could not retrain quickly enough to obtain jobs in the expanding sectors.

The financial sector deregulation has seen the retreat of commercial and privatised banks from rural areas and the cessation of specialised credit programs for agricultural and small-scale rural activities. This adversely affected the growth of the rural and small-scale sector, and compounded the problem of seasonal employment in rural areas. As alternative credit programs, such as micro and meso finance schemes, did not develop at the pace at which privatised commercial banks and specialised credit programs retreated, workers who lost jobs in the process of

liberalisation could not be absorbed in the rural sector; nor could they start their own small businesses.

1.6 Issues to be examined

This research will critically examine major labour market problems that impede workers' ability to earn an income above the poverty threshold: low earnings, low productivity, periodic unemployment and part-time/ casual work.

1.6.1 Supply side issues

Since independence in 1971, in Bangladesh, public education expenditures have increased from 0.9 percent of GDP to around 2.2 percent (ADB & World Bank, 2003). Primary education always receives the highest allocation in both revenue and development. The distribution of public primary spending is strongly pro-poor compared with total education outlay. The impact of adult literacy programs in educating the illiterate adults particularly working adults, is not discernible. Skill development programs undertaken in piecemeal manner are not enough to develop the skills of the poor, despite them the bulk of the poor remain without jobs. Similarly, public health facilities are not enough to improve the health and nutrition status of the poor, which is manifest in the increased number of malnourished people in the country. Keeping these in mind, this study will examine whether these policies are enough to make people skilled and productive.

The study will probe the factors underlying inadequate provision of public goods and their inability to reach the poor who need them most. It will investigate whether the paucity of public goods is due to resource constraints or to management failure. It will also examine whether the inability of the poor to access public goods is an effect of their ignorance, a faulty distribution system or corruption of vested interests in power at the grassroots levels.

At household level, there is huge potential labour force that cannot participate in the labour market because of family constraints. It is difficult for women in conservative families to work outside their homes because of religious reasons. As well, if the husband does not like his wife working, it is not possible for her to do so, whatever

qualifications she has. Sometimes a woman has to do the entire household work herself, which keeps her busy from dawn to dusk. There are also social barriers against women working and earning. Free mobility of women outside their homes in many places is still a distant dream. A large number of women who have the potential to work and earn are found discharging household activities within the house. This study will examine family or social constraints which hinder women from participating in the labour market.

Since family structure and composition affect the participation of household members in the labour market, this study will examine household characteristics including size, structure, nature, dependency and leadership. Opportunities available to the separated and widowed will be examined, and whether they fail to avail themselves of opportunities due to lack of knowledge or social disadvantage. Social attitudes towards those people and whether they attitude create constraints against accessing the labour market will also be examined.

1.6.2 Demand side issues

One of the causes of job loss is structural change. This is a normal process of economic development, but can be accelerated or induced by policies. Structural changes in the economy have a great impact on employment and the labour market. Increased production in a particular sector may create overtime work while decreased production in another sector brings about downsizing of employees. In this regard, it is relevant to examine the sectors and occupations in which the poor are concentrated, and how they have been affected under organisational restructuring. Another task is to examine any discernible shifts in the structure of employment, towards occupations with higher skills. A third important element to examine is the level of earnings of wage workers who are likely to be victims of such policy shifts.

Over the years the structure of the economy, including employment structure, has changed dramatically. The contribution of the agricultural sector to GDP is currently less than 40 percent; it was as high as 60 percent during the 1980s. Manufacturing and services have emerged as leading sectors in the Bangladesh economy since the 1990s. Since then, there has been a move of the redundant agricultural labour force to urban areas. The labour market demand was biased towards skilled labour force

and as such low-skilled, uneducated labour force became unemployed. The structure of GDP growth reveals that maximum growth originated from agricultural sector but since real wages did not increase proportionately, the agricultural wage labourers did not get the benefit of growth and hence they remained as poor as before. These structural issues should be analysed, supported by empirical evidence, to answer the questions noted above.

Employment growth associated with a given output growth is provided by the employment elasticity of output growth. High investment in more labour-intensive sectors, and higher growth rates in such sectors, will usually generate high employment elasticity. How much employment elasticity is required to generate sufficient employment opportunities to absorb the unemployed is an issue of research. It has been estimated that with a labour force growth of 2.5 percent per annum and an overall employment elasticity of 0.4, a GDP growth of 6 percent would be required to absorb annual additions to the labour force (Islam, 2003). Employment elasticity may be raised through increasing the labour intensity of production processes and developing labour-intensive sectors. This study will examine in which sectors employment intensity has increased or decreased over a given period of time.

It is also instructive to examine how and under what circumstances workers undertake part-time jobs. The prominence of involuntary part-time employment indicates that many workers do want full-time work but are unable to find it because opportunities for these jobs are not available (Ehrenberg, 1988). The essence of part-time work may lead to a situation where regular full-time low-wage jobs may be replaced by part-time work, given its cost effectiveness and employers' preferences. Employers find it convenient to employ part-timers because they are not only cheap but are available on soft terms and conditions. The issue of part-time job needs to be examined critically because of its potential impact on the wellbeing of the household.

Bangladeshi agriculture is characterised by seasonality in employment and output. During cropping and harvesting, known as peak period, most of the labour force remains employed. Beyond it, a remarkable portion of the active labour force remains unemployed or underemployed. The extent of redundancy is remarkable,

spanning from one to six months a year. The non-farm sector in rural Bangladesh is still small and its potential to absorb redundant workers is limited. With that in view, this study examines the prospects of the rural and urban non-farm sector providing employment for workers during the redundancy period, and identifies the needs of this sector if it is to proliferate and diversify.

The government of Bangladesh has undertaken a privatisation policy, against the backdrop of huge losses incurred by the state-owned enterprises. The government spends a significant amount of money from the exchequer each year to cover the losses of those enterprises. Privatisation policies designed without objective assessment of the situation created problems in terms of loss of employment in state enterprises. Entrepreneurs taking ownership of privatised enterprises downsized them dramatically and thousands of workers lost jobs and fell into the risk of poverty. The same happened in the trade sector. Trade liberalisation following structural adjustment policies without assessing the reality in the industrial sector, led to the closure of a number of small- and medium-scale enterprises during the mid-eighties, leaving thousands of workers jobless. Apart causing from job losses, inappropriate policy decisions caused other financial and social problems: for instance, the owners of closed enterprises could not repay their loans to the banks. This in turn caused a severe liquidity crisis for the banks.

The tight fiscal and monetary policies imposed by the adjustment program so far have failed to ignite rapid economic growth, which is needed to absorb workers back into employment. This has added to the plight of the working poor. Its effect could partly be ameliorated through fast-expanding micro and meso financing schemes to help the working poor establish small-scale businesses to supplement their income. This study will analyse the impact of the pacing and sequencing of adjustment policies, and the role of micro finance.

1.7 Organisation of the thesis

The thesis is presented in seven chapters. Chapter 1 describes the framework and methodology of the thesis, followed by a comprehensive review of literature in chapter 2. Chapter 3 presents a plain profile of the working poor in Bangladesh,

focussing on their socioeconomic characteristics and living conditions. Chapter 4 considers how household characteristics determine the probability of a household being poor. Chapter 5 attempts to identify and analyse discrimination in the workplace, with special reference to wage inequality between males and females. Chapter 6 explores those characteristics of the labour market and working conditions which together shape and sustain poverty among the workers. Chapter 7 analyses rural-urban migration resulting from seasonality in employment. Discrimination and working poverty have been examined in chapter 8.The thesis concludes by summarising the main findings and making recommendations to address the problem of the working poor in chapter 9.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter contains a review of literature available from various sources, such as books, journals, research reports and websites. An attempt has been made to capture the household and labour market characteristics of the working poor in both developed and developing countries. The chapter presents the extent and incidence of working poverty in the international arena. It indentifies socioeconomic factors that determine and shape the poverty of workers. In addition, cross-country evidence of a gender dimension to poverty among workers is presented, as well as empirical evidence on working conditions in factories and establishments with particular reference to Bangladesh.

2.1 Defining the working poor

In the literature, definitions of the working poor are many. The definitions differ in terms of approach, methods and perspective. According to ILO, 'the working poor are those who work and belong to poor households' (ILO, 2004). This definition involves two statistical units: the individual and the household. The individual is the basis of establishing the 'working' and 'non-working' classification, while 'poor' and 'non-poor' are determined on the basis of the household (Majid, 2001). Schafer (1997) is of the view that persons whose individual wages lie below a certain threshold are working poor. In some studies the definition of the working poor is extended to all household members who live in a poor household with at least one worker (Sen, 1981; Ringen, 1988; Jenkins, 1991).

The only country where an official definition of the working poor exists along with a tradition of research is the US (US Bureau of Labour Statistics, 2000; Warren, 2002). The United States Bureau of Labour Statistics (BLS) has been monitoring this group for almost 15 years. As reported in Gardner and Hertz (1992), for many years policy makers, analysts and workers have been interested in the relationship between work and the poverty status of families. Interest escalated in the 1960s, when many poverty reduction efforts were put into place for the first time. In the early 1980s, the BLS began analysing the relationship between work and the economic status of families, and published data annually from 1982 to 1987 in bulletins titled *Linking*

Employment Problems to Economic Status. In 1989, BLS researchers Bruce Klein and Philip Rones developed a new method of linking individuals' labour market efforts to the poverty status of their families, introducing the concept of working poor, which was officially accepted by the USA in 1989.

According to the US BLS (2005), the working poor are those who spent at least 27 weeks in the labour force (working or looking for work), but whose incomes fell below the official poverty threshold[2]. The working poor as defined by Klein and Rones (1989) are those who devote more than half of the year to working or looking for work but still live in families with incomes below the official poverty level. Recently, through different studies of the National Statistical Institute (INSEE), France has adopted a similar definition of the working poor: individuals who spend at least six months in the labour force, working or looking for work, but whose household's standard of living is below the poverty level (Ponthieux and Concialdi, 2000).

In Canada, according to the NCW (The National Council of Welfare), a working person is poor whose income is below Statistic's Canada's low income cut-off (NCW, 2002).[3] In 2000, the Canadian Council on Social Welfare (CCSD) prepared a profile of the working poor in Canada using their own definition: non-elderly households (under 65) whose adult members have, between them, at least 49 weeks of their full-time or part-time work during the year.

More recently, the working poor have gained attention in Europe. In 2003, the European Foundation (an agency set up by the European Council to contribute to the

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[2] The actual poverty thresholds vary in accordance with the composition of the family. In the US in 2003, the average poverty threshold for a family of four was $18,810; for a family of nine or more people, the threshold was $37,656; and for an unrelated individual aged 65 or older, it was $8,825. The poverty thresholds are updated each year to reflect changes in the Consumer Price Index for All Urban Consumers (CPI-U). The thresholds do not vary geographically.

[3] The NCW defines the working poor as any economic family whose income is below Statistics Canada's low income cut-off and who earned more than half of that income from wages and salaries or from self employment.

planning and designing of better living and working conditions in Europe) commissioned researchers to look into the issue of working poverty. According to the European Foundation, the working poor are those individuals who worked at least six months in the prior year and whose income falls under 60 percent of the national equivalent median income (European Foundation, 2004).

In 2001, the Swiss Federal Economy Department commissioned researchers to prepare a statistical profile of the working poor in Switzerland. The Swiss Federal Statistical Office defines the working poor as 1) all active individuals, regardless of the number of hours they work; or 2) all individuals working full-time (i.e. 36 hours or more weekly) whose family income falls below the cost of a moderate rent plus a basic health insurance premium, plus the Confederation Suisse des Institutions d' Action Sociale's vital minimum.

These definitions of the working poor are based on different approaches to what is meant by being at work and being at poverty. The following table summarises various definitions of the working poor based on two major elements: the activity status and the poverty norm (Ramon and Latta, 2004).

Table 2.1: Existing Definitions of Working Poverty

Country	**Source**	**Work Definition**	**Poverty Threshold**
EU	Eurostat	- employed at least 15 hours (Marlier 2000) - most frequent activity status in the last year	Low income threshold: less than 60% of the median equivalised household income (relative monetary poverty)
France	- Institut National de la Statistique et de l'Economie(INSEE) - Academics - National Action Plan for Social Inclusion 2001/2003-2003/2005	- individuals who have spent at least six months of the year on the labour market (working or searching a job) - working at least six months - have had a job for at least one month	Low income threshold: less than 50% (60%-70% occasionally of the median equivalised household income (relative monetary income)

Country	**Source**	**Work Definition**	**Poverty Threshold**
		during a year	
Belgium	National Action Plan for Social Inclusion 2001-2003/2003-2005	- individuals who have spent at least six months of the year on the labour market (working or searching a job) - working at least six months	Low income threshold: less than 60% of the median equivalised household income (relative monetary income)
Switzerland	-Swiss Federal Statistical Office - Academics	all active individuals, regardless of the number of hours they work; or all individuals working full-time (i.e. 36 hours or more weekly); or at least one individual having a lucrative activity for at least 40 hours a week (one full-time job)	Administrative flat rates of social security modified. (monetary administrative poverty)
US	US Census Bureau	Total hours worked by family members greater than or equal to 1,750 hours (44 weeks)	Federal Poverty Line (FPL)
	US Bureau of Labour Statistics	Individuals who have spent at least six months (27 weeks) of the year on the labour market (working or searching for a job)	
	US researchers in general	adults working, on average, at least half time (at least 1000 hours);or definition of USCB and USBLS	Less than 125%-200% of FPL (absolute monetary poverty)

Country	Source	Work Definition	Poverty Threshold
Canada	National Council of Welfare (NCW)	More than 50% of total family income comes from wages, salaries or self-employment	Statistic's Canada's Low-income cut-offs (LICOs)
	Canadian Council on Social Development(CCSD)	Adult members have, between them, at least 49 weeks of either full-time (at least 30 hours a week) or part-time work	CCSD relative low-income threshold (relative monetary poverty)
	Canadian Policy Research Networks	Full-time /full year	Relative low-income threshold: less than $20,000 per year (relative monetary poverty)
Australia	Social Policy Research Centre	All active individuals, regardless of the numbers of hours they work	Henderson absolute poverty line (absolute monetary poverty)

Source: Compiled from published documents.

The phenomenon of working poverty is hybrid in nature because it involves two concepts: one is work and the other is poverty. The subject can therefore be viewed from two separate but complementary angles: workers who are poor, but also poor people who are working. Politicians, trade unions, academics and the media have frequently used the term 'working poor', sometimes as a synonym for low-wage workers without referring to the poverty issue. Working poverty and low wages may be related but they are distinct issues. Low wages is one of many factors explaining the term 'working poverty'. Defining working poverty is not an easy task because controversies exist on the definitions of what it is to be poor, or to be working.

The controversies could be resolved by: 1) considering the working poor situation as a product generated by the economic environment of low wages employment, low productivity and increasingly skilled jobs demands; and 2) approaching the working poor category as a social issue entangled in the complex relationships of households to social and economic contexts such as labour market exclusion, low quality of

employment, social protection, poverty and social exclusion. According to Strengmann-Kuhn (2002), there are two ways for workers to become poor. The first is that the worker has a poverty wage[4] and poverty can be avoided neither by the earnings of other household members nor by other income such as public transfers. In this case, the reason for poverty is low pay. The second way of becoming working poor is that the worker receives sufficient income, but falls below the poverty line because of the structure of the household.

The idea of working poverty contradicts the popular beliefs that those who work cannot remain poor, and that poverty results from lack of commitment to work. In the US, where the concept of working poverty has its roots, the working poor remain the glaring contradiction to the American ethos that a willingness to work leads to material advancement, and negate the prevalent view that the cause of poverty among adults capable of work is deviant behaviour, and particularly a lack of commitment to work (Levitan et al., 1993).

2.2 Extent of the working poor population

The ILO developed the concept of working poverty to cover those people who work but do not earn enough to lift themselves and their families above the US $1 poverty line level income. Current estimates for 2003 show that 1.39 billion people in the world work but are still unable to lift themselves and their families above the level of US $2 per person per day. Among them, 550 million people cannot even lift themselves and their families above the extreme threshold of US $1 a day. This means that 49.7 percent of the world's workers and 58.7 percent of the developing world's workers are not earning enough to lift themselves and their families above the poverty line of US $2 a day. As well, 19.7 percent of the employed persons in the world and 23.3 percent of the developing world's workers are earning less than US $1 per day per person (Majid, 2001).

At country level, the ratio of working poor to employed shows wide variation across countries. At one end are countries with less than 10 percent of the employed

[4] A 'poverty wage' is a wage that is not high enough to avoid poverty if the worker were living alone.

population in the working-poor category, such as Brazil, Bulgaria, Chile, Jordan, Mauritius and the Russian Federation. The other end is represented by countries where 60 percent or more of the employed population fall in the working poor category, such as Burkina Faso, Madagascar, Mali, Nigeria and Zambia (Table 2.2).

Table 2.2: Working Poor as a Proportion of the Employed Population: Selected Developing Countries

Country	Proportion of working poor	Country	Proportion of working poor
Bangladesh	29.1	Jordan	2.0
Brazil	5.1	Kenya	26.5
Bulgaria	2.0	Madagascar	60.2
Burkina Faso	61.2	Mali	72.8
China	18.5	Mauritius	3.8
Colombia	11.0	Mongolia	13.9
Cote d'Ivoire	12.3	Nepal	37.7
Chile	4.2	Nigeria	61.4
Ecuador	20.2	Russian Federation	7.1
Ethiopia	31.3	Tanzania	19.9
India	44.2	Zambia	72.6
Indonesia	15.2		

Source: Ghai (2003): 'Decent work: concept and indicators', *International Labour Review*, vol.142, no.2, pp.120.

The working poor constitute an important part of the active population in many countries: 4.9 percent of individuals who were in the labour force for 27 weeks or more in the US in 2001; 7 percent of workers living in the EU in 1999; 7.1 percent of families in South Korea in 2000; and 7.5 percent of people working for pay in Switzerland in 1999. The World Employment Report 2004 anticipated that the trends and shares of working poor population across the international arena would decline, but there is not enough empirical evidence as yet to justify that expectation.

Studies that examine the extent and various dimensions of working poor include Berger (2001); Burtless (1986); Chen and Ravallion (2000); Klein and Rones (1989); Caputo (1991); Levitan et al. (1993); Ehrenberg (1988); Majid (2001); Mossisa (2001); Berger and Harasty (2000); Schiller (1994); Katz and Murphy (1987); Bernstein (1999); Bane and Ellwood (2000) and Kim (1998). The working poor constitute an important part of the active population in many countries: they

comprise 4.9 percent of individuals in the labour force for 27 weeks or more in the US in 2001, 7 percent of workers living in the EU in 1999, 7.1 percent of families in Sough Korea in 2000 and 7.5 percent of people working for pay in Switzerland in 1999 (Fortin and Fleury, 2001).

According to the study by Majid (2001), in developing countries in 1997, around 534 million persons could be classified as belonging to the population of the working poor. About 95 percent of the working poor in the developing world lived in low-income countries, and constituted about 25 percent of the employed labour force in all developing countries (Majid, 2001). In other words, one in every four employed persons in the developing world belonged to a poor household. Between the mid-1980s and the mid-1990s, the decline in the working poor populations in the aggregate (low- and middle-income countries) classifications was driven by changes in middle-income countries.

Working poor populations increased in low-income countries and declined in middle-income countries. Over the decade, the share of middle-income countries in working poor declined from 12 to 5 percent, while that of low-income countries increased from 88 to 95 percent (Majid, 2001). The problem of the working poor remains serious. There are currently (2004-05) 202 million working poor in South Asia (ILO, 2005). This means that among those in employment, 34.2 percent live in households earning below $1 per person per day. The share of the working poor in employment is high, mainly because of South Asia, where between 40 and 56 percent of those employed are poor. In 2004-05, East and South-East Asia, excluding China, had between 11 and 16 percent of working poor, with an unemployment rate of 7 percent. In the Middle East and North Africa the share of the working poor in total employment was between 2 and 3 percent in 1998.

In Latin America and the Caribbean the share of working poor in total employment was 16–25 percent in 1998. In Sub-Saharan Africa, the proportion was 46 percent in the same year. Although growth processes there are employment intensive, the jobs created are not very productive, are mostly located in the informal sector, and do not permit those who work to lift their families above the poverty line (Chen and Ravallion 2000). The global figure of the working poor was estimated at 542 million

in 1998. The prevalence of working poor throughout the world poses a threat to the fulfilment of decent work targets and the elimination of poverty.

A review of the literature shows that whatever the country they live in, the working poor share many common traits. In particular, they are more likely than other workers to work in the service industry (Canada, US, EU countries and Switzerland); to be self-employed (Canada, EU, countries and Switzerland); to earn low wages (Canada, US, EU countries and Switzerland); to depend on only one earner (Canada, US, EU countries); to be young (Canada, US, EU countries and Switzerland); to be part of the minority (immigrants in Canada, Switzerland and EU countries, blacks and Hispanics in US); to have a disability (Canada, EU countries); to be lowly educated (Canada, US, EU countries and Switzerland); to be lone parents (Canada, US, EU countries and Switzerland) and to have more children (Canada, US, EU countries and Switzerland).

The world has set itself a target of reducing poverty by half by 2015, and various exercises have provided estimates of GDP growth rates needed to achieve this target.[5] These exercises, however, never take the employment variable into account; but because work is often the only source of income for the poor, poverty has a direct relationship to employment: it results from, long-term unemployment in industrialised countries on the one hand, and low productivity employment in developing countries on the other hand (Berger and Harasty, 2002). Achieving the poverty target implies achieving a reduction of unemployment and low paid employment.

Total employment can be divided into two: the working poor – referred to here as low productivity employment – and non-poor workers – productivity employment, sometimes called high productivity employment. Reduction of low productivity

[5] Similar other studies are: World Bank (1999): *Poverty Trends and Voices of the Poor– Two Scenarios for the next Decade*; Collier, P. and Dollar, D. (2001): 'Can the World Cut Poverty in Half? How Policy Reform and Effective Aid Can Meet International Development Goals', *World Development*, 29(11), Hammer, L. and Naschold, F. (2000): 'Attaining the International Development Targets - Will Growth be Enough?' *Development Policy Review*, Vol.18.

employment is a necessary condition for reducing the poverty of the working poor (Sundaram and Tendulker, 2002). There may exist a relationship between poverty elasticity and growth, and the productive employment elasticity and growth. If so, poverty elasticity could be expressed as a function of the productive employment elasticity, the labour market participation rate of poor and non-poor, and population and GDP growth. If productive employment responds positively to output growth, poverty will decline. This in turn implies that an increase in productive employment will lead to a decrease in low productivity employment, resulting in the decline of poverty as a whole.

In Canada, some few organisations have looked into the working poor issue. In 1981, the National Council of Welfare (NCW) prepared a statistical profile of the working poor in Canada. According to that profile, the number of working poor declined steadily over 1973–1977, in both absolute and in relative terms. In 1977, the working poor were highly urbanised, were more likely to work in the services, sales, farming, fishing or clerical jobs, and were a lot less likely to be employed all year. The working poor were much more likely than the non-poor to depend on only one earner. Finally, a majority of working poor Canadians were unattached individuals, as opposed to being part of an economic family.

The number of working poor individuals declined on average by 4.5 percent (annual average rate) from 1996 to 2001 in Canada. In 2001, there were 460,000 working poor. Apart from the steep decline in 1998 (-13.3 %) and 2000 (-5.0%), the reduction in the number of working poor in other years was small (-0.5% in 1997, -1.2% in 1999 and -1.9% in 2001). Despite recent economic growth, the proportion of workers among the poor did not decline: on the contrary, this proportion persistently decreased in the 1960s and in the 1970s, but levelled off between 1996 and 2001.[6] Indeed, the percentage of poor families that were working went from 40.4 percent in 1996 to 44.5 percent in 2001.

[6] See Podoluk (1961); National Council of Welfare (1981); National Council of Welfare *Poverty Profile*, 1985,1988,1992, 1997 and 2002 editions for statistics on the working poor.

A breakdown of the working poor shows that in 2001 there were 184,000 working poor unattached individuals and 230,000 working poor families. There were on average 1.2 workers per working poor family, compared to 1.6 workers per working family that was not poor. Breaking down the results further, it was observed that 11 percent of unattached workers and 4 percent of families where at least on individual was working were poor. However, the working poor accounted for about a third (33.0%) of poor unattached individuals, and close to half of poor families. Having a strong attachment to the labour market was not enough to keep those households out of poverty. Finally, when including dependants, in 2001 close to one million Canadians (964,000) were living in a family headed by a working poor person; about one third (307,000) were children under the age of 18 (Fortin and Fleury, 2001).

In the EU, Portugal has the highest poverty rate with employment as well as the highest share of working poor among the poor. In 2002, nearly 10 percent of the working population in Portugal lived in a poor household. Including the people with whom they lived, 20 percent of the Portuguese population lived in a working poor household, 19.3 percent in a full-time working poor household. In all other EU countries the working poor rates were much lower. In Greece, 5.8 percent of the population worked and were poor, and in all other countries the working poor constituted less than 5 percent. Among these other countries, Ireland, Italy, Spain, France, Luxembourg, Great Britain and the Netherlands had relatively high working poor rates. In the remaining countries, Austria, Belgium, Finland, Germany and Denmark, the working poor rates were comparatively low. In total, 10 percent of the whole population of the EU lived in a working poor household; 2.5 percent were employed full-time and poor.

Working poor are the new face of poverty in Australia. According to the *Senate report on poverty and financial hardship 2004*, one million Australians live in poverty despite having a job. The ABS (Australian Bureau of Statistics) found that in 2004, over half a million working families were unable to pay electricity or phone bills, 60,000 were unable to afford food, 36,000 were unable to heat their homes and 95,000 were forced to pawn or sell something because they were short of cash.

In India, in 1999–2000 the number of working poor was 128.8 million, down from 133.5 million in 1993–94: a decline of 4.7 million. The share of women workers in

the working poor came down from 36.7 percent to 35.4 percent over the same period. The rural share too came down (from 82.2 to 80.4 percent) between 1994 and 2000. The self-employed as a group form the major contributor to the reduction in the number of working poor in rural India. There has been a reduction of a little over 6.6 million in the number of self-employed workers in agriculture who are located in poor households. This reduction was partly facilitated by the reduction in the total number of self-employed workers in agriculture in rural India: from 137.9 million in 1993-94 to 133.9 million in 1999–2000. However, the reduction, by about 4 percentage points, in the head count ratios in the group, also played an important role.

2.3 Incidence of working poverty

The US Bureau of Labour Statistics in its report *A profile of the working poor 2003* reveals that in the US in 2003, 35.9 million people, accounting for 12.5 percent of the population, lived at or below the official poverty threshold – 1.3 million more than in 2002. The working poor rate – the ratio of the working poor to all individuals in the labour force for at least 27 weeks – was 5.3 percent, unchanged from the rate reported in 2002. Mosissa (2003) in his study found that in the US in 2001, the proportion of working poor was higher for women (5.5 percent) than for men (4.4 percent). Young workers were more vulnerable to poverty than those in other age groups because of low earnings and unemployment. Poverty was found negatively correlated to education. In 2001, only 1.5 percent of college graduates were among the working poor compared with 5.8 percent of college graduates in 2003. Workers in service and firm occupations had a relatively high incidence of poverty among the working poor. A sizeable group of full-time workers was found to live below the poverty line, accounting for 3.5 million (3.2 percent) in 2001. In that year, about 83 percent of the working poor who usually worked full-time faced at least one labour market problem: low earnings (68.0 percent) or unemployment (32.0 percent). Kim (1998), using US Population Survey data for the year 1994, has shown that of those who worked at any time during 1993, 14 percent were still poor. Interestingly, 35 percent of the adults who did not work were poor. Among those who usually worked full-time (35 or more hours per week), 9 percent were poor. Among those who worked year-round, 6 percent were poor. This rose to a poverty rate of 32 percent among those who worked 13 or fewer weeks.

In Canada, the National Council of Welfare (NCW) prepares statistical profile of the working poor. In 1998, the NCW presented statistics on children living in working poor families in their *Child poverty profile 1998*. According to that profile, there were 311,000 poor children living in families where the major income earner worked full-time, full-year (FTFY) in 1998. Of the children who lived in two parent families where the major income earner worked FTFY, only 5.6 percent were poor. The rate was 18.9 percent for children living with single-parent mothers who worked FTFY.

According to *A profile of the working poor in Canada,* in 2001 the average poverty depth for working poor families was 30.3 percent while it was only slightly higher (31.8%) for non-working poor families. Therefore, for families of two or more, providing their incomes were below the low income cut-off, it made little difference in their overall income levels whether they worked a substantial number of hours during the reference year or not. It is worth noting that although 1996–2001 was a period of economic growth, the depth of poverty of the working poor did not decrease during the period.

In all countries of the EU, the poverty rates of the workers are below the average poverty rates. In the whole EU except Sweden, the poverty rate is 16.4 percent of the whole population, but only 9 percent of all workers are poor. The poverty rate in employed households, households with at least one employed household member, is higher than for the worker alone in all countries. For the EU this poverty rate is 13.3 percent, which is lower than the general poverty rate. This is typical for all member states; only in Luxemburg is the poverty rate in employed households slightly higher than for the whole population.

Strengmann-Kuhn (2002) found the poverty rates of workers highest in Portugal (24.7 percent) and Greece (18.8 percent), followed by Spain, Ireland and Italy with poverty rates between 10.6 percent and 12.2 percent of all workers and about 16 percent in employed households. This means that poverty rates connected with employment are particularly high in southern Europe and Ireland. These are also the regions with the highest general poverty rates. In general, there is a correlation between the poverty rate for the whole population and the rate for the employed. The most striking exception is the UK, where the share of the working poor among the poor is the lowest.

Chatterjee (2007) in his study has revealed that at least 86 percent of working Indians earn less than Rs. 20 (or half a dollar a day) in spite of the blistering pace of growth of the nation's economy. No social security, pitiable working conditions, extreme poverty, no education, acute gender discrimination and poor enforcement of labour laws – these are what Indian workers live by. The illiterate have a very high probability of being poor or vulnerable, almost nine out of ten; and they are predominantly unorganised workers. Even of those with education up to primary level, 83 percent are in the poor vulnerable group.

2.4 Feminisation of working poverty

In Bangladesh, gender discrimination against the girl child starts at the earliest stages of life within families. At all stages of life, gender discrimination contributes both to the feminisation of poverty and to the perpetuation of poverty from one generation to another. The constitution of Bangladesh provides equal rights and privileges for both men and women, and existing laws do not allow discrimination against women workers in terms of employment and working conditions. Nonetheless, pervasive gender discrimination makes it even more difficult for women to escape poverty than for men. Young women face greater difficulties finding employment than young men, with unemployment rates sometimes 50 percent higher (ILO, 2003).

The school-to-work transition is harder for young women than for young men. More women are employed in the informal economy than men. Informal women entrepreneurs have fewer assets than their male counterparts, and face greater problems gaining access to credit or title to their property. For those in wage employment, a large gap persists between male and female earnings, despite the increasing adoption of equal pay legislation. Women continue to have primary responsibility for housework, childcare and unpaid work, so that increasing participation in paid employment in many cases simply means women work extra long hours (UNDP, 1999).

According to *A profile of the working poor 2003*, in the US, of all individuals in the labour force for at least half of the year during 2003, more women than men were poor (3.9 million and 3.5 million respectively). The share of people classified as working poor was higher for women (6.0 percent) than for men (4.7 percent).

Working women who maintained families had the highest working poor rate in 2003 (18.4 percent), more than twice the rate for their male counterparts (8.9 percent). Working wives in married couple families had the lowest likelihood of being among the working poor (1.9 percent), compared with 3.6 percent of working husbands.

Denziger and Gottschalk (1986) found that in the US between 1967–84, households headed by women with children over 6 years increased from 13.4 to 17.7 percent, indicating feminisation of poverty among the poor households. About half of poor able-bodied mothers whose youngest child was over age 6 worked at some point during the year, as compared with about 80 percent of men who headed poor households with children. The level of low weekly earnings among women was much higher than that for men in every year studied. According to *A profile of the working poor in Canada 2001*, 41.3 percent of the heads of working poor families were women, compared with 32.5 percent of heads of working non-poor families. They were over twice as likely to be separated, divorced or widowed (19.2% versus 8.6%). In Turkey, it has been observed that in most sectors women get 20–30 percent less wages than men (Zeytinoglu, 1998).

Rahman (1990) in his study on Bangladesh found female workers employed in low-paid low-profile jobs received average wages lower than those of male workers. The wage differential is an instance of discrimination against female workers in the labour market. Insofar as leave is concerned, the only special leave available to women workers was maternity leave. Women workers reported that employers used maternity leave as an excuse for not employing them as regular workers, and women workers remained in the category of *badli* (waiting) workers for long periods of time.

Rahman and Islam (2003) in their study on Bangladesh found the wage rate of female workers was much lower than that of male workers. The ratio between male and female wage rates increased in the rural /agricultural sector, from 1.4 in 1984–85 to 1.8 in 1995–96, and was found at the same level in 1999–2000. Thus in the rural areas, the growth of the male wage rate has been much higher than the growth of the female wage rate. In the case of urban wage rates, the ratio declined and was 2.38, 1.67 and 1.4 during the three years mentioned above. This was due to increased demand for female workers with skill and experience. Rural female workers' real wage rate in 1999–2000 was lower than that in 1989. The wage rate is such that a

day's wage cannot maintain a family of three members, even if the woman has year-round employment. The situation is worse for rural women, where t female wage rate usually supports fewer than 2 members above the poverty level. The 1999–2000 urban male wage rates supported 3.2 members, compared to 2.2 on the female wage. Since the female wage is lower than male wage, households depending on female labour are particularly vulnerable to poverty.

In terms of gender composition, in India in 1994 the share of women in the working poor (36.7 percent) was about 4 percentage points higher than their share in the total work force, reflecting the fact that the poverty prevalence rates among women workers are greater than those for male workers in both rural and the urban areas with HCRS of 40.6 percent and 35.8 percent for females and males in rural India, and 38.1 and 26.9 percent in urban India (Sundaram, 1989b). Sundaram and Tendulker (2002) find interesting gender contrasts in terms of literacy. In 1994, among the working poor in rural India, the proportion of illiterates among women workers (87 percent) was higher than the corresponding proportion among males by nearly 30 percentage points. Even among the workers in non-poor households in urban India, the share of illiterates among women workers was nearly three times as large as the proportion of illiterates among male workers in these households.

As in other developing countries, the rate of feminisation in employment is overwhelmingly high in Mali. The proportion of women in Mali's modern sector is 20 percent, compared with 59 percent in non-agricultural employment in other African countries in 1996. The average feminisation rate in Mali has been estimated at 18 percent across all occupations (Doumbia and Meurs, 2003). Women's educational disadvantages might be expected to channel them into the lowest-skilled jobs, and wage dispersion should result in a wide wage gap between men and women, irrespective of discrimination. Women's under-representation pairs with strong occupational segregation and the concentration of female employees in only a few occupations/s kill categories at intermediate levels in the hierarchy.

2.5 Household characteristics

2.5.1 Structure of household

One common key cause of poverty is the structure of the household. Households with many children are at a greater risk of poverty than households with relatively few children. This is supported by evidence from the European Community Household Panel (ECHP) that shows that households with two adults and three or more children, and households with a single parent with at least one dependant child, have the highest relative poverty rates of all household types, 35 percent in 1996 and 40 percent in 1997. The converse may also be true if the children of a large household work and earn, against those children belonging to a small household who do not work.

There are certain general characteristics of households that make its members more vulnerable to poverty:

- Only one parent working, either with low pay or inadequate hours;
- Many children or other dependants living in the household;
- Low educational level among the adults of the household;
- Prevalence of sickness and disability among the household members.

The working poor are generally found to live in single-parent households. More than one in five European households of this kind is a working poor household. Empirical evidence reveals that single parents with young children are more likely to be among the working poor (Marx and Verbist, 1998; Kosonen, 2001).

In Europe, it is found that households headed by single parents (usually mothers) have a higher risk of poverty. The number of single female parent households under the poverty line is three times higher than other types of households: 40 percent compared with 15 percent (Gardberg and Morner, 2000; Esping and Anderson, 2002; Ruspini, 1998; European Commission, 2002). The incidence of widowhood contributes to the instance of single person households. If a female is widowed or divorced, the incidence of poverty becomes highly pronounced.

Mosisa (2003) found that in the US in 2001, working families with children, regardless of the type of family, had higher poverty rates than families without children. The difference was greatest among families maintained by women. Among these families, 21.3 percent of those with children were poor in 2001, compared with 5.2 percent of those without children. Single parents with young children were more likely to be among the working poor (Kim 1998). *A profile of the working poor 2003* reveals that in 2003, 4.2 million families were classified as working poor, despite having at least one member in the labour force for 27 weeks or more. Their number was slightly higher than the number in 2002. Among families with one member in the labour force for half a year or more in 2003, married couple families had a lower likelihood of being among the working poor (8.4 percent) than did families maintained by single women (22.5 percent) or single men (13.5 percent).

The working poor rate was higher in families with children than in families without children. The rate for families with children under the age of 18 that were maintained by a woman was 23.0 percent. Families maintained by a man with children had a working poor rate of 13.5 percent. Among married couple families with children, the proportion classified as working poor was 5.8 percent, slightly higher than in 2002.

According to '*A profile of the working poor in Canada 2001*', in 2001, the working poor did not only differ from other workers with regard to their personal and labour characteristics, but also had family traits which emphasised those differences. In particular they were over three times more likely to be lone parent families: 18.8 percent of working poor families were lone parents, compared to 5.8 percent of working non-poor families. The working poor were also over three times more likely to depend on only one earner: 58.8 percent of working poor families depended on only one earner, compared to 18.2 percent of working non-poor families. As well, they were almost twice as likely to have three children or more: 19.2 percent of working poor families had three children or more, compared to 11.3 percent of working non-poor families.

The incidence of poverty may vary across the households even if they have the same levels of income. Given the same income, a household with some of its members disabled may be poorer than another household. Levitan et al. (1993) found that constraints of health and family obligations prevent the working poor from working

more hours. Qualitative evidence suggests that many of them cannot find year-round work or are unable to work additional hours due to family responsibilities and child care (Levitan et al., 1993; Schwartz and Volgy, 1992).

Regarding household structure and working poverty we observe a similarity of findings in Turkey as in some European countries. In Turkey, a study found that the annual average income of female-headed households in urban areas was 67 percent of that of male-headed households (Kasnakoglu, 1997). The working poverty rate in households with one member in the workforce is higher than in households with two or more members in the workforce. In addition, the risk of becoming working poor is higher in families having one or more children than in families without children. According to a study of individual income distribution in Turkey, for example, the poverty of a family without children was found to be less than a family with two or more children (Gursel et al., 2000).

2.5.2 Education

In general, the risk of being poor declines rapidly as individuals attain higher educational levels. According to *A profile of the working poor 2003*, of all people in the labour force for at least half of 2003, those with less than a high school diploma had a higher working poor rate, at 14.11 percent, than did high school graduates with no college accounting, for 6.2 percent. Workers with an associate degree or a 4-year college degree recorded the lowest working-poor rates, at 3.2 percent and 1.7 percent respectively.

Sundaram and Tendulker (2002) examined the educational characteristics of the working poor and the working non-poor in India for 1993–94. They found striking contrasts between these two groups of workers across poverty status, gender and location. In rural India, the proportion of illiterate workers in poor households (i.e., among the working poor) was 20 percentage points more than that among workers in non-poor households. Further, among the workers in non-poor households, the proportion with education up to primary and above was much higher (25 percent, compared to 10 percent among the working poor).

These contrasts in the educational levels of the working poor and workers in non-poor households were even sharper in urban India, where, while 45 percent of the

working poor were illiterate, the proportion of illiterates among the workers in non-poor households was much lower, at 17 percent. While the proportion of workers with above-secondary level of education was less than 5 percent among the working poor, close to 28 percent of workers in non-poor households had this level of education.

2.6 Demographic characteristics

According to *A profile of the working poor 2003*, younger workers were more vulnerable to poverty than old workers, as in earlier years. High working poor rates among young workers largely reflect the lower earnings and higher rates of unemployment associated with having relatively little education and work experience.

2.7 Labour market characteristics

2.7.1 Wages

There is no denying that women are less likely to participate in paid employment, and when they do it is usually in low paid occupations. Male-dominated culture in developed and developing countries means that males normally get more education and training, and therefore occupy high-skilled jobs. Women, on the other hand, are likely to be neglected in terms of formal education and training, and pushed to the lower end of the occupational hierarchy. Even when equally qualified, women are likely to receive less pay than their male counterparts.

As income is a major factor in tackling poverty, the extent of low wage employment can weaken the capacity of the household to gain sufficient income to escape poverty. There is no commonly agreed definition of low pay. Academic literature generally uses a low-pay threshold of earnings below two-thirds of the earnings level for all full-time workers. According to that definition, the incidence of low-paid work varies from 12.6 percent to 15.8 percent in the EU, where 14.6 percent of full-time employees are low-paid. This proportion rises to 15.8 percent for all employees including part-time and temporary workers (Jepsen, 2000). Low pay as a cause of poverty has been found significantly high in Germany and the UK (40 percent), in Denmark (37.6 percent), in the Netherlands (32.1 percent) and in Austria (28.6

percent). In the US, nearly two-thirds of full-time employed young people are low-paid (Bluestone et al. 1993).

One of the striking findings of *A profile of the working poor in Canada 2001* is that the working poor worked on average as much as their non-poor counterparts but for little more than half the wage. In particular, heads of working poor families worked on average 2220 hours per year, compared to 2218 hours per year for other workers. Heads of working poor families earned on average $11.66 per hour, compared to $20.05 per hour for other workers.

One important issue in this regard is the overlap of low wage work with the incidence of working poverty; this is an issue which has not been extensively studied. Undoubtedly, low pay is a particular cause of poverty. Besides low pay, the household situation, such as being a sole earner, either in a single-adult or two-adult household, is also a determining factor for the incidence of poverty (Nolan and Marx 2000; OECD, 1998). Nevertheless, a study conducted by Eurostat on the situation in the EU shows a different picture, where the risk of being poor when in a low-wage situation is established. Low-wage employees are considerably more likely than the total population of employees to be poor: some 20 percent of European low-wage earners are considered poor as opposed to the 80 percent who are not (Marlier and Ponthieux, 2000).

Kim (1997) observes that most of the working poor would have remained poor even if they had worked full-time and year-round, because of the low wages they earned. Contrary to the finding that low wages are responsible for working poverty, Denziger and Gottschalk (1986), using US data for the period 1967–1984, showed that in the US in 1984, 31 percent of the households classified as working had low weekly earnings but not all of them were poor. Most poor household heads who worked had low earnings (91.4 percent), but most heads with low weekly earnings escaped poverty (64.2 percent). In every year, at least 60 percent of the households whose heads were low earners escaped poverty, which was due to the earnings of other family members, income from other sources and social transfers. Denziger and Gottschalk (1986) also found that a substantial portion of households could not keep a family of four out of poverty even if they worked 52 weeks at their current weekly earnings. They observed that poor households remained in poverty because of low

annual earnings, which reflected both low weekly earnings and less than full-year work. Most of the households would have remained poor even if their heads worked a full year at their current rate.

While the incidence of low pay varies significantly across countries, it tends to be concentrated among workers in the same jobs. The incidence of low pay is much higher for unskilled workers, irrespective of age and gender, than for skilled workers. The incidence of low pay among workers with less than an upper secondary education is typically more than twice the average for all workers. In addition, the higher the earnings inequality in the country context, the higher will be the incidence in low-paid jobs (OECD, 1998).

A high proportion of these poorly paid jobs are in the wholesale, retail and catering sectors, but are rare in transportation, communication and public administration. Sales workers and, in some countries, clerical workers face a higher risk of being in low-paid jobs than trade and craft workers. This has led to debate on the rising 'new working class' (Gallie, 1998). On the other hand, very few managerial, technical and professional workers are in low-paid jobs, although workers in smaller firms face a higher risk of low pay than those in larger firms (OECD, 1998).

In general, women are over-represented (77 percent) among low-wage employees, i.e., nearly twice the proportion of women among all employees (42 percent). This over-representation of women is found throughout the whole of Europe. Although it does not explain everything, the distribution of part-time work is clearly one of the major factors in this over-representation, since 24 percent of all women employees in the EU work part-time, compared with 2 percent of men. However, even when women do work full-time, they are more likely to end up in low-paid work than man. Women still earn on average 20 percent less than men for the same work. Women are 1.3 times more likely to have a low rate of remuneration (European Commission, 2003).

Eurostat figures indicate that 77 percent of all low paid workers are women – a level rising to as high as 86 percent in Austria, and 81 percent in the Netherlands and the UK. The lowest proportion of women among low-paid workers has been found in Greece (51 percent) and Italy (60 percent). Other research suggests that employers

systematically choose to employ women at lower wages than men, based on the assumption that their commitment to work is secondary to their commitment to home and the family (Francois and van Ours, 2000).

The key overall factors contributing to low-paid work are part-time work and low hourly wage rates. However, behind these factors are issues related to individual characteristics of low-paid workers, the sectors and establishments in which they work and the types of job they do. In sectoral terms, there is a high incidence of low pay among workers in the private sector – and notably in service sectors such as the wholesale and retail trade, restaurants and hotels, transport and storage – than in the public sector, although low-paid jobs are also found in health, education and public administration. Occupations with high incidences of low pay include jobs in sales, personal services, catering, care, cleaning, security and many other unskilled occupations. Small establishment size is very strongly linked to low pay. As well as part-time work, fixed-term temporary and seasonal employment is associated with low pay. In terms of personal characteristics, low pay is strongly linked to gender, age, marital status, education, skills and length of service. Women are more likely to be low paid, as are young people, single people, those with a low level of education and employees who do not have long work experience.

One important issue in the literature on the working poor is the relationship between low wages and poverty. Obviously, the risk of being poor is higher for people who earn a low wage. On the relationship between low pay and the working poor, the Eurostat figures indicate that low-wage employees[7] are more likely to be poor than the working poor as a whole. In the 13 EU countries in 1996, the proportion of low-wage workers being poor was 20 percent while the percentage share of the overall working poor was 8 percent only. However, 80 percent of low-paid workers were not poor.

Although low-wage employees are considerably more likely than the total population of employees to be poor, this might not be the case in the presence of other sources

[7] Low-wage employees are those whose monthly wage is less than 60 percent of the median national salary.

of household income. It thus seems that there is no causal link between being a low-wage worker and being a member of the working poor. An important factor explaining the weak relationship between the two variables is that the low wages received by one member of a household are frequently supplemented by wages received by other members of the household (see Marx and Verbist, 1998; Marlier and Pointhieux, 2000; Pointhieux and Concialdi, 2000). Besides, governments provide welfare measures such as social transfers, housing benefits, minimum income schemes and the like, that offset low-wage earnings and reduce poverty among low-wage workers.

2.7.2 Employment

According to *A profile of the working poor in Canada 2001*, in that year a majority of working poor Canadians (64.2%) were already working full-time full-year[8] (compared to 81.2 percent of working non-poor individuals). Strengmann-Kuhn (2002) found more than a third of the poor were working full-time and an additional 10 percent worked less than full time. Portugal had the highest employment ratio of the poor, and more than 70 percent of those of working age were employed: more than 60 percent of the poor workers full-time (Eruostat, 2000). Nearly half of the poor in Austria, Luxembourg and Spain worked full-time. In the Netherlands, Germany, France and Denmark, about 40 percent of all working-age poor were employed full-time. The lowest percentage of full-time workers among the working-age poor was found in Great Britain and Ireland, with a higher additional share of part-time employment in Great Britain. Only 17 percent of the poor in the UK were employed, and only 10 percent were full-time workers. In the UK, 30.5 percent of the poor lived in a full-time working poor household and 42.5 percent in a working poor household. In the whole EU, 50.3 percent of the poor lived in households in which at least one member worked full-time.

[8] Working full-time/full year is defined as working a minimum of 1470 hours per year, i.e. 49 weeks per year times 30 hours per week.

2.7.3 Occupation

The likelihood of being among the working poor varies widely by occupation. According to *A profile of the working poor 2003*, in the USA in that year, two-thirds of those classified as working poor were employed in one of three broad occupational groups: sales and services; production; and transportation and material moving. Workers in occupations that required higher education and were characterised by higher earnings were least likely to be among the working poor. For instance, only 2.0 percent of people employed in managerial, professional and related occupations were classified as working poor.

By comparison, individuals employed in occupations that typically did not require high levels of education and were characterised by lower earnings – for example, service occupations and natural resources, construction and maintenance occupations – were more likely to be among the working poor. About 2.22 million individuals, or 30.1 percent of the working poor, held service jobs. Their working poor rate, at 10.6 percent, was double the average rate for all workers. The proportion of workers in natural resources, construction and maintenance who were classified as working poor was 6.5 percent; within this occupational category, working poor rates for farm workers and construction workers were 14.6 percent and 7.2 percent respectively.

The *Senate Report on poverty and financial hardship 2004* confirms that the rise in the number of working poor families is due to an increasing proportion of casual and low paid jobs in the Australian economy. There are now 2.2 million casual workers in Australia. More than one in four (27.3) working Australians are casual, and the number of men casually employed has more than doubled (142 percent) during the past decade. Many Australians now have low-paid jobs – almost nine in ten (87%) jobs created in the 1990s paid less than $26,000 a year.

In Turkey, the working poor are casual workers (45 percent), unpaid family workers (35 percent) and the self-employed (29 percent). Most casual workers and unpaid family workers are concentrated in the agricultural, construction and services sectors; the majority of self-employed workers are employed in casual jobs. In rural areas, the rates of working in casual jobs among the self-employed are 87.7 percent for men and 98.0 percent for women (Gundogan et al., 2005).

Sundaram and Tendulker (2002) show that in India between 1993–94 and 1999–2000, there was an increase in the number of working poor engaged in non-agricultural activities. This was true for the self-employed as well as for casual labourers. Even in the category of regular wage/ salaried employees in non-agriculture, there was an increase in the number of the working poor. Overall, excluding casual labourers in public works, there was an increase in the number of non-agricultural workers falling below the poverty line, figured at 1.7 million. Compared to workers in non-agriculture, workers in agriculture – whether self-employed, on regular wages/ salaries or casual labourers – showed a clear reduction in numbers below the poverty line. Casual labourers in agriculture below the poverty threshold declined by 0.8 million between 1993–94 and 1999–2000. This significant reduction in the headcount ratio among workers in rural India was a result of the strong growth in real wages experienced by casual labourers in rural India.

In terms of the broad activity composition of the working poor, the situation in 1999–2000 reflected the growing share of casual labourers in the total rural workforce. For casual labourers in both agriculture and non-agriculture, this increase was of the order of about 1 percentage point each. In the case of the working poor in India, the share of casual labourers, as a group increased from about 49 percent to 52 percent, with a 2 percentage point rise in the share of casual labourers in agriculture among the working poor. This was despite the sizeable reduction in the poverty ratios from 60.7 percent in 1993–1994 to 49.9 percent in 1999–2000 for this class of worker. With an unchanged share of regular wage/ salaried workers (a little over 3 percent), the rise in the share of casual labourers among the rural working poor was matched by a decline in the share of the self-employed as a group. However, reflecting the rise by a little over 1 million in the number of self-employed workers in non-agricultural activities located in poor households, the share of the self-employed in non-agriculture in the working poor increased by a little over one percentage point.

Unlike their rural counterparts, the self-employed as a group, rather than casual labourers, have the largest share of the working poor in urban India. With a share of a little under 34 percent (compared to 45 percent share of the self-employed), casual labourers have a distinctly lower share among the working poor. As one would expect in the urban context, workers in non-agricultural activities, with a 79 percent

share, dominate the working poor. Another significant feature of the activity composition of the working poor in urban India is the fact that regular wage/ salaried employees account for more than one-fifth of the working poor. In terms of changes over the 1990s, the number of the working poor in urban India increased by a little over 1.5 million, but in terms of the three broad activity groups – self-employed, regular wage/salaried employment and the casual labourer – there was virtually no change between 1993–94 and 1999–2000 in the activity composition of the working poor in urban India.

Chatterjee's (2007) study revealed that among regular wage earners, 66.7 percent were in the poor and vulnerable groups while 33 percent were from higher income groups. Among the self-employed, 74.7 percent were from the poor and vulnerable, and 25.3 percent from higher income groups. The study highlighted that 79 percent of unorganised casual non-agricultural women workers in the villages were illiterate. Poverty among casual non-agricultural workers in cities was higher by almost 60 percent, compared to villages; in addition, 87 percent of women in non-agricultural unorganised sectors worked for less than the stipulated minimum wages, and 85 percent of women agricultural workers were illiterate.

2.8 Labour market problems

Workers whose incomes fall below the poverty threshold typically experience one or more of the three labour market problems: unemployment, low earnings and involuntary part-time employment. As revealed in *A profile of the working poor 2003*, in the US during 2003, 80.1 percent of the working poor who usually worked full-time experienced at least one of these labour market problems. Low earnings continued to be the most common problem, with 62.1 percent subject to low earnings, alone or in combination with other labour market problems. About 37 percent experienced unemployment alone or in conjunction with other problems. Only 3.7 percent of the working poor experienced all three problems. Some 736,000 poor workers, or about 1 in every 5, did not experience any of the three labour market problems in 2003. Their poverty status may be associated with other factors, including short-term employment, some weeks of voluntary part-time work or a family structure that increases the likelihood of poverty.

2.9 Working poor and decent work

As can be seen from the above review, the primary focus of most studies of working poverty is the income dimension of poverty. Income poverty originates from low wages, intermittent employment, a lack of remunerative jobs and the like. Intermittent employment may be caused by slack in the labour market, or by family and social constraints which inhibit one's access to the labour market despite a willingness to work. It is generally understood incorrectly that income is the panacea for getting out of poverty. Income undoubtedly is a necessary condition, but is not a sufficient condition, for overcoming poverty. Since poverty is a multi-dimensional problem, addressing poverty through income is an incomplete approach. A worker may be vulnerable even if earning income above the poverty line.

This vulnerability can arise from job insecurity or a hazardous working environment, which may inflict disabling physical injuries. Maltreatment, abuse, a lack of opportunity for vertical or horizontal mobility, a lack of rights and privileges, and inadequate provision for pensions and other benefits may also contribute to vulnerability. These issues may be classified as 'capability poverty', following Sen (1999). In recent times, the ILO has shifted its focus on the issues of vulnerability, as reflected in its conventions on labour standards. The ILO's concept of 'decent work' highlights the broader definition of working poverty[9] that takes into account both income and capability poverty. Decent work refers to both adequate opportunities and remuneration for work (in cash or kind). Decent work also embraces safety at work and healthy working conditions. The social security component of decent work is intended to protect against the risk of losing income (Ghai, 2002).

At the International Labour Conference in 1999, the ILO stated through the report of the Director General that 'the primary goal of the ILO today is to promote opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity'. Decent work means

[9] The ILO (the International Labour Office) has already started paying attention to working poverty issues and in March 2004 published a document discussing working poverty among women (see ILO 2004).

productive work in which rights are protected, which generates an adequate income and offers adequate social protection. It also means sufficient work, in the sense that all should have full access to income-generating opportunities. It marks the high road to economic and social development, a road in which employment, income and social protection can be achieved without compromising workers' rights and social standards (ILO 1999). In order to achieve the ultimate goal of decent work, the ILO proposed four strategic objectives: the promotion of rights at work, employment, social protection and social dialogue.[10] The UN's Millennium Development Goals also articulate the objective of decent and productive employment for young people.

The conceptual framework of decent work proposed by the ILO covers six dimensions: opportunities for work, freedom of choice of employment, productive work, equity in work, security at work and dignity at work. In addition, the macroeconomic and social implications of decent work, which signify the development of the national economy and society and enhancement of labour outcome achieved through decent work, are emphasised (Anker et al., 2002). Based on the conceptual framework, the ILO elaborates 11 groups of indicators to measure decent work, including wages, hours, workplace, social dialogue and workplace relations (Anker et al., 2002).[11]

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[10] 1) All those who work have rights at work whether organised or not, and whenever work might occur, whether in the formal or the informal economy. Therefore, it includes all types of labour including unregulated wage workers, self-employed, home workers and workers in the voluntary sector. 2) Employment promotion not only refers to the expansion of employment opportunities in terms of quantity, but also means providing quality of working conditions in such areas as equity in employment opportunities, wages and industrial safety. 3) Although these mechanisms are perfectly in place, it does not meet all the criteria of decent work. Increased competition based on globalisation may result in drastic changes in industrial structure, and measures to prepare for unemployment should be in place too. In 'decent work', social protection against the vulnerability of labour is also stressed. 4) Basically, ensuring security of employment, promoting basic rights of labour and expanding employment opportunities are possible through sustained dialogue and compromise based on active participation of related entities of society. In this context, in order to achieve decent work social dialogue is a prerequisite.

[11] The eleven groups of indicators include employment opportunities, unacceptable work, adequate earnings and productive work, decent hours, stability and security of work, fair treatment in

There have been attempts to develop indicators of decent work; but quantification is problematic because it is predominantly a qualitative variable. Decent work captures not only the formal economy but also unregulated informal sectors. However, the most important economic component is access to a level of income adequate to escape from poverty, which ultimately must come from growth – growth in output, growth in productivity and growth in jobs.

2.9.1 Decent work situation in Bangladesh

The Constitution of the People's Republic of Bangladesh provides clear development directives which the government has to take into account when enacting laws, formulating development policies and devising strategies. The Constitution of Bangladesh provides for the citizens:

1. the right to work: that is, the right to guaranteed employment at a reasonable wage having regard to quantity and quality of work;
2. the right to reasonable rest, recreation and leisure;
3. the right to social security: that is to say, to public assistance, illness or disablement.

The Government of Bangladesh has enacted various laws and regulations in conformity with the principles stated in the Constitution. Most important among these laws are: Factories Act 1965, Workmen's Compensation Act 1923, Employment of Labour Act 1965, Maternity Benefit Act 1939, Roads Transport Workers Ordinance 1961, and Transport Act 1965.

While on paper these laws should provide the basis for determining working conditions including leave, wages, working hours, working environment, overtime

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employment and at work, safe work environment, social protection, combining work and family life, social dialogue and work place relations, and economic and social contexts of decent work. For instance, statistical indicators for employment opportunities include employment-population ratios and youth unemployment rates, and statistical indicators for fair treatment include occupational segregation by sex and female ratios in managerial jobs.

payments, probationary period, provident fund, compensations for termination including procedures for adjudication of grievances etc., in practice, various studies have identified departures from the ideal n some aspects of working conditions.

Employment in the RMG (Readymade Garments) sector is characterised by low wages, and there is little controversy over the fact that the decent work record of Bangladesh's RMG sector is far from satisfactory. In fact, Bangladesh has one of the lowest wage rates in the world (Abernathy et al., 2004). While the low wage rate reflects the large supply of workers relative to demand, what is striking is that the legal minimum wage for this sector has not increased in the past 10 years or so. Against this backdrop, applying the concept of decent work can greatly resolve these issues as it encompasses the quality of work and social environment along with wages provided.

The RMG industry is considered to be largely apathetic about the welfare of its workers. The industry is characterised by a wide variety of deprivations of women workers, which include, *inter alia*, lack of proper infrastructure and safety in workplaces, non-compliance with minimum wage requirements, wage discrimination, lack of provision of essential service benefits to workers, lack of housing facilities and lack of skill development and training opportunities (CPD 2003). Although women overwhelmingly constitute the workforce of the industry, provisions available in the sector are not gender sensitive at all. Crèches at the factory premises are rarely found, and there are many irregularities associated with granting maternity leave and benefits to eligible workers. Workplaces are congested and buildings unsafe, and there are insufficient toilets. Failure to issue any formal contract of employment, and non-compliance with overtime work standards and allowances are some of the more serious allegations. During the entire lifetime of the industry in Bangladesh, there has been very little improvement with regard to minimum basic provisions.

RMG is not the only sector with a bad record. There are many other formal and informal jobs where working conditions and labour standards need improvement. Nevertheless, being a sector contributing to 76 percent of the country's exports earnings, the conditions prevailing in the RMG industry have been catapulted into prominence through buyers' regular criticisms and various international pressure

groups' campaigns for improving working conditions. Buyers' threats to boycott procurement if the labour situation is not improved have made Bangladesh's business prospects bleak.

While on paper laws provide the basis for determining working conditions including leave, wages, working hours, working environment, overtime payments, probationary period, provident funds and compensation for termination including procedures for adjudication of grievances, in practice, working conditions in Bangladesh fall far short of ILO's Labour Standards. Rahman (1990) found many industrial units lacked adequate toilet facilities, necessary privacy for eating and cleaning or accommodation for rest and recreation. The workplaces were dirty, obnoxious, dark and suffocating. It was also observed that most of the garment workers were employed on a casual basis without a formal contract. Their wages were below the minimum wage, their hours of work too long, and without any break. They were found to work under threat and pressure, abuse and maltreatment, to receive unlawful and irregular overtime payments, and suffer indignity and other difficult circumstances. Sometimes workers were denied weekly holidays and leave, even on festivals.

2.9.2 Minimum wages and industrial relations in Bangladesh

The first wages policy in Bangladesh (then Pakistan) was formulated in 1955. In pursuance of this policy, the first Minimum Wages Laws (i.e., the Minimum Wages Act, 1957) was enacted, to regulate the wages of selected categories of industries only. A labour policy was declared in February 1959, replaced by the Minimum Wages Ordinance of 1961. The Minimum Wages Board, constituted under the provisions of this Ordinance, was empowered to recommend minimum wages for adult unskilled and juvenile workers who were not organised, or where no adequate mechanism existed for regulation of minimum wages. The new labour policy of the Government of Pakistan in 1969 delimited the functions of the Board, and the East Pakistan Minimum Wages (Fixation) Ordinance, 1969, was promulgated as a by-product of the labour policy under which wage rates were determined for establishments employing 50 or more workers.

After independence in 1971, the Government of Bangladesh constituted the first Industrial Workers Wages Commission in 1972. It recommended a uniform wage structure and fringe benefits for workers employed in the nationalised industries. Most of the recommendations of the Commission were accepted by the Government and implemented by legislation, namely the State-Owned Manufacturing Industries Workers' (terms and conditions of services) Act, 1973, with effect from July 1973. The Government, however, constituted a second Industrial Workers' Wages and Productivity Commission under the Chairmanship of a High Court Judge in April 1977 to review the existing wage structure and recommend a new one which was (a) commensurate with the modalities of piece rate versus working time; and (b) conducive to raising productivity. On the basis of the recommendations of the Commission, pay scales of all workers in the public sector were revised with effect from July 1977. A similar revision was implemented with effect from 1 July 1985.

The laws related to wages and fringe benefits enacted so far are:

1. Minimum Wages Act, 1957;
2. Minimum Wages Ordinance, 1961;
3. Industrial Relations Ordinance, 1969;
4. Newspaper Employees (Condition of Services) Act, 1974;
5. Inland Water Transport (Regulation of Employment) Act, 1965.

Rahman (1990) finds the implementation of both labour laws and minimum wages in almost all industrial enterprises disappointing. Non-unionisation of workers was identified as the main reason for non-implementation of minimum wages and labour laws. Paucity of relevant statistics on wages was a constraint against implementation of minimum wages in Bangladesh. Wage data, both cross-section and time-series, is an essential prerequisite for comparison and analysis of the wage situation prevailing in a particular industry at a particular time. The absence of a statistical cell in the Minimum Wages Board means that it cannot furnish the necessary information, even on levels and trends of wages in the manufacturing sector.

The Director, of the Department of Labour, under the Industrial Statistics Act, 1942 is authorised to collect data on i) employment and income, ii) living conditions including housing, water supply and sanitation, wages, hours of work, provident fund and other benefits and iii) labour disputes in industrial establishments. However, the data collected by the department are utterly inadequate to formulate wages policies. The department undertakes sample surveys and studies to fulfil specific purposes as and when required. As regards data on minimum wage implementation, there is no separate register to record the number of inspections conducted, the number of violations detected and the number of prosecutions lodged with the court for non-payment of minimum wages.

2.10 Conclusion

The working poor are those who work and belong to poor households. The term 'working poverty' includes two attributes: work and poverty. The issue of working poverty has been viewed at household and labour market levels. From the labour market's point of view, working poverty is the product of low wages, low productivity, intermittent employment, long hours of work, physically demanding work and so on. From the household perspective, poverty stems from such things as illiteracy, widowhood, lack of training, the structure of the household and unemployment of the household members. The number of working poor is on the increase across the international arena. Among the working poor, women are found to be poorer than men everywhere in the world, and households with many children are at greater risk of poverty than households with relatively few children. The prevalence of the working poor is more pronounced in single-parent households than double-parent households. Single parents with young children are more likely to be among the working poor. The working poor rate has been found higher in families with children than in families without children.

The prevalence of disability among household members increases the risk of poverty of the household. The extent of poverty is more severe in female-headed households relative to male-headed households. Illiterate persons are predominant in relatively poor households. Low-wage employees are more likely to be poor than other types of employees. Most of the working poor remain poor even though they work full-time and year-round, because of the low wages they earn.

In general, women are predominant among the low-paid employees. This over-representation has been found in both developed and developing countries. The relationship between low wages and poverty indicates that the risk of being poor is higher for people who earn low wages. Individuals employed in low-profile occupations are more likely to be among the working poor. Casual and part-time workers constitute most of the working poor because of their low and discontinued income. Apart from the income dimension of poverty, workers may be vulnerable to poverty due to job insecurity and hazardous working environments. Risk, maltreatment, lack of opportunity for upward mobility in the hierarchy, suppression, and a lack of rights and privileges also contribute to the poverty of workers.

CHAPTER 3: A PROFILE OF THE WORKING POOR

Here is thy footstool and there rest thy feet
where live the poorest, and lowliest, and lost.
When I try to bow to thee, my obeisance
cannot reach down to the depth where thy feet rest
among the poorest, and lowliest, and lost.
Pride can never approach to where
thou walkest in the close of the humble
among the poorest, and lowliest, and lost.
My heart can never find its way to where
thou keepest company with the companionless
among the poorest, and lowliest, and lost.

Rabindranath Tagore (1912): Gitanjali, pp.23

3.0 Introduction

This chapter presents a plain picture of the working poor in Bangladesh. The socioeconomic characteristics constituting the profile of the workers are analysed in this chapter, which examines how these characteristics shape the poverty of the workers and their households. Rates and levels of poverty vary substantially with such differences in household characteristics as structure, size and status; marital and employment status of household members; education and training; and access to social security. Households maintained by men and those by women are not equally well off for several reasons. Households with relatively large numbers of dependants, and those maintained by women, are likely to be poorer than those with fewer dependants. The economic condition of the single parent household is not the same as that of double parent households. Poverty is least evident among married couple households in which two or more persons are in the labour force.

The situation of households with one member unemployed should be better than when more than one member is unemployed; but the presence of any unemployed family members deepens the poverty of the entire household. Higher educational levels are associated with lower levels of poverty. Young workers have a relatively high poverty rate due in part to their lower earnings and higher unemployment. At

the household level, the high dependency burden of children and disabled members is a major reason for poverty. Taking care of dependants swallows a major portion of labour time, particularly of the female household members.

Land is a valuable asset to the poor. Along with land, livestock are an important asset to the poor, particularly in the agricultural sector. Households possessing land or livestock are less likely to be poor than those who without these assets. Empirical evidence suggests that the probability of being poor is less for the farmers with livestock than for others. There is a gender dimension in respect to asset ownership as women are less likely to own assets than are men. All these issues are examined empirically in this chapter.

The consumption patterns of households reveal that relatively poor people spend the lion's share of their income on food items. As a result, poor households invest less in education and training for their members: female members in particular get little chance for education and training, on the assumption that they will be taking care of children in the future. In turn, the low literacy of women has an adverse economic and demographic impact on the household. Workers characterised by low income and inadequate employment are unable to afford three meals a day. Protein-rich food such as meat, milk or eggs are beyond their reach, and many suffer from malnutrition and disease.

Poverty may be reduced to some extent if the household income is supplemented by social security payments. Although the government provides social security for its people, the coverage is very narrow and the benefit is meagre. In the absence of supplementary income, the poverty of a household persists. Taking into consideration the issues that cause and perpetuate poverty, this chapter provides a real-life snapshot of the working poor who constitute the vast majority of the poor people in Bangladesh.

3.1 Socioeconomic and demographic characteristics

3.1.1 Age and sex composition of the household heads

The size of our sample is 660 households, of which 248 (37.58 percent) are rural and 412 (62.42 percent) are urban. There are 660 respondents, corresponding to 660

households. The respondents are 454 (68.79 percent) males and 206 (31.21 percent) females. They represent 2984 household members, of which 1495 (50.10 percent) are males and 1489 (49.90 percent) are females. As the sample size is small, the sample characteristics may not be comparable with population characteristics. It should be mentioned that the respondents (household heads) are all workers; their ages lie between 15–65 + years.

Table 3.1 shows that fifty percent of the respondents' ages lie between 15–34 years. This implies that half of the respondents belong to a highly productive age group. The proportion of respondents whose age lies between 35–44 years is 28 percent, while those belonging to 35–54 years account for 21 percent only. Roughly one percent of respondents were over 65. The sex ratio has been estimated at 1.00, which means that male and female members are even across the sample households (Table 3.2). The average size of households in the study area is estimated at 4.52, which is below the national average (5.01). This may be due to underreporting household members, or because, as they are poor, they tend to keep their family size small.

Table 3.1: Distribution of Respondents by Age and Gender

Age group (in yrs.)	**Sex**		**Total**
	Male	Female	
15 – 24	102	27	129
	(79.07)	(20.07)	(100.00)
	(22.47)	(13.11)	(19.55)
25 – 34	139	62	201
	(69.15)	(30.85)	(100.00)
	(30.62)	(30.10)	(30.45)
35 – 44	121	64	185
	(65.41)	(34.59)	(100.00)
	(26.65)	(31.07)	(28.03)
45 – 54	54	44	98
	(55.10)	(44.90)	(100.00)
	(11.89)	(21.36)	(14.85)
55 – 64	33	7	40
	(82.50)	(17.50)	(100.00)
	(7.27)	(3.40)	(6.06)
65+	5	2	7
	(71.43)	(28.57)	(100.00)
	(1.10)	(.97)	(1.06)
Total	**454**	**206**	**660**
	(68.79)	**(31.21)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.

Source: Calculated from data obtained from the sample survey.

Table 3.2: Male-Female Ratio of Household Members by Age

Age group (in yrs.)	No. of males	No. of females	Ratio
Up to 4	179	202	0.88
5 - 14	353	334	1.05
15 - 24	348	318	1.09
25 - 34	202	225	0.90
35 - 44	172	172	1.00
45 - 54	143	157	0.91
55 - 64	77	66	1.16
65 +	21	15	1.40
Total	**1495**	**1489**	**1.00**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

3.1.2 Marital status of respondents

In order to capture the marital status of respondents we classified them into five categories: single, married, widowed, divorced and separated. Data indicate that 76 percent of the respondents are married. The unmarried respondents account for only 16 percent. The widowed, divorced and the separated together stand at 8 percent (Table 3.3). The sex ratio is 0.98 in the rural area and 1.00 in the urban area. To analyse age structure of the respondents, we lumped single, widowed, divorced and separated respondents altogether and broadly termed it single. The married respondents remain as they were. This was done for simplicity of analysis. Table 3.4 shows that the ages of 68 percent of the married respondents lie between 25–44 years. In contrast, 60 percent of the single respondents' ages fall between 15–24 years. At a relatively old age, married persons are predominant compared to the singles. Both males and females tend to get married even at old age for reasons of personal services, financial security etc. The females are dependent on their spouses for maintenance, while the males depend on their spouses for personal services as they grow old.

Table 3.3: Distribution of Respondents by Marital Status and Gender

Marital status	**Sex**		**Total**
	Male	Female	
Single	98	10	108
	(90.74)	(9.26)	(100.00)
	(21.59)	(4.85)	(16.36)
Married	354	144	498
	(71.08)	(28.92)	(100.00)
	(78.79)	(69.90)	(75.45)
Widowed	1	25	26
	(3.85)	(96.15)	(100.00)
	(.22)	(12.14)	(3.94)
Divorced	0	8	8
	(.00)	(100.00)	(100.00)
	(.00)	(3.88)	(1.21)
Separated	1	19	20
	(5.00)	(95.00)	(100.00)
	(.22)	(9.22)	(3.03)
Total	**454**	**206**	**660**
	(68.79)	**(31.21)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Table 3.4: Distribution of Respondents by Age and Marital Status

Level of education	**Marital Status**		**Total**
	Single	Married	
15 – 24	97	32	129
	(75.19)	(24.81)	(100.00)
	(59.88)	(6.43)	(19.55)
25 – 34	28	173	201
	(13.93)	(86.07)	(100.00)
	(17.28)	(34.74)	(30.45)
35 – 44	19	166	185
	(10.27)	(89.73)	(100.00)
	(11.73)	(33.33)	(28.00)
45 – 54	13	85	98
	(13.27)	(86.73)	(100.00)
	(8.02)	(17.07)	(14.85)
55 +	5	42	47
	(10.64)	(89.36)	(100.00)
	(3.09)	(8.43)	(7.12)
Total	**162**	**498**	**660**
	(24.55)	**(75.45)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

3.1.3 Education and training of household heads

The respondents are ordinary workers with low levels of education and virtually no training. They come from poor families living in remote rural areas. Their families could not afford to education them; and when they started growing up they were compelled to work to support their families. The location of schools at distant places coupled with logistical problems, inadequate reading materials and backward communication kept them uneducated. Data indicate that 59 percent of the respondents never attended school. This is an alarming figure for any society. It

should not be attributed to intellectual inability; rather, it is lack of opportunity which has forbidden them from being educated. Table 3.5 shows that only a quarter of the respondents got the chance to study up to primary level (class I–V). The proportion of respondents attaining high school level education was only 15 percent.

Table 3.5: Distribution of Respondents by Level of Education and Gender

Level of education	**Sex**		**Total**
	Male	Female	
Never attended school	244	143	387
	(63.05)	(36.95)	(100.00)
	(53.74)	(69.42)	(58.64)
Class (I–V)	134	40	174
	(77.01)	(22.99)	(100.00)
	(29.52)	(19.42)	(26.36)
Class (VI–VIII)	56	16	72
	(77.78)	(22.22)	(100.00)
	(12.33)	(7.77)	(10.91)
Class (IX–X)	19	6	25
	(76.00)	(24.00)	(100.00)
	(4.18)	(2.91)	(3.79)
HSC +	1	1	2
	(50.00)	(50.00)	(100.00)
	(.22)	(.49)	(.30)
Total	**454**	**206**	**660**
	(68.79)	**(31.21)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

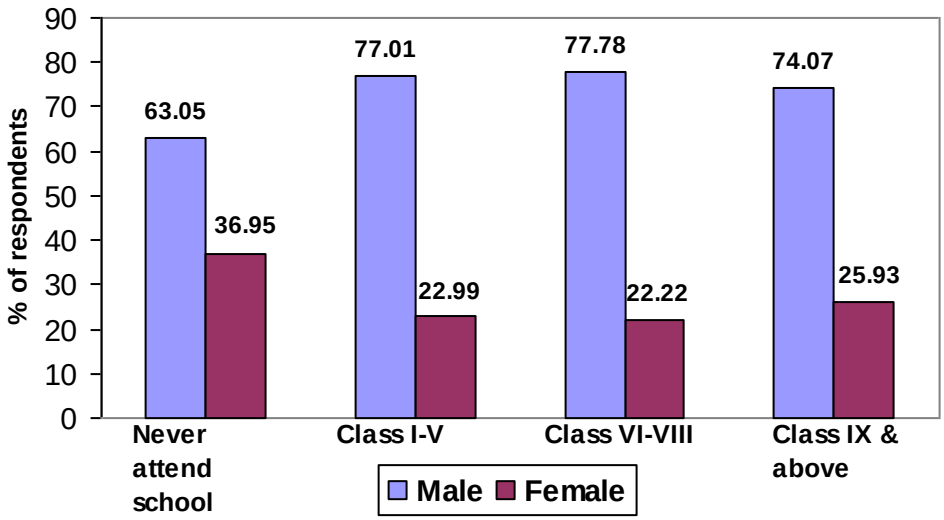
Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey

The number of respondents who never attended schools is overwhelmingly high and the majority have no formal education. Among this group of respondents the proportion of males is relatively high compared to that of females. The same trend continues for other levels of education (class I–HSC +) where females are underrepresented compared to males (Figure 3.1).

Some who do not have any formal education are capable of reading and writing, learning at home from family members, friends and relatives. Among this category

of respondents 5 percent could write (at minimum their name and at maximum a letter) and 3 percent could read (elementary books, letters etc.). The proportion of respondents who could sign their names was 56 percent, while those who were unable to do so comprised 35 percent (Table 3.6).

Figure 3.1 : Percentage Distribution of Respondents by Level of Education and Gender



Source: Drawn from data obtained from the sample survey.

Table 3.6: Reading and Writing Capacity of Respondents who Never Attended Schools (by Age)

Age group (in yrs.)	**Reading and writing capacity**					**Total**
	Can read	Can write	Can not read	Sign only	Can not sign	
15 – 24	1	4	0	17	4	26
	(3.85)	(15.38)	(.00)	(65.38)	(15.38)	(100.00)
	(9.09)	(21.05)	(.00)	(7.76)	(2.92)	(6.72)
25 – 34	4	4	1	68	40	117
	(3.42)	(3.42)	(.85)	(58.12)	(34.19)	(100.00)
	(36.36)	(21.05)	(100.00)	(31.05)	(29.20)	(30.23)
35 – 44	4	5	0	81	40	130
	(3.08)	(3.85)	(.00)	(62.31)	(30.77)	(100.00)
	(36.36)	(26.32)	(.00)	(36.99)	(29.20)	(33.59)
45 – 54	2	4	0	39	32	77
	(2.60)	(5.19)	(.00)	(50.65)	(41.56)	(100.00)
	(18.18)	(21.05)	(.00)	(17.81)	(23.36)	(19.90)
55 – 64	0	2	0	11	17	30
	(.00)	(6.67)	(.00)	(36.67)	(56.67)	(100.00)
	(.00)	(10.53)	(.00)	(5.02)	(12.41)	(7.75)
65 +	0	0	0	3	4	7
	(.00)	(.00)	(.00)	(42.86)	(57.14)	(100.00)
	(.00)	(.00)	(.00)	(1.37)	(2.92)	(1.81)
Total	**11**	**19**	**1**	**219**	**137**	**387**
	(2.84)	**(4.91)**	**(.26)**	**(55.59)**	**(35.40)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

A very few respondents were found to have had training, although generally the level of training was worse than their level of education. About 96 percent of the respondents had no training, while the proportion of illiterate respondents was 59 percent. The remaining 4 percent respondents were found to have had training (Table 3.7). The proportion of respondents having formal as well as informal training turned out to be 2 percent each. Data indicate that females lag far behind males in terms of training received.

The areas of formal training are motor vehicle servicing, motor driving, welding, plumbing, wiring, cotton spinning; the areas of informal training are block printing, cycle and rickshaw repairing, tailoring, masonry, bread baking, poultry rearing and so on. The respondents, being poor, could not afford the cost of training. Besides, they lacked information regarding availability of training and were unable to decide which training would best suit them. Those who had received training reported that they could not utilise the training they received. They were of the opinion that training was of no use to them.

Table 3.7: Respondents' Training Status by Gender

Type of training	**Sex**		**Total**
	Male	Female	
Formal	8	5	13
	(61.54)	(38.46)	(100.00)
	(1.76)	(2.43)	(1.97)
Informal	16	–	16
	(100.00)		(100.00)
	(3.52)		(2.42)
No training	430	201	631
	(68.15)	(31.85)	(100.00)
	(94.71)	(97.57)	(95.61)
Total	**454**	**206**	**660**
	(68.79)	**(31.21)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

3.1.4 Education and training of household members

The level of education and training of the household members (including the respondents) paints a dismal picture of their human capital. Data indicate that 50 percent of household members never attended school in their life. Only 31.43 percent had a primary level of education, while those attaining secondary education accounted for 17.40 percent. Interestingly, the members with levels of education at higher secondary and above made up less than 1 percent. Among the members who never attended schools, females constituted 55.72 percent and males 44.28 percent. Of those who had formal education, the proportion of females was less than that of males. For example, among the respondents having a primary level of education, the proportion of females was 42 percent, while it was as high as 58 percent for males (Table 3.8).

Table 3.8: Distribution of Household Members (5 years+) by Level of Education and Gender

Level of education	**Sex**		**Total**
	Male	Female	
Never attended school	581	731	1312
	(44.28)	(55.72)	(100.00)
	(44.15)	(56.80)	(50.40)
Class (I–V)	475	343	818
	(58.07)	(41.93)	(100.00)
	(36.09)	(26.65)	(31.43)
Class (VI–VIII)	176	142	318
	(55.35)	(44.65)	(100.00)
	(13.37)	(11.03)	(12.22)
Class (IX–X)	43	55	98
	(43.88)	(56.12)	(100.00)
	(3.27)	(4.27)	(3.76)
SSC or equivalent	26	11	37
	(70.27)	(29.73)	(100.00)
	(1.98)	(.85)	(1.42)
HSC or equivalent	11	3	14
	(78.57)	(21.43)	(100.00)
	(.84)	(.23)	(.54)
Graduate or equivalent	4	2	6
	(66.67)	(33.33)	(100.00)
	(.30)	(.16)	(.23)
Total	**1316**	**1287**	**2603**
	(50.56)	**(49.44)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

The training intake of their household members was not dissimilar to that of the respondents. Only 2 percent of the household members were found to have training (Table 3.9). Among the trained persons, the proportion of females was relatively less than males. The women received training mostly from informal sources, in areas like tailoring, block printing, homemade food processing, poultry rearing and yarn dyeing. Males were trained in motor driving, automobile servicing, welding, carpentry, masonry, rickshaw repairing, cattle rearing etc.

Table 3.9: Household Members' Training Status by Gender

Type of Training	**Sex**		**Total**
	Male	Female	
Formal	10	6	16
	(62.50)	(37.50)	(100.00)
	(1.04)	(.63)	(.84)
Informal	18	7	25
	(72.00)	(28.00)	(100.00)
	(1.87)	(.73)	(1.30)
No training	935	940	1875
	(49.87)	(50.13)	(100.00)
	(97.09)	(98.64)	(97.86)
Total	**963**	**953**	**1916**
	(50.26)	**(49.74)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

3.1.5 Impact of female education on household size

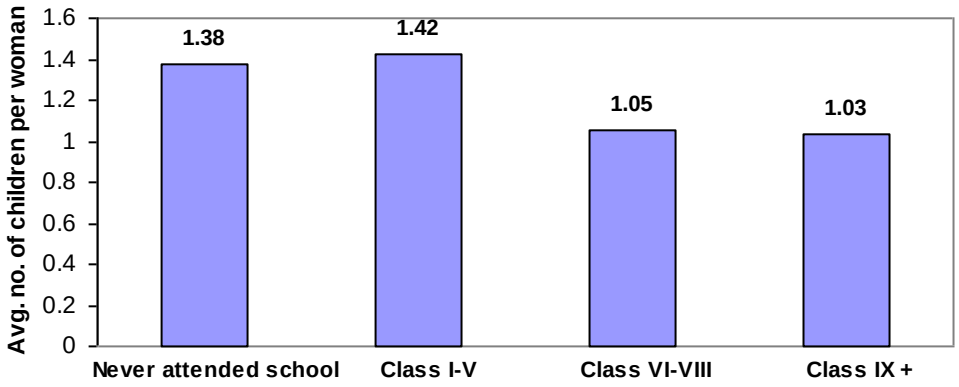
There is discernible impact of education on population almost everywhere in the world. In this chapter we have tried to capture the impact of female education on household size. Data indicate that as the level of female education increases, the average number of children per woman decreases except for those who are educated up to primary level. The average number of children per woman declines from as high as 1.38 for women who never attended school to 1.03 for those who have class IX and above education (Table 3.10). The relationship between female education and the number of children per woman is thus negative, with the correlation coefficient being -0.83. The relationship between female education and the number of children per woman is shown in Figure 3.2.

Table 3.10: Level of Education and Average Number of Children per Woman

Level of education	No. of married women	No. of children	Average no. of children/woman
Never attended school	487	675	1.38
Class I–V	198	281	1.42
Class VI–VIII	77	81	1.05
Class IX+	30	31	1.03

Source: Calculated from data obtained from the sample survey.

Figure 3.2 : Distribution of Average Number of Children per Woman by Level of Education



Source: Drawn from data obtained from the sample survey.

It has been found that educated married females have fewer children on average compared to educated married males. Considering those with class I–V level of education, the average number of children per male member is 1.54 while the corresponding figure for female members is 1.45. For class VI–VIII, the ratio is almost the same for both males and females; but for the highest level of education (class IX and above) the ratio is 1.35 for males and for females 0.57 (Table 3.11).

Table 3.11: Level of Education of Household Members and Average Number of Children per Married Male and Female

Level of education	**No. of married males**	**No. of children**	**Average no. of children per male**
Class I–V1	134	207	1.54
Class VI–VIII	56	59	1.05
Class IX+	20	27	1.35
	No. of married females	**No. of children**	**Average no. of children per female**
Class I–V	40	58	1.45
Class VI–VIII	16	17	1.06
Class IX+	7	4	0.57

Source: Calculated from data obtained from the sample survey.

We have so far examined the impact of female education on household size. Along with this, we have examined the impact of the highest level of education of household members on household size. Data indicate that the household size uniformly decreases with the increase of the highest level of education, from class I–V up to class IX–X. Household size showed an upward trend at the SSC (Secondary School Certificate) level of education but afterwards showed a downturn (Table 3.12**).** If we divide household members into male and female we find discernible a difference in household size resulting from the highest level of education achieved. The household size is found to be relatively small for the highest-level educated females, compared with the corresponding males. Data indicate that except for class VI–VIII, at all levels of education the household size for educated females is smaller than for educated males (Table 3.13 and 3.14). The implication for policy is that if women are educated, it works as a deterrent to population growth. *The higher the level of female education, the lower will be the population growth.*

Table 3.12: Highest Level of Education of Respondents and Household Size

Level of Education	Total Number of Respondents	Total Number of HH Members	HH size
Class (I–V)	174	783	4.50
Class (VI–VIII)	72	320	4.44
Class (IX–X)	18	76	4.22
SSC or equivalent	7	33	4.71
HSC or equivalent	2	7	3.50
Total	**273**	**1219**	**4.47**

Source: Calculated from data obtained from the sample survey.

Table 3.13: Highest Level of Education of Male Respondents and Household Size

Level of Education	Total Number of Respondents	Total Number of HH Members	HH size
Class (I–V)	134	613	4.57
Class (VI–VIII)	56	248	4.43
Class (IX– X)	12	54	4.50
SSC and above	8	37	4.62
Total	210	952	4.53

Source: Calculated from data obtained from the sample survey.

Table 3.14: Highest Level of Education of Female Respondents and Household Size

Highest Level of Education	Total Number of Respondents	Total Number of HH Members	HH size
Class (I–V)	40	170	4.25
Class (VI–VIII)	16	72	4.50
Class (IX– X)	6	22	3.67
SSC and above	1	3	3.00
Total	**63**	**267**	**4.24**

Source: Calculated from data obtained from the sample survey.

3.1.6 Household status and household size

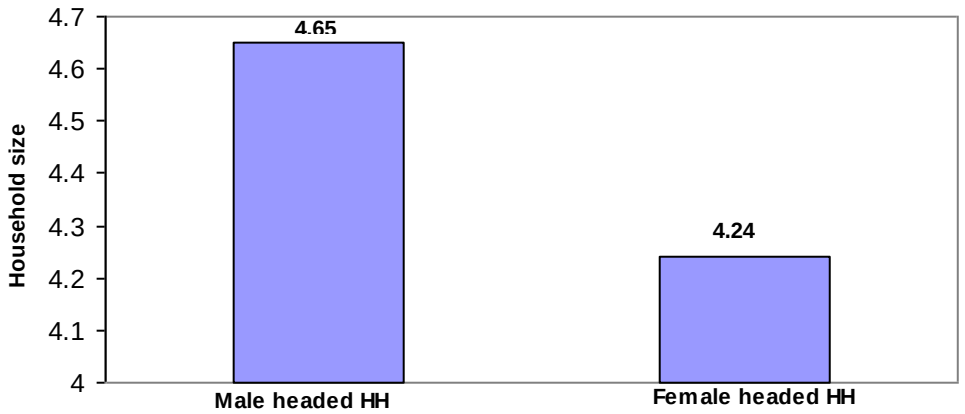
In a patriarchal society, the household size is mainly determined by the male household head. The reproductive decision is solely taken by males, no matter what the opinion of females is. The issue of gender in determining the reproductive behaviour of the household is important, particularly in formulating polices to control population in a densely populated country like Bangladesh. It is against this backdrop that the issue of household status has been analysed, to determine if there is any discernible impact of household status on the household size. The findings in this regard are interesting and revealing. The household size has been found to be smaller for female-headed households than for male-headed households. Data indicate that the size of female-headed households is 4.24, while the figure is 4.65 for male-headed households (Table 3.15 and Figure 3.3). This implies that the female heads are aware of the population problem and the advantages of small households.

Table 3.15: Status of Household and Household Size

Status of Household	Number of households	Total household members	Average household size
Male-headed household	454	2111	4.65
Female-headed household	206	873	4.24

Source: Calculated from data obtained from the sample survey.

Figure 3.3 : Household Size by Status of Household



Source: Drawn from data obtained from the sample survey.

3.1.7 Household structure and income

Household income to a great extent depends on household structure, and particularly whether it is a single parent household or double parent household. The single parent household emerges after death of a spouse or separation. The lack of an earning member is one of the reasons for the low levels of income of single parent households. Unless the individual income is substantially high and there are other sources of income, it is unlikely that single parent households can be better off than double parent households. In particular, if the household is headed by a female the chance of being poor remains very high. Because of the low levels of education and training, and the lack of mobility, it is difficult for single parent households to raise their level of income enough to cross the poverty threshold. Data indicate that per capita monthly income of single parent households is Taka 765.60 (AUD1= Tk. 72.00 as of March 2011) while the corresponding figure for the double parent household is Taka 627.32 (Table 3.16).

Table 3.16: Household Structure and Per Capita Income (in Taka)

Household Structure	No. of households	Total monthly income	Total HH members	Per capita income
Single parent household	179	551826.57	721	765.60
Double parent household	481	1783579.85	2251	792.35

Source: Calculated from data obtained from the sample survey.

3.1.8 Household status and income

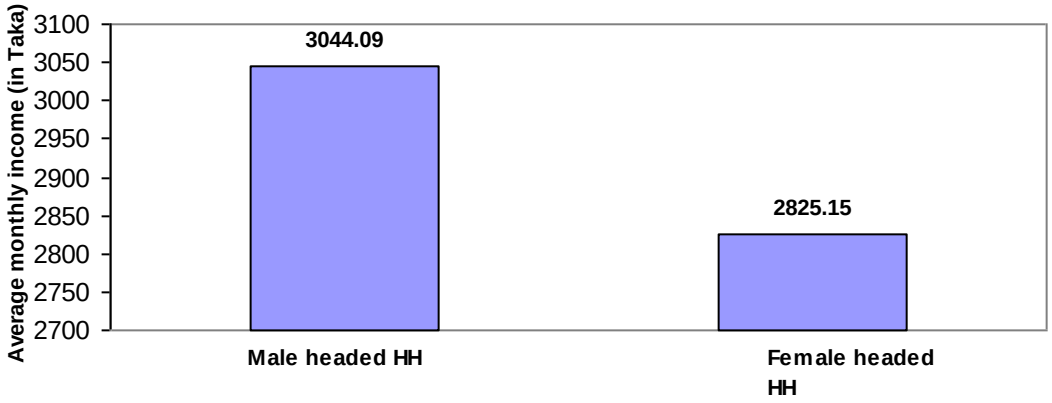
Female-headed households are an integral part of Bangladeshi society, which is predominantly patriarchal. Factors forcing women to oversee a household are found in the broad structure of the economy and the society. Widowhood, divorce, separation or abandonment, coupled with the absence of adult male members to support the family, are the common reasons for women becoming household heads. In Bangladesh, only a few studies (Rahman, 1980; Alam, 1985 and Arif, 1988) focus on issues related to female-headed households.

Rahman (1980) reported that only 5.7 percent households were headed by females. The Bangladesh Population Census Sample Survey 1982 estimated this figure to be 15 percent, while Bangladesh Labour Force Survey 1984–85 recorded the figure at

7.2 percent. In our sample, there were 206 (31.0 percent) female-headed and 454 (69.0 percent) male-headed households. The number of female-headed households in the sample area is relatively high when compared with national figures. One reason may be that our sample constitutes poor people only, and the presence of female heads is more pronounced among the poor. On the other hand, the figures in the census or national sample survey might be underreported. Female-headed households had only 27 percent male members of productive age (15–64 years) while the proportion is 35 for male-headed households. The incidence of poverty is striking among the female-headed households compared to male-headed households. Rahman et al. (2009) found that among Bangladeshi male-headed households 38 percent were chronically poor; the corresponding figure for female-headed households was 58 percent.

In our study the female-headed households have been found to be relatively poor compared with the male-headed households. Data indicate that the average monthly income of female-headed households is lower than that of male-headed households (Figure 3.4). The average monthly income of the male-headed household is Tk. 3044.09, while the figure for the female-headed households is Tk. 2825.15 (Table 3.17). Rahman et al. (2009) estimated the average monthly income at Tk. 3871.20 for male-headed households and Tk. 2818.0 for female-headed households ($P<0.05$). They observed that the incidence of poverty and vulnerability was more pronounced among female-headed households. Their findings reveal that the proportion of chronically poor among female-headed households (47 percent) differs widely from that of the male-headed households (40 percent). Similarly, female-headed households tend to be more highly represented (57 percent) in the extreme vulnerability category than male-headed households.

Figure 3.4 : Average Monthly Income (in Taka) by Status of Household



Source: Drawn from data obtained from the sample survey.

The report, 'Analysis of poverty trend project' issued by the Bangladesh Institute of Development Studies (BIDS) reveals that the monthly income of the female-headed household was 55 percent of that earned by the average household. The report further noted that the overwhelming majority (96 percent) of female-headed households were poor and that no female-headed households were among the 3 percent of non-poor households. These findings are plausible because female-headed households lack income from the spouse and women have limited access to labour market; even when there is access they work for lower wages. The essential features of such households are meagre assets, low education, low skill and hence low incomes.

Besides imposing inadequate income and employment opportunities, their family duties severely constrain women's participation in the labour market. Their income earning opportunities are limited and their mobility is restricted. As such, female-headed households are characterised by low incomes and negligible assets. Traditional values and sex-role expectations are biased against women in rural areas because rural people in Bangladesh are largely influenced by traditional values (Larson, 1978; Willits, 1973). The predominance of traditional values means that women are expected to remain at home and take care of their husbands and children. These women have low education and limited access to skill development training that would enable them to participate in the labour market (Marini and Brinton, 1984). Thus, female-headed households inevitably have lower incomes than male-

headed households. The low level of income in turn contributes to the risk of the household of being poor.

Table 3.17: Status of Household and Level of Income (in Taka)

Status of household(HH)	No. of HHs	Total monthly income (in Taka)	Average monthly income (in Taka)
Male headed HHs	454	1382016	3044.09
Female headed HHs	206	581980	2825.15

Source: Calculated from data obtained from the sample survey.

3.1.9 Dependency burden and household income

The age structure of household members is a good indication of the number of dependants within a household. The proportion of children aged 14 years and under was found to be about 36 percent. About one third of these are infants (aged up to 4 years). This figure is undoubtedly high for any society. The economically active population (persons aged 15–64 years) is 58 percent, while the aged population (65+ years) account for 1 percent only (Table 3.18). The remarkably high proportion of children indicates the heavy dependency burden of households, which in turn affects its wellbeing in terms of reduced labour force participation and, hence, income.

Women with young children have to spend a significant portion of their labour time rearing and caring for them – in fact, they have to oversee them round the clock. This results in unemployment of womenfolk, and loss of income. It has been found that households with infants have lower incomes than those without infants. Data indicate that the average monthly income of the households without infants is Tk. 3110.85, but Tk. 2810.63 for households with infants (Table 3.19). Similarly, the per capita monthly income is lower for households with infants than for households without infants.

Table 3.18: Distribution of Household Members by Age and Gender

Age group (in years)	**Sex**		**Total**
	Male	Female	
Up to 4	179	202	381
	(46.98)	(53.02)	(100.00)
	(11.97)	(13.57)	(12.77)
5 – 14	353	334	687
	(51.38)	(48.62)	(100.00)
	(23.61)	(22.43)	(23.02)
15 – 24	348	318	666
	(52.25)	(47.75)	(100.00)
	(23.28)	(21.36)	(22.32)
25 – 34	202	225	427
	(47.31)	(52.69)	(100.00)
	(13.51)	(15.11)	(14.31)
35 – 44	172	172	344
	(50.00)	(50.00)	(100.00)
	(11.51)	(11.55)	(11.53)
45 – 54	143	157	300
	(47.67)	(52.33)	(100.00)
	(9.57)	(10.54)	(10.05)
55 – 64	77	66	143
	(53.85)	(46.15)	(100.00)
	(5.15)	(4.43)	(4.79)
65 +	21	15	36
	(58.33)	(41.67)	(100.00)
	(1.40)	(1.01)	(1.21)
Total	1495	1489	2984
	(50.10)	(49.90)	(100.00)
	(100.00)	(100.00)	(100.00)

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Table 3.19: Nature of Household and Level of Income (in Taka)

Nature of household (HH)	No. of HHs	No. of female HH members	Total monthly HH income	Average monthly HH income	Monthly Per capita income
HHs with infants (0–4 yrs.)	297	1366	834757.11	2810.63	611.09
HHs without infants (0–4 yrs.)	363	1618	1129238.55	3110.85	697.92

Source: Calculated from data obtained from the sample survey.

This study also examined the economic condition of the households having small and large numbers of children. For simplicity of estimation, we classified the households into two broad groups: households with up to 2 children (small households) and households with more than 2 children (large households). Interestingly, we found significant differences in income between the two groups. The level of income was higher for small households (up to 2 children) than for large households (more than 2 children). Data indicate that per capita monthly income of the households with up to 2 children is Tk. 665.70, and 533.28 for households with more than 2 children (Table 3.20).

Table 3.20: Household Size and Level of Income (in Taka)

Household size	Number of HHs	Total HH member	Total monthly income	Per capita monthly income
Up to 2 children	366	1595	1061798	665.70
More than 2 children	115	657	350370	533.28

Source: Calculated from data obtained from the sample survey.

We found that households with large numbers of children experience relatively low levels of income compared to households with few children. This implies that the number of children is a determinant of income. We also considered if income was a determinant of the number of children in the household. We found married female wage earners to have fewer children than married female non-wage earners. Data indicate that the average number of children per married female wage earner is 1.28,

and 1.34 for married female non-wage earners (Table 3.21). This implies that women wage earners are conscious of the deleterious effects of large family size and try to keep the family small. If there are few children in a family, the participation of the women in the labour market increases, followed by increased income. The findings therefore suggest that the size of children determines income, and vice versa. The policy implication is that if women are provided with employment it will work as a check on rapid population growth.

Table 3.21: Average Number of Children per Married Female Wage and Non-wage Earners (15 years +)

Category of wage earners	Total number	Average number of children per female
Female wage earners	372	1.28
Children for female wage earners	363	–
Female non-wage earners	410	1.34
Children for female non-wage earners	590	–

Source: Calculated from data obtained from the sample survey.

3.1.10 Employment situation at household level

Unemployment as well as underemployment are the major problems in Bangladesh. Bangladesh achieved spectacular growth in the past, averaging about 4–5 percent per annum. The growth nevertheless could not create enough employment opportunities for the bulk of the labour force. Unemployment among the active labour force remains rampant. The incidence of unemployment is manifested at both the household and national level. Table 3.22 below presents a picture of the unemployment situation at household level in the study areas. In the rural area (agricultural sector), one third of the households have one family member unemployed, while households with two members unemployed stand at 3 percent. In the urban area, households with one member unemployed appear most in the manufacturing sector (51 percent) and least in service sector households (19.0 percent). Of households with two members unemployed, the manufacturing sector holds the highest proportion, accounting for about 50 percent. It appears that in the urban area, manufacturing sector households experience the problem of unemployment more than other sectors under study.

A large number of workers employed in the informal sector do not have full-time jobs: that is, many of them work fewer than 8 hours a day. Even though these people are not jobless or openly unemployed, their underemployment reflects an underutilisation of human resources with obvious implications for economic growth, and, perhaps more importantly, the very low level of income associated with underemployment, which has an important bearing on poverty. The proportion of the labour force with regular full-time wage employment in the formal sector has always

been very small compared to the vast numbers demanding jobs. The remaining workers are employed in the rural and urban informal sectors, where terms and conditions of employment are not institutionally determined. Lacking adequate legal protection, workers labour in conditions of risk and uncertainty. Unpaid family workers suffering from the lack of adequate employment opportunities dominate the employment scenario, particularly in rural Bangladesh.

Table 3. 22: Households Having Unemployed Members by Sector and Area

Households with unemployed members	**Sector**					**Total**
	Agriculture	Manufacturing	Transport	Construction	Service	
Rural:						
No. of households with one member unemployed	80	–	–	–	–	80
	(100.00)					(100.00)
	(90.91)					(90.09)
No. of households with two members unemployed	8	–	–	–	–	8
	(100.00)					(100.00)
	(9.09)					(9.09)
Total	**88**	**–**	**–**	**–**	**–**	**88**
	(100.00)					**(100.00)**
	(100.00)					**(100.00)**
Urban:						
No. of households with one member unemployed	–	44	11	15	16	86
		(51.16)	(12.79)	(17.44)	(18.60)	(100.00)
		(93.62)	(91.67)	(93.75)	(94.12)	(93.48)
No. of households with two members unemployed	–	3	1	1	1	6
		(50.00)	(16.67)	(16.67)	(16.67)	(100.00)
		(6.38)	(8.33)	(6.25)	(5.88)	(6.52)
Total		**47**	**12**	**16**	**17**	**92**
		(51.09)	**(13.04)**	**(17.39)**	**(18.48)**	**(100.00)**
		(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Apart from unemployed members, households include members who participate in household activities without pay. This type of household member is known as an unpaid family worker. Unpaid family workers emerge from lack of employment opportunities; they are particularly visible in rural areas. This type of worker includes housewives, divorced or separated family members, widows, old parents, school dropouts and the like. They contribute virtually nothing to the additional income of the household because of their zero marginal productivity and depend on the earning members of the household for their maintenance, putting pressure on the total household income. Male unpaid family workers assist the wage earners in their income-generating activities, while female unpaid family workers perform household activities such as cooking, child caring, housekeeping, home gardening, collecting firewood, procuring drinking water, rearing livestock/poultry and so on.

In the rural area, only agricultural households include unpaid family workers. Of the total agricultural households, 33 percent had one unpaid family worker; the proportion of households having two unpaid workers was 6 percent. In the urban area, of total households having one unpaid family worker, manufacturing sector households accounted for the highest proportion (53 percent) and transport sector households the lowest, at 7 percent. Similarly, among households having two workers unpaid, manufacturing sector households turn out have the most (50.0 percent) followed by service sector households accounting for 25.0 percent (Table 3.23). It appears that the number of unpaid family workers is high in both rural and urban areas.

Undoubtedly, unpaid family workers contribute to the poverty of the household in terms of their failure to participate in productive employment and generate income. They share the income of the bread winners, lowering the average household income. If we distribute total household income among its members, we find that households with unpaid family workers are worse off than those without unpaid family workers. Data indicate that per capita income of the households with unpaid family workers is Tk. 630.73, and as high as Tk. 669.77 for those without unpaid family workers (Table 3.24). This implies that this type of worker is a constraint to household prosperity and thus an important determinant of poverty at the household level.

Therefore, from the policy point of view, the issue needs to be examined in a broader perspective before suggesting any measures to address household poverty.

Table 3.23: Households Having Unpaid Family Workers by Sector and Region

Households with unpaid family workers	**Sector**					**Total**
	Agriculture	Manufacture	Transport	Construction	Service	
Rural:						
with one unpaid worker	83	–	–	–	–	83
	(100.00)					(100.00)
	(97.65)					(97.65)
with two unpaid workers	2	–	–	–	–	2
	(100.00)					(100.00)
	(2.35)					(2.35)
Total	**85**	**–**	**–**	**–**	**–**	**85**
	(100.00)					**(100.00)**
	(100.00)					**(100.00)**
Urban:						
with one unpaid worker	–	67	9	19	32	127
		(52.76)	(7.09)	(14.96)	(25.20)	(100.00)
		(94.37)	(90.00)	(95.00)	(94.12)	(94.07)
with two unpaid workers	–	4	1	1	2	8
		(50.00)	(12.50)	(12.50)	(25.00)	(100.00)
		(5.63)	(10.00)	(5.00)	(5.88)	(5.93)
Total	**–**	**71**	**10**	**20**	**34**	**135**
		(52.59)	**(7.41)**	**(14.81)**	**(25.19)**	**(100.00)**
		(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Table 3.24: Level of Income (in Taka) of Households with and without Unpaid Family Workers

Type of households (HHs)	No. of HHs	No. of HH Members	Total HH Income	Per Capita Income
a. HHs with unpaid family workers	180	871	549374	630.73
b. HHs without unpaid family workers	480	2112	1414560	669.77

Source: Calculated from data obtained from the sample survey.

3.1.11 Seasonality and consumption

Our rural study area is poverty stricken, and the majority of the people live below the poverty line. This area is affected by *monga,*[12] the traditional problem of seasonal poverty which appears in the Ashwin–Kartik (September–October) months of the Bengali calendar year. Bangladesh has discernible seasonality in income and employment. Its agricultural sector is characterised by three crop seasons, based on three kinds of rice – *Aus, Aman and Boro.* While these three crops cover the whole year, there is a period of virtual economic inactivity during the lean period (Rahman, 1995).The non-farm sector is not large enough to absorb the unemployed labour force, mostly agricultural wage labourers or small farmers.

Seasonality in agriculture is a fact of agrarian life. Households mostly draw income more from farm than from non-farm sources, and so are vulnerable to seasonality. Income co-varies with seasonality: a decrease in seasonal income lowers household consumption, which thus also varies seasonally (Chambers et al., 1981; Chaudhury and Paxson, 2001; Dercon and Krishnan, 2000). The people experience acute deprivation during the pre-harvest season of *aman* rice. During *monga*, households suffer food crises due to lack of adequate employment and income. In order to cope they adopt means such as dis-saving, distress sales of assets, receipts from safety-net

[12] Monga refers to 'mora kartik' extending over the September-October months of the year. The epicentre of monga is the North Western part of Bangladesh, particularly the greater Rangpur district which consists of Rangpur, Gaibandha, Kurigram, Lalmonirhat and Nilphamari districts. In the locality monga means lack of job; it does not necessarily mean shortage of food. It is rather a lack of purchasing power, income and employment for a large section of the people (Sen, 1981).

programs, advance sales of labour or crops, borrowing from formal and informal sources or migration to other parts of the country (Alderman and Paxson, 1992; Besley, 1995; Jalan and Ravallion, 1999). People miss meals when they are unable to manage *monga* through any of these shifts.

Households who cannot supplement their income from other sources are bound to starve for a notable period of time. Khandker (2009) in a study based on Household Income and Expenditure Surveys (HIES) of 2000 and 2005 shows that average household income and consumption are much lower during *monga* than in other seasons, and that seasonal income markedly influences seasonal consumption. He found food consumption to fall sharply during the pre-harvest *monga* period. This indicates that seasonality in agriculture results in severe shortfalls in food and, perhaps starvation, without recourse to other means to cope with the crisis. The crop income is very much seasonal, and follows a similar pattern of seasonality in consumption. It was found that total income falls short of total consumption during the *monga* period. It falls short of consumption during other seasons as well, particularly during the pre-*monga* and to some extent the post-*monga* periods.

Rural people of Bangladesh commonly eat three meals a day, but during lean seasons households cannot afford adequate food. They suffer from acute food shortages particularly in the pre-harvesting periods in the months of *Ashar* (mid June–mid July), *Sraban* (mid July–mid August) and *Kartik* (mid October–mid November). Asking about the availability of food in the household we got a stark picture of the dietary situation in the study area, with 7 percent of households reporting that they could afford one meal, 81 percent two meals and 12 percent three meals a day. This is the picture of food intake by households in the *monga* area. Of the total households, 63 percent reported going to bed with dinner; those going without dinner accounted for 37 percent. Among those who went to bed without dinner, 91 percent did so intermittently and 9 percent regularly throughout the *monga* period.

The food crisis during the *monga* period is due to lack of jobs, shortfalls in income and rises in the price of basic foodstuffs such as rice, wheat and lentils, particularly before the sowing period. In rural Bangladesh, people suffer from food shortage for roughly 3 to 4 months a year. These months are spread over *Bhadra* to *Augrahayan* (roughly from mid-August to November). The respondents identified the month of

Kartik (mid-October to mid-November) as the most distressful. *Kartik* is traditionally called *Mora* (dead) *Kartik*, a situation of no jobs, inadequate income, high prices for food items, lower consumption and malnutrition preceding the *aman* rice harvest season.

3.2 Widowhood and poverty

Women become widowed because of longer life expectancies or the premature deaths of their husbands. Older women without a spouse are more likely than men to face economic insecurity. Upon the loss of their spouse, they become helpless, particularly in a country like Bangladesh where there are virtually no social security benefits, and what there are are not enough for survival. They are in a parlous situation, especially if they have been stay-at-home wives who were dependent on their husband's income. Given their age, they may lack the education or skills required to compete for jobs. They may be unwilling or unable to seek or find employment, and they are likely to face discrimination in the labour market (Morgan 1981). Younger widows may be unprepared to cope with the reduced income resulting from the death of the spouse. This loss of a spouse and his economic resources is associated with the decline in the economic wellbeing of widows (Burkhauser et al., 1991; Zick and Smith, 1991). Widowhood has been associated with loss of income and increased risk of poverty.

The death of their husbands results in lower financial status for wives, many of whom become impoverished following bereavement. Research findings suggest that two-fifths of widows fall into poverty at some time during the five years following the death of their husbands. Widowers also suffer a decline in economic wellbeing, albeit to a lesser degree than their female counterparts (Zick and Smith, 1991). Despite some policies and programs for widows, widowhood remains a powerful risk factor for transition into poverty. Earlier research work (Bound et al., 1991; Hurd and Wise, 1987; Sevak et al. 2003; Morgan, 1981) find that many wives face reduced living standards after their spouse’s death.

In order to examine the relationship between widowhood and poverty in the USA, Morgan (1981) used the National Longitudinal Survey (NLS) sample of mature women (aged 30–44 in 1967) to analyse how widowhood changes subsequent

financial resources. When the cross-sectional incomes of widows were compared to those of married women, Morgan's (1981) results indicated that widows had a higher probability of being poor. Holden et al. (1986) have shown from the Retirement History Survey (RHS) that the poverty rate for widows hovers around 30 percent in any given year during their 10-year period of analysis, and the risk of widows being poor at some point during this time was over 50 percent. Zick and Smith (1991) examined the incidence of poverty using the Panel Study of Income Dynamics (PSID), and concluded that widowed households had a higher risk of experiencing economic hardship than did households in the general population. Hurd and Wise (1987) further found that the death of the husband was a strong predictor of poverty of his relict. These findings indicate that the transition to widowhood is, itself, associated with an increase in poverty rates.

A higher likelihood of poverty among households with widowed heads supports the argument that widower hood serves as a negative shock to many households, pushing them into greater vulnerability with adverse implications on their ability to earn an adequate income and achieve economic wellbeing (Amis, 1994; 2000; Lustig, 2000; World Bank, 2001). This group of women has a considerably higher incidence of poverty relative to others, with less access to resources, services and employment opportunities. In rural areas, widows lead very isolated, powerless and oppressed lives. The household itself isolates them from other members of the family, and society treats them as outcasts. Isolation and social exclusion lead to deterioration in physical and mental wellbeing. Poor adjustment to being widowed, therefore, can often be attributed to socioeconomic deprivation. This is especially apt to be the case among members of disadvantaged racial or ethnic groups, whose recovery may be impeded by discrimination and inequitable social policies that affect their health and financial circumstances.

Widowhood often leads to changes in lifestyle and living arrangements. Most often, the people living alone are women, because of their low probability of remarriage. Compared to elderly married couples, widows and widowers are much more likely to live in poverty. There are also barriers to remarriage for the widowed. Dependent children may limit the opportunities of their widowed parents to meet potential mates

and develop relationships with them. Older children may oppose remarriage out of concern for their inheritance.

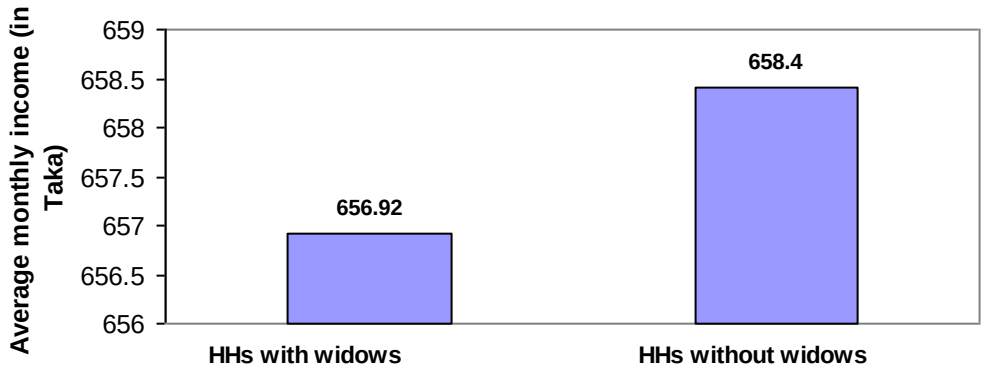
Widowhood is considered to be a contributing factor to household poverty because of widows' limited access to the labour market and their low levels of income. If they cannot find employment they become dependent on other earning members, thus reducing the economic wellbeing of the household. Data indicate that the average monthly income of households without widows is higher (Tk. 3014.59) than that of households with widows (Tk. 2775.03; see Table 35). Moreover, the average monthly per capita income of household members has been found to be marginally higher for households without widows than for the others (Figure 3.5). This indicates that the presence of widows in households has a tendency to lower household income. It would not be unjust to say that, among others, widowhood is a factor keeping households at a relatively low level of income and a high risk of poverty.

Table 3.25: Widowhood and Income (in Taka) of Households

Type of household (HH)	No. of HHs	No. of HH members	Total monthly HH income	Average monthly HH income	Average monthly per capita income
HHs with widows	107	452	296928.21	656.92	2775.03
HHs without widows	553	2532	1667068.27	658.40	3014.59

Source: Calculated from data obtained from the sample survey.

Figure 3.5: Average Monthly Income (in Taka) of the Households with or without Widows



Source: Drawn from data obtained from the sample survey.

3.3 Disability and poverty

People with disability are often among the poorest of the poor, more likely than the rest of the population to live in poverty. There is relatively little information about the prevalence and incidence of disability anywhere in the world, and Bangladesh is no exception in this regard. Data on disability *per se* in developing countries are rough estimates based on casual censuses and surveys. The information thus obtained is inadequate for developing programs and policies to address the problem. In 1981, WHO estimated the number of disabled people in developing countries at 10 percent of the population. A 1995 ESCAP paper suggests that global prevalence is probably lower than 10 percent and cites a 1992 UNDP estimate of disabled people in developing countries of around 5 percent of the population (Helander, 1995). Another study estimated disabled people to constitute 15–20 percent of the poor in developing countries (Elwan, 1999). The UN's Disability Statistics Compendium,

published in 1990 indicates that the percentage of disabled persons ranges from 0.2 percent to 20.9 percent of the population.

In Bangladesh, disability has not been included in any routine data collection system except the national censuses of 1981 and 1991. A survey on the prevalence of disability in 1994 by the Bangladesh Bureau of Statistics shows 10.62 disabled people per 1000 population. This figure is considerably lower than the commonly used international estimates. WHO estimates that there are 7–10 percent of disabled people in any population, depending on the inclusiveness in the definitions and classifications of disabilities (Barbotte et al., 2001).Among children below 18 years of age the prevalence tends to be about half of the rate for the whole population. Mental and intellectual disabilities are assumed to represent 1–1.5 percent of the total population in any country (Barbotte et al., 2001).

Disability and poverty cause and reinforce each other. It is a two-way relationship – disability adds to the risk of poverty, and conditions of poverty increase the risk of disability. Poor nutrition, dangerous working and living conditions, limited access to health care, poor hygiene, bad sanitation, war and conflict, natural disasters: all create disabilities. Poor households do not have adequate food, basic sanitation and access to preventive health care. Malnutrition can cause disability as well as increased susceptibility to other disabling diseases.

Costs resulting from disability make an individual or household economically worse off. Additional costs include extra medical expenses, specialised equipment and services, and costs incurred by care providers. Exclusion and marginalisation reduce opportunities for the disabled to contribute productively to the household and the community, and increase the risk of poverty. Attitudinal barriers, as well as physical barriers such as lack of adequate or appropriate transportation, physical inaccessibility, and lack of learning opportunities can affect access to education and employment opportunities, further reducing opportunities for income enhancement.

A large proportion of surveys indicate that higher disability rates are associated with higher illiteracy, poor nutritional status, higher unemployment rates and lower occupational mobility. On average, disabled people receive less education and are likely to leave school with fewer qualifications than others (Barnes, 1991). The UN

Compendium of 1990 reports that in Hong Kong, according to the 1981 census, people aged 15–24 years who never attended school constituted less than 4 percent of the population, compared with over 25 percent of disabled people in the same age group. In Canada, the 1983–84 survey showed that about 6 percent of the total population aged 15–24 had attended eight years of schooling or less, while the proportion for the disabled group was 17 percent. In Bahrain, 27 percent of all persons aged 10 and over recorded in the 1981 census were illiterate, but in the same age group of the disabled population, the proportion was 77 percent.

The International Labour Office (1984) points out that the unemployment rate for disabled people in industrialised countries is twice or even three times more than that of non-disabled people. Employment of disabled people is roughly half the rate of non-disabled people. When disabled people are employed, there is a greater tendency for them to be under-employed relative to their levels of training (Metts and Oleson, 1993). Data on the employment pattern of the disabled people are scarce for developing countries. Based on available data, SIDA (1995) reports that only 16 percent of the disabled population in Mauritius is engaged in economic activity; in Botswana the figure is 34 percent.

Disabled people tend to work longer hours than non-disabled people, and their lower take-home pay reflects lower rates of pay rather than fewer hours worked. They are more likely to have a poor physical working environment and poor promotion prospects; and they are at greater risk of becoming unemployed, and for longer periods. They are more likely to withdraw early from the labour force through voluntary redundancy and early retirement. The probability of a disabled person being employed decreases with the severity of the disability.

Society displays a stigmatising attitude towards disabled people. This is the basis for discrimination against people with disabilities, and impedes their inclusion and participation in society. The most marginalised of the marginalised are women and girls with disabilities. Women are often described as doubly disabled, by their gender as well as by their impairment. A woman with a given impairment is often more disabled than a man with the same impairment, because she cannot carry out the many practical tasks of being a wife, which is an important source of social identity. Her chances of marriage and other social aspirations are much smaller than a man's

even though their impairment may be the same. Experience indicates that children with disabilities are often neglected by their families: they get less food, clothing and care than their peers, and their health and education needs are often ignored. Abuse of children with disabilities is not uncommon. Some people are of the opinion that disability is a curse or punishment for previous deeds.

The link between disability and poverty cannot be ignored. Disabled people have lower education and income levels than the rest of the population. They are more likely to have incomes below poverty levels, and less likely to have savings and other assets than the non-disabled population. These findings hold for both developing and developed countries. Whether the link is weak or strong depends on the resource position of the household, earnings of the household members, policies of the government to support disabled persons and the like. Disability, particularly of the head of the household, exacerbates the poverty of the whole family because of associated increased expenses, inadequate income of the household head and lack of opportunities given social exclusion. Their disability limits earning opportunities and affects their standard of living. The able-bodied members of the household may have to spend a significant portion of their productive time taking care of the disabled members. As a result they get little opportunity to search for remunerative employment. The income thus forgone may be substantial, particularly where the labour market is stringent.

In our survey, we found 93 disabled persons (both physically and mentally handicapped), constituting 3 percent of the total household members under study (Figure 3.6). About 14 percent of the households contained disabled persons, implying that these households are at a greater risk of being poor. Data reveal that the per capita income of the members of the households without disabled persons is higher than that of the others (Table 3.26). Empirical evidence indicates that disabled people have lower incomes than non-disabled people. In a 1997 survey, the average earnings of disabled persons were found to be only 50 percent of those of non-disabled persons in the US. Data from 1990 show that, in general, median family income is substantially lower if a household head has disability, while income is still affected, although much less, by the presence of other family members with disabilities (La Plante, 1990). Glendinning and Baldwin (1988) in reference to the

UK, note lower earnings of disabled workers and show that earnings decrease as the severity of disability increases. Disabled people are less likely to have the kind of pension or the level of support that will adequately protect them from poverty in old age.

Analysis of disability statistical data in the US shows that the poverty rate for partnered families increased from 7.8 percent to 9.5 percent when one partner had a disability and to 14.2 percent when two partners had disabilities (La Plante, 1996). A 1993 study by the Policy Studies Institute in the UK found that one sixth of disabled people were poor; the proportion increased to almost a half when the extra disability costs were considered (Berthoud et al. 1993). Recent research in rural India finds that a higher proportion of households with self-reported disabled members is below the poverty line, has lower total assets, smaller land holdings, and greater debt, than households without disabled members (Harris-White, 1996). In some communities, the disabled are regarded as the most disadvantaged.

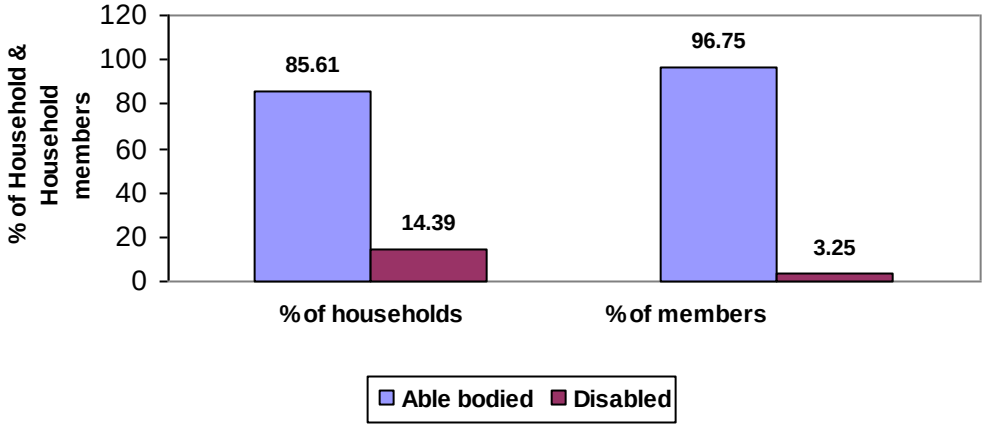
From the above analysis it may be concluded that disability is strongly linked to poverty. Regarding disability–poverty linkage we find a very few exceptions in the existing literature apart from Rahman et al. (2009), who do not find a strong relationship between disability and poverty. Otherwise, most of the empirical evidence suggests a strong relationship between disability and poverty. This is plausible because the disabled lack the physical ability to actively participate in the labour market, have low levels of education, lack income, have limited marketable skills and have difficulty accessing safety-net programs. Moreover, they face discrimination almost everywhere in the society, and in some cases are denied fundamental rights like equal access to education, health, employment and other public benefits. Given all this, disabled people are likely to be exposed to poverty.

Table 3.26: Disability and Income of Household Members

Type of Household	Total number of household members	Total monthly household income (in Taka)	Per capita monthly income (in Taka)
Households having able members	2535	1672576	659.79
Households having disabled members	449	284490	633.60
Total	**2984**	**1957066**	**674.45**

Source: Calculated from data obtained from the sample survey.

Figure 3.6 : Percentage Distribution of Households and Household Members Having Able Bodied and Disabled Members



Source: Drawn from data obtained from the sample survey.

3.4 Living conditions

3.4.1 Housing structure

Housing is an important indicator of living standards. In our survey, the dwellings of the household heads were considered such an indicator. Other indicators such as ownership of the dwelling, access to drinking water and electricity, and types of cooking fuel were also noted. Data show discernible variations in the housing of the surveyed households across rural and urban areas (Table 3.27 and Figure 3.7). About 45.0 percent of the respondents were found to live in *Kutcha* (thatch) houses (earthen floor, straw/bamboo walls and bamboo roof). At national level this figure is 40.0 percent (BBS 2005). Our survey findings reveal that in rural areas 47.0 percent of

respondents live in *kutcha* houses, and the figure for urban area is 43.0 percent. At national level, in rural areas about 44 percent of household heads live in houses with thatched walls, and 22 percent in houses with thatched roofs. In urban areas, 5.08 percent of the structures are made of thatch, both walls and roof (BBS 2005).

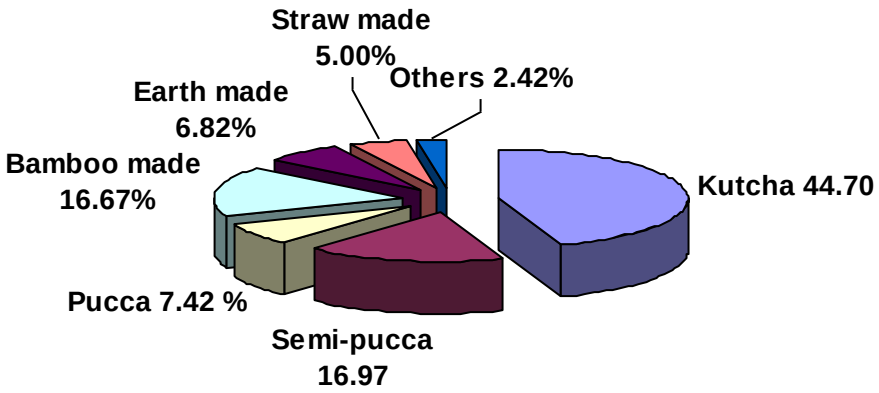
In our study area, the *semi-pucca* (brick wall and tin roof) and bamboo-made houses (earthen floor, straw walls, and bamboo roof) accounted for 17.0 percent each. 7.42 percent of the respondents were found to live in *pucca* houses (concrete structures); the corresponding figure at national level is 6.4 percent (BBS, 2005). The housing structure is consistent with the economic condition of our respondents. Our respondents are all poor and unable to afford brick-built houses. With their limited income they live in houses that incur the least cost. For the same reason, our urban respondents were found to live in slums and squats where the housing was relatively cheap.

Table 3.27: Housing Structure by Rural and Urban Areas

Structure	**Area**		**Total**
	Rural	Urban	
Kutcha	117	178	295
	(39.66)	(60.34)	(100.00)
	(47.18)	(43.20)	(44.70)
Semi-pucca	1	111	112
	(.89)	(99.11)	(100.0-)
	(.40)	(26.94)	(16.97)
Pucca	0	49	49
	(.00)	(100.00)	(100.00)
	(.00)	(11.89)	(7.42)
Bamboo made	51	59	110
	(46.36)	(53.64)	(100.00)
	(20.56)	(14.32)	(16.67)
Earth made	45	0	45
	(100.00)	(.00)	(100.00)
	(18.15)	(.00)	(6.82)
Straw made	32	1	33
	(96.97)	(3.03)	(100.00)
	(12.90)	(.24)	(5.00)
Other	2	14	16
	(12.50)	(87.50)	(100.00)
	(.81)	(3.40)	(2.42)
Total	**248**	**412**	**660**
	(37.58)	**(62.42)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Figure 3.7 : Percentage Distribution of Housing Structure



Source: Drawn from data obtained from the sample survey.

The location and structure of housing indicates the poverty status of the households. These are considered more as affects than as characteristics of poverty. Studies show that in urban areas, people with low incomes tend to concentrate on low-cost housing lacking necessary infrastructure and utilities. A severe income inadequacy for a significant portion of a population often leads to slum formation with temporary housing and almost nonexistent social services (Oberai, 1993). The finding is that living in temporary houses increases the poverty status, while living in permanent dwelling houses decreases the poverty status of households (Wagle, 2006).

Ownership of a house is a good indicator of the economic wellbeing of households. In the study area, 60.0 percent of the respondents lived in their own houses, and those living in rented houses accounted for 30.0 percent (Table 3.28 and Figure 3.8); but ownership of the dwelling did not indicate solvency of the respondents. This is because a majority of the poor built their houses on *khash* land (government owned property), some of them received houses from the government or non-government organisation or some generous persons, free of cost. Most of the respondents had lost their homesteads due to distress sales or migration. Because of their lack of income and employment opportunities, or because they are the victims of natural disasters, many people leave their own place to new places, and take shelter in other people's property. In our study area, about 11 percent of respondents were found to live in

rent-free houses which had been given to them by close relatives or persons living abroad.

3.4.2 Source of utilities

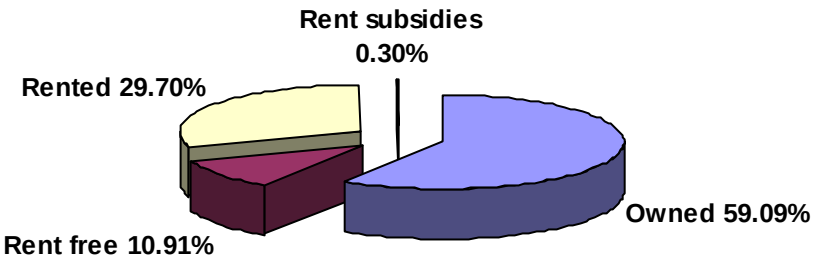
There are two sources of lighting in the study area: electricity and kerosene oil. The majority of the respondents' source of lighting was electricity (61.0 percent) followed by kerosene oil (39 percent). Macro level data indicate that only 31.2 percent of households in the whole country have electricity connections. Electricity as a source of lighting is a good indicator of infrastructural development, particularly in Bangladesh. In the urban area, electricity is more readily available, and cheaper than kerosene oil, but the picture is quite different in rural areas. The proportion of rural respondents who have access to electricity is less than 1.0 percent, while the proportion is as high as 99.0 percent in the urban area (Table 3.29 and Figure 3.9). At national level, in the urban area, 80.4 percent of households have electricity connections; this proportion is 18.7 percent for the rural area (BBS, 2005).Electricity in rural areas is supplied by the Rural Electrification Board (an autonomous body of the government). The capacity of the Board to supply electricity falls far short of demand. Access to electricity largely depends on affordability and availability. The rural poor, constrained by their purchasing power, can hardly afford electricity consumption.

Table 3.28: Ownership of Dwelling in Rural and Urban Areas

Pattern of ownership	**Region**		**Total**
	Rural	Urban	
Owned	218	172	390
	(55.90)	(44.10)	(100.00)
	(87.90)	(41.75)	(59.09)
Rent free	29	43	72
	(40.28)	(59.72)	(100.00)
	(11.69)	(10.44)	(10.91)
Rented	1	195	196
	(.51)	(99.49)	(100.00)
	(.40)	(47.33)	(29.70)
Rent subsidies	0	2	2
	(.00)	(100.00)	(100.00)
	(.00)	(.49)	(.30)
Total	**248**	**412**	**660**
	(37.58)	**(62.42)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Figure 3.8 : Percentage Distribution of Households by Ownership of Dwelling House



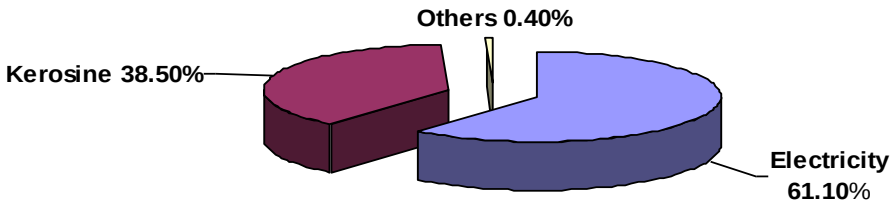
Source: Drawn from data obtained from the sample survey.

Table 3.29: Sources of Lighting in Rural and Urban Areas

Source of lighting	**Region**		**Total**
	Rural	Urban	
Electricity	3	400	403
	(.70)	(99.30)	(100.00)
	(1.20)	(97.10)	(61.10)
Kerosene oil	243	11	254
	(95.70)	(4.30)	(100.00)
	(98.00)	(2.70)	(38.50)
Others	2	1	3
	(66.70)	(33.33)	(100.00)
	(.80)	(.20)	(.50)
Total	**248**	**412**	**660**
	(37.60)	**(62.40)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Figure 3.9 : Percentage Distribution of Households by source of Lighting



Source: Drawn from data obtained from the sample survey.

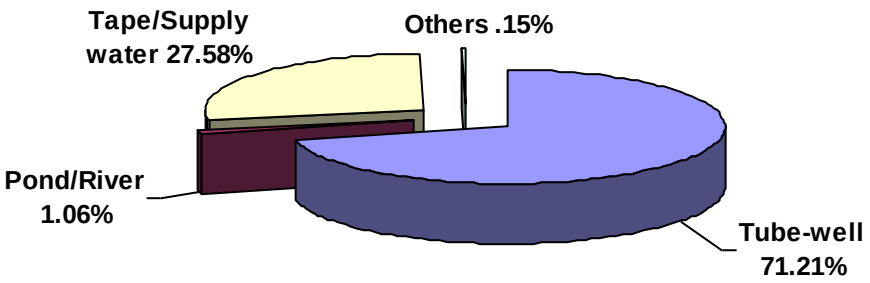
The sources of drinking water in Bangladesh are tube-well, pond, canal, river, and tap. Of these sources, the tube-well is predominant. Our survey findings reveal that an overwhelming majority (71 percent) of the respondents use tube-well as their source of drinking water; the corresponding figure at national level is 90.0 percent (BBS 2005). In the study area, among that using tube-well water, 52.0 percent were rural and 48.0 percent urban (Table 3.30 and Figure 3.10). In general tap water is considered safe, but there is no such facility in the rural area. As a result, rural people largely depend on tube-wells for safe drinking water. Only 1.0 percent of the respondents reported that they drank surface (pond/river) water.

Table 3.30: Sources of Drinking Water in Rural and Urban Areas

Source of drinking water	**Region**		**Total**
	Rural	Urban	
Tube well	243	227	470
	(51.70)	(48.30)	(100.00)
	(97.98)	(55.10)	(71.21)
Pond/river	5	2	7
	(71.43)	(28.57)	(100.00)
	(2.02)	(.49)	(1.06)
Tap/supply water	0	182	182
	(.00)	(100.00)	(100.00)
	(.00)	(44.17)	(27.58)
Others	0	1	1
	(.00)	(100.00)	(100.00)
	(.00)	(.24)	(.15)
Total	**248**	**412**	**660**
	(37.58)	**(62.42)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Figure 3.10 : Percentage Distribution of Households by source of Drinking water



Source: Drawn from data obtained from the sample survey.

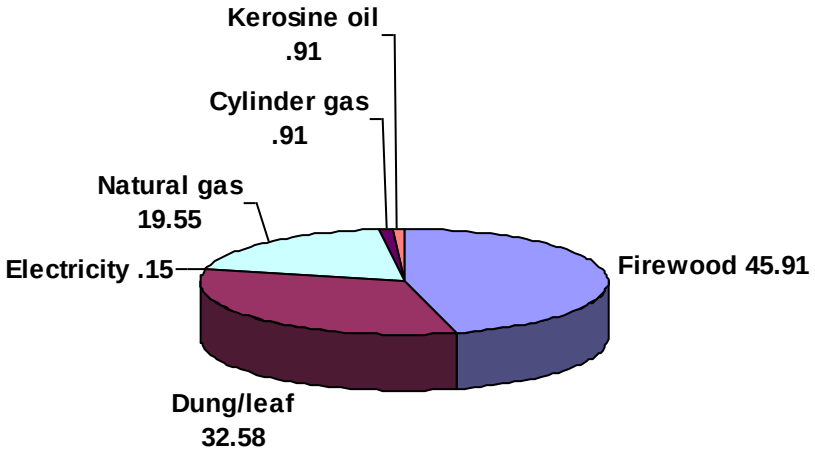
Firewood is the most commonly used cooking fuel, particularly in rural Bangladesh. Our study area was not an exception in this regard. Most of the respondents (46.0 percent) used firewood. The least used fuel was electricity at less than 1.0 percent. The use of dung/leaf/straw and natural gas as means of fuel turned out to be about 33.0 percent and 20.0 percent respectively. Cylinder gas and kerosene oil were each used by about 1.0 percent of the respondents (Table 3.31 and Figure 3.11). It is interesting to note that the proportion of respondents using firewood is higher in urban areas (74.0 percent) than rural areas (26.0 percent). This may be because our urban respondents mostly lived in slums and squats, as mentioned earlier. Slums and squats not registered with local government agencies (i.e. City Corporation/ municipalities) are not provided with electricity connections as a matter of policy. Although electricity is available in the urban area, most of the respondents cannot afford it.

Table 3.31: Sources of cooking Fuel in Rural and Urban Areas

Source of fuel for cooking	**Region**		**Total**
	Rural	Urban	
Firewood	79	224	303
	(26.07)	(73.93)	(100.00)
	(31.85)	(54.37)	(45.91)
Dung/leaf/straw	168	47	215
	(78.14)	(21.86)	(100.00)
	(67.74)	(11.41)	(32.58)
Electricity	1	0	1
	(100.00)	(.00)	(100.00)
	(.40)	(.00)	(.15)
Natural gas	0	129	129
	(.00)	(100.00)	(100.00)
	(.00)	(31.31)	(19.55)
Cylinder gas	0	6	6
	(.00)	(100.00)	(100.00)
	(.00)	(1.46)	(.91)
Kerosene oil	0	6	6
	(.00)	(100.00)	(100.00)
	(.00)	(1.46)	(.91)
Total	**248**	**412**	**660**
	(37.58)	**(62.42)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Figure 3.11 : Percentage Distribution of Households by Source of Fuel for Cooking



Source: Drawn from data obtained from the sample survey.

3.4.3 Relationship between living conditions and economic wellbeing

In our study we looked for any relation between living conditions and the economic wellbeing of households. The economic condition of the households was measured by average monthly household (HH) income. First, we examined how the housing structure was linked to the economic condition of a household. The average monthly income of the respondents living in *pucca* houses was found to be Tk. 3721.47, followed by those living in semi-*pucca* houses (Tk. 3611.34). In contrast, the average monthly income of respondents living in earth-made houses was lower, at Tk. 2297.00 (Table 3.32). As indicated by the data, the respondents living in *pucca* and semi-*pucca* houses were economically better off than those living in the other types of houses. This may be because the inhabitants of *pucca* and semi-*pucca* houses were mainly manufacturing workers who were better off than other categories of workers. There is the possibility that their income was being supplemented by other sources or overseas remittances.

Table 3.32: Housing Structure and Average Monthly Household Income (in Taka)

Housing structure	**No. of HHs**	**Percent of HH**	**Average monthly HH income**
Kutcha	295	44.70	2757.25
Semi-pucca	112	16.97	3611.34
Pucca	49	7.42	3721.47
Bamboo-made	110	16.67	2929.46
Earth-made	45	6.82	2296.91
Straw-made	33	5.00	2697.42
Others	16	2.42	3073.00
Total	**660**	**100.00**	**2975.75**

Source: Calculated from data obtained from the sample survey.

Secondly, we examined the relationship between ownership of the dwelling and the economic condition of the household. Table 3.33 shows that the average monthly income of respondents living in rented houses was the highest (Tk. 3515.18), followed by those living in rent free houses (Tk. 2878.670. It is interesting to note that the average monthly income of the respondents living in their own houses was less (Tk. 2725.58) than that of those living in rent-free houses, as mentioned above. One plausible explanation is that the respondents living in their own houses, in fact, did not have to bear the entire cost of constructing them. Their houses are mostly built on *Khash* land or land abandoned by nationals living abroad, or on charitable land. As they did not have to pay for the plots, this increased their ability to construct houses out of the money thus saved. Therefore, owning a house does not mean that the concerned respondents are economically better off.

Table 3.33: Ownership of Dwelling and Average Monthly Household Income (in Taka)

Ownership of house	No. Of HHs	Percent of HH	Average monthly HH income
Owned	390	59.09	2725.58
Rent free	72	10.91	2878.67
Rented	196	29.70	3515.18
Rent subsidies	2	.30	2390.00
Total	**660**	**100.00**	**2975.75**

Source: Calculated from data obtained from the sample survey.

Thirdly, we supposed that there might be some relationship between electricity users and economic wellbeing. As indicated by the data, the average monthly income of respondents using electricity was found to be higher (Tk. 3239.22) than that of those using kerosene oil (Tk. 2554.91) (Table 3.34). Electricity users may not necessarily be rich, because there are many electricity users in urban areas who have very low levels of income. This may be due to the non-availability of alternative sources of energy – if however, there were alternatives; these might be beyond their reach. It is reported that some people obtain illegal electricity connections and thus escape paying a tariff to the government; this is how some respondents, although poor, can afford electricity. However, it is plausible that the respondents using electricity are economically better off. The explanation is that if electricity is connected to the house, the household members can undertake various income-generating activities (processing food, ironing clothes, tailoring etc.) and raise the household income. Moreover, if there is electricity they can work longer hours and escalate their level of income over and above their regular earnings.

Table 3.34: Use of Energy and Average Monthly Household Income (in Taka)

Energy	No. of HHs	Percentage	Average monthly HH income
Electricity	403	61.06	3239.22
Kerosene oil	254	38.48	2554.91
Others	3	.45	3215.00
Total	**660**	**100.00**	**2975.75**

Source: Calculated from data obtained from the sample survey.

Fourthly, we investigated the relationship between the source of drinking water and the economic condition of households. Table 3.35 shows that the average monthly income of the respondents drinking tap/ supply water is the highest (Tk. 3447.43) followed by those drinking tube-well water (Tk. 2797.23). Using tap/ supply water as drinking water depends on both its availability and its affordability. Rural people have no access to tap/supply water because there is no such facility in the rural areas of Bangladesh. However, urban areas are generally covered by tap/supply water. It is likely that the relatively well-off respondents would get access to tap/supply water because of their ability to pay. Data reveal that all the respondents using tap/supply water lived in urban areas and were predominantly manufacturing workers; they are generally economically better off and can afford this facility although it is expensive.

Table 3.35: Source of Drinking Water and Average Monthly Household Income (in Taka)

Source of drinking water	Number of households	Percentage	Average monthly household income
Tube well	470	71.21	2797.23
Pond/river	7	1.06	2487.86
Tap/supply water	182	27.58	3447.43
Others	1	.15	4450.00
Total	**660**	**100.00**	**2975.75**

Source: Calculated from data obtained from the sample survey.

The water supply in Dhaka metropolitan city, particularly in the backward areas, is terrible. Our respondents mostly live in slums and squats, as mentioned earlier. The supply of water was highly inadequate to the demand. Apart from the shortage of supply, there are legal constraints slum dwellers must contend with. The government does not provide water connections to unregistered slums as a matter of policy.

Donor agencies are willing to provide utility facilities, but the legal constraints make them hesitant. Even when they come forward, they cannot work smoothly due to space problems; the homesteads are so congested that there is virtually no space in which to install tube-wells.

We personally experienced such a situation in the slums within our study area in Dhaka. Some of the respondents reported that, donor agencies had tried to install tube-wells but could not do so for lack of the space required. Among slum dwellers, a few persons have installed tub-wells at their own cost. They sell the water from these tube-wells, charging high prices. The price of private tube-well water is much higher than of the supply water provided by the government, but slum dwellers are not granted access to this source of water. There are even restrictions on the availability of tube-well water: buyers are not allowed to buy more than five pitchers (each pitcher containing 10 litres) of water a day even though they are willing to pay. In this way well-owners make super-normal profits.

Fifthly, we looked for any relationship between fuel for cooking and the economic condition of households. Data indicate that the average monthly income of households using cylinder gas is the highest (Tk. 4070.83), but their proportion is less than 1.0 percent of the total households (Table 3.36). The average monthly income of households using natural gas as fuel is the second highest (Tk. 3621.65), followed by those using firewood (Tk. 2921.52). Rural households generally use firewood for cooking because they do not have access to natural gas or electricity even if they are willing to pay. If we consider the cost, we find that using firewood is even more expensive than using natural gas, so it is difficult to conclude definitely that the households using natural gas are economically better off than those using firewood.

Table 3.36: Source of Cooking Fuel and Average Monthly Household Income (in Taka)

Source of fuel for cooking	Number of households	Percentage	Average monthly household income
Firewood	303	45.91	2921.52
Dung/leaf/straw	215	32.58	2628.15
Electricity	1	.15	2835.00
Natural gas	129	19.55	3621.65
Cylinder gas	6	.91	4070.83
Kerosene oil	6	.91	3211.67
Total	**660**	**100.00**	**2975.75**

Source: Calculated from data obtained from the sample survey.

3.5 Consumption pattern

The consumption bundle includes both food and non-food items. Poor people in Bangladesh lead very plain and simple lives. They consume cheap, simple items because these are most affordable. Their purchasing power is low because of their low levels of income and sustainable employment. Their food intake is inadequate and lacks the calories necessary to keep the body active and healthy. Following the FAO standard for South Asian countries, the Bangladesh Bureau of Statistics (BBS) adopted a national threshold of 2122 k.cal. per capita per day. A person who consumes 2122 k.cal. per capita per day is considered moderately poor, while an individual consuming less than 1805 k.cal. per day is said to be extremely poor. According to the Poverty Monitoring Survey conducted by the BBS in 2004, 40.1 percent of the rural households consumed less than 2122 k.cal, while 18.2 percent consumed less than or equal to 1805 k.cal. This suggests that a large number of people in Bangladesh suffer from food deficit, resulting in hunger and malnutrition.

In our study, we investigated the consumption of some basic food items. The food items were meat, fish, milk, lentils and vegetables. We measured the quantity of food items consumed by the households and did not try to estimate the calorie intake, for the sake of simplicity and because this was not our objective. We analysed food intake by various household sizes. Table 3.37 shows wide variations of food consumption across various sizes of households. The quantity of food intake is

utterly inadequate and lies below the national average. Data indicate that the quantity of food consumed decreases in inverse relation to household size: a quite plausible finding, if not particularly interesting from a policy point of view. But it is important to note that the quantity of food intake was relatively high in the urban area compared to the rural area across all size groups.

Table 3.37: Per Capita/Day Household Consumption of Main Food Items (in gram/ litre) in Rural and Urban Areas

HH size	Fish (gram)	Meat (gram)	Milk (litre)	Lentil (litre)	Vegetable (gram)
Rural:					
2	33.1	10.5	23.5	9.0	146.2
3	31.3	9.3	–	6.2	143.3
4	30.2	9.1	–	6.3	140.0
5	21.5	–	–	5.5	137.6
6	–	–	–	4.6	133.0
7	–	–	–	3.3	129.1
9	–	–	–	2.2	125.0
Urban:					
2	38.6	20.3	28.5	14.0	148.2
3	36.2	12.5	25.2	13.2	145.3
4	33.5	10.4	24.3	11.3	142.5
5	30.4	9.6	21.5	9.5	141.2
6	28.0	6.5	18.2	8.2	137.1
7	24.0	8.2	16.3	7.8	134.1
8	–	5.3	14.2	6.3	130.3
9	–	–	12.2	5.5	128.0
10	–	–	10.0	3.2	123.2

Source: Calculated from data obtained from the sample survey.

Data indicate that milk is virtually absent from the menu in the rural area, and only relatively small households eat fish and meat. In the urban area, relatively large numbers of households cannot afford fish or meat. Lentils and vegetables are common items for both rural and urban households, irrespective of their size. Rural respondents are unable to afford fish and meat because of their rarity and high prices. Fish caught in rural areas are taken to the cities by traders for higher prices and profit. Most rural people are unable to pay for such food items such as fish and meat

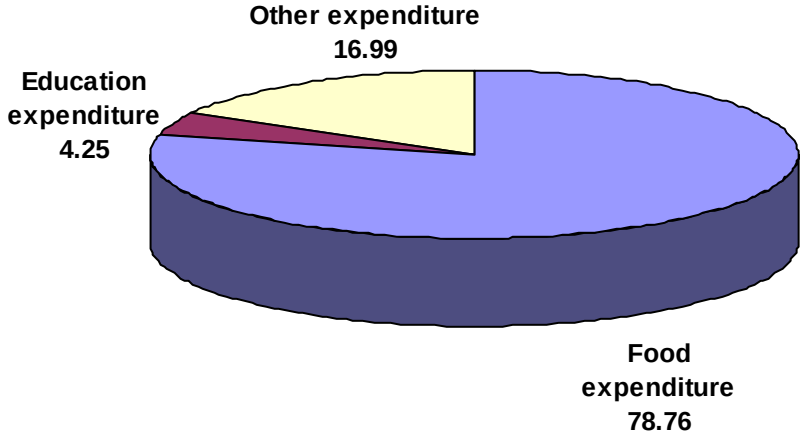
so the fish and meat market in rural areas is consequently narrow; traders find it expedient to take these items to urban areas where the market is relatively large and the expected profit is high. It is interesting to note that the price of fish and meat is relatively high in rural areas compared to urban areas, although these items originate from rural areas.

Not only are protein-rich food items like meat, fish, and milk beyond the reach of the poor because of their high price, but the supply falls short of the demand from a rapidly growing population. In fact, food production is unable to keep pace with the rise in population. In addition there are artificial crises of food supply, created by unscrupulous traders from time to time. The poor become the victims of these circumstances and suffer malnutrition and starvation. During our interviews, we found the respondents emaciated and skinny, reminding us of the legendary words of Tagore, as quoted at the start of this chapter. Most of our respondents were found to suffer from malnutrition arising from inadequate nutritious food. The heath status of female family members and children was worst. For females, eating last and least is still the cultural norm in rural Bangladesh. The result is physical vulnerability, disease and premature death.

Household expenditure on different food items was estimated based on the previous week's expenditure on those items. The results were then scaled up to total a monthly expenditure. The estimated expenditure on non-food items was based on information given about purchase of such items over the previous three months; we scaled the quarterly figure to obtain a monthly figure. The households were then divided into various groups according to their monthly expenditure. An examination of the consumption pattern of the households reveals that the lion's share of income goes on food items, at about 79 percent; only 4 percent goes towards non-food items (Figure 3.12). At the national level, the share of food as a percentage of total consumption expenditure has been estimated at 54.60 percent (BBS, 2005). Expenditure on food items is the highest (84 percent) for households belonging to the lowest income group (monthly income up to Tk. 3000.00) and lowest (65 percent) for the highest income group (with a monthly income of Taka 7501 and above) (Table 3.38). This conforms to the proposition that the poor spend more on food

items (basic necessities) and their propensity to consume those goods is relatively high compared to the non-poor.

Figure 3.12 : Percentage Distribution of Household Expenditure



Source: Drawn from data obtained from the sample survey.

Table 3.38: Income and Expenditure (in Taka) of Households

Income group	Expenditure on food (%)	Expenditure on education (%)	Expenditure Other (%)
Up to 3000	84.02	4.01	11.97
3001 – 4500	78.34	4.24	17.42
4501 – 6000	70.54	4.74	24.72
6001 – 7500	69.53	5.04	25.42
7501 +	65.28	3.59	31.13
Total	**78.76**	**4.25**	**16.99**

Source: Calculated from data obtained from the sample survey.

With that end in view, we estimated respondents' MPC: their marginal propensity to consume food items. We derived the MPC by estimating consumption functions separately for the rural and the urban areas. This exercise was done through simple linear regression using OLS. The MPC was captured through regression coefficients. Estimates reveal that the MPC in the rural area was about ten percent higher than that in the urban area (Table 3.39). Our findings are corroborated by macro level data available from official sources of Bangladesh. Estimates at national level indicate

that the share of food items in total consumption expenditure in the rural area in 2005 was 59.29 percent, but in urban areas was 44.55 percent (BBS, 2005). This difference may be attributed to the fact that the respondents in the rural area are poorer than their urban counterparts. The wage level of the urban respondents is higher than rural respondents' since they are more skilled, more mobile and more aware of labour market information. Urban respondents may have diversified sources of income including petty trade or casual piece rate work, and better access to public benefits; it is likely that they will be better off than rural respondents. Moreover, urban respondents have a tendency to send their children to school. As such, they have to spend money for books, fees, reading materials, conveyance, school clothes and other necessaries. It may be that they reduce their consumption expenditure for food items and use the money saved for such non-food items.

We also estimated the educational expenditure of households. Data indicate that the proportion of household expenditure on education maintains a positive relation with the increase in household income, except for the highest income group (Tk. 7501 and above per month). The relatively low figure of educational expenditure for this income group may be due to enrolment in low-cost public schools, subsidised fees, location of schools close to home and the like.

$$C_R = \alpha + \beta_1 Y + u \qquad (1)$$

$$C_U = \alpha + \beta_1 Y + u \qquad (2)$$

Where C_R = consumption expenditure on food items in the rural area, C_U = consumption expenditure on food items in the urban area, Y = monthly household income, U = stochastic term.

Table 3.39: Marginal Propensity to Consume (MPC) Food Items

Area	Intercept	Coefficients (MPC)
Rural	941.586	0.862
	(18.48)	(26.70)
Urban	1333.007	0.765
	(21.28)	(24.05)

Note: Terms in the parentheses indicate t-values. n = 248 for rural area and n = 412 for urban area. The d.f. = 246 for the rural area and d.f. = 410 for the urban area.
Source: Calculated from data obtained from the sample survey.

Along with estimating the MPC, we estimated the elasticity of consumption demand for food items in both rural and urban areas. We estimated the logarithmic (natural) form of regressions 1 and 2 above through OLS. The coefficients of the estimated log linear regressions provided us with the elasticity of consumption demand for food items. Results show that the elasticity of demand is higher in the rural area than the urban area. In the rural area, for a 10 percent increase in income, consumption increases by 8.2 percent. In the urban area, a 10 percent increase in income leads to a 7.6 percent increase in consumption demand (Table 3.40). This may be attributed to the greater dependence of rural households on essential food items than of urban households.

Table 3.40: Elasticity of Consumption for Food Items

Area	Intercept	Coefficients (elasticity)
Rural	3.424	0.817
	(16.843)	(22.233)
Urban	2.992	0.756
	(13.245)	(23.374)

Note: Terms in the parentheses indicate t-values. n = 248 for rural area and n = 412 for urban area. The d.f. = 246 for the rural area and d. f. = 410 for the urban area.
Source: Calculated from data obtained from the sample survey.

3.6 Access to land and other assets

Land is an important productive asset and a key determinant of the social status of rural households. For the vast majority of the labour force in Bangladesh, land remains the only source of income and employment. Landless households are more exposed to poverty, and their likelihood of being poor is relatively high compared to land-owning households. This is because landless households have no income from the land and are dependent on wage income which is both inadequate and sustainable. A vast majority of rural households in Bangladesh are landless (owning up to 0.05 acres of land) and functionally landless (owning 0.06–0.49 acres of land). The distribution of land nationwide is highly skewed with the lion's share owned by a few households. There is an inverse relationship between land ownership size and

incidence of poverty. According to Bangladesh Bureau of Statistics (2001), the incidence of poverty is the highest among the landless (0.05 acre) and marginal landowners (0.06–1.49 acres).

Keeping in mind the importance of land to the households, we examined the ownership pattern of land in the study area and found that 21.35 percent of households had no type of land, either homestead or cultivable. At national level, the figure is 15.62 percent of total households (BBS 2008). Table 3.41 shows that in the study area, 64.0 percent of the households owned the smallest landholdings (0.00–0.05 acre), while the percentage of households owning the largest landholdings accounted for 7.0 percent only. Among households with the smallest landholding, the proportion of urban households was overwhelmingly high at 74 percent. This finding is consistent with the findings of the Agricultural Census (2008) which reported that the percentage of households owning this size of landholding is higher in urban areas compared to rural areas. This implies that the households are mostly migrants from rural areas. They might have lost their land due to natural disasters or economic crisis and hence migrated from the rural to the urban areas. In contrast, among the households owning largest landholding (0.31+ acres), the rural households account for 19 percent and the proportion of urban households is even less than 1.0 percent. The land ownership pattern in the study area reflects uneven distribution of land across the entire country.

Table 3.41: Land Ownership in Rural and Urban Areas

Size of land (in acres)	**Region**		**Total**
	Rural	Urban	
0.00 – 0.05	117	305	422
	(47.17)	(74.03)	(63.94)
0.06 – 0.10	37	36	73
	(14.90)	(8.70)	(11.10)
0.11 – 0.15	25	42	67
	(10.08)	(10.19)	(10.15)
0.16 – 0.20	14	18	32
	(5.65)	(4.37)	(4.85)
0.21 – 0.25	4	7	11
	(1.61)	(1.70)	(1.67)
0.26 – 0.30	4	2	6
	(1.61)	(.49)	(.91)
0.31 +	47	2	49
	(18.95)	(.49)	(7.42)
Total	**248**	**412**	**660**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

There is discernible gender disparity in the ownership of land. The average land ownership of male-headed households is 0.11 acre, while it is 0.04 acre for female-headed households. Rahman et al. (2009) found the average landownership was 1.33 acres for male-headed households and 0.49 acre for female-headed households. The figures are higher than those of our study. This is because their sample included both poor and non-poor households and our sample covered poor households only.

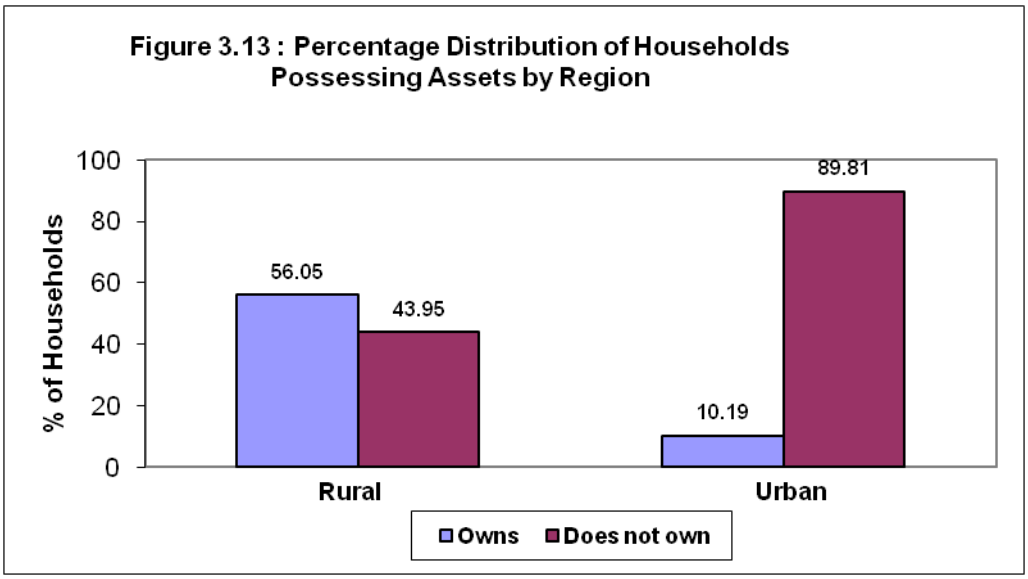
Besides land, we also explored access to other assets such as a sewing machine, rickshaw, rickshaw van, cattle or agricultural equipment. Inaccessibility to resources is characteristic of the poor in Bangladesh. When we consider the ownership of assets by our sample households we find a disappointing situation: only 27 percent of the total households owned any of the assets mentioned above. Among those owning assets 77 percent were rural and the rest were urban (23 percent) (Table 3.42). In the rural area, the proportion of households owning assets was relatively high compared

with the urban households (Figure 3.13). Inaccessibility to assets is a binding constraint against undertaking income-generating activities. Most respondents reported that if they had necessary equipment they could initiate self-employed activities instead of sitting idle for a particular period of time each year. As it was, they had neither equipment nor working capital to generate gainful employment and enhance income.

Table 3.42: Households Owning Assets in Rural and Urban Areas

Region	**Possession of assets**		**Total**
	Owns	Does not own	
Rural	139	109	248
	(56.05)	(43.95)	(100.00)
	(76.80)	(22.76)	(37.58)
Urban	42	370	412
	(10.19)	(89.81)	(100.00)
	(23.20)	(77.24)	(62.42)
Total	**181**	**479**	**660**
	(27.42)	**(72.58)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.



Source: Drawn from data obtained from the sample survey.

Data indicate that the urban households mostly owned a sewing machine, rickshaw or rickshaw van, while rural households owned cattle or agricultural equipment. Table 3.43 shows that 89 percent of the urban households owned sewing machines; the corresponding figure for rural households was 11 percent. Of the households owning a rickshaw, urban households were predominant; and vice versa for rickshaw vans. Most male respondents reported that if they were provided with the necessary equipment they could start a business of their own, because there were some works they could perform at home. Female respondents particularly mentioned that if they were given sewing machines (tailoring), ovens (home-made food), scissors (paper cases), dies (boutique printing) or hammers (stone, brick breaking) they could start income-generating activities because they had the skills to use such equipment. A rickshaw worth Taka 10,000 (AUD 200) could provide a worker with gainful employment and enough income to maintain a family.

Table 3.43: Ownership of Selected Assets in Rural and Urban Areas

Region	**No. of HHs owning**						**Total no. of HHs**
	Sewing machine	Rickshaw	Rickshaw van	Cattle	Agricultural. equipment.	Other	
Rural	1	1	9	68	41	19	139
	(11.11)	(16.67)	(56.25)	(88.31)	(83.67)	(79.17)	(76.79)
Urban	8	5	7	9	8	5	42
	(88.89)	(83.33)	(43.75)	(11.69)	(16.33)	(20.83)	(23.21)
Total	**9**	**6**	**16**	**77**	**49**	**24**	**181**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Side by side with examining ownership of assets, we also explored gender disparity in asset ownership. We found that, as with land, the kind of assets noted in Table 3.43 was unevenly distributed across male-headed and female-headed households. Among the households owning assets, 80 percent were male-headed and 20 percent female-headed. Even regarding ownership of sewing machines, male-headed households were predominant (56 percent). We found the same pattern of ownership for the other assets. The proportion of households owning cattle was 79 percent male-headed and only 21 percent female-headed. Regarding ownership of

agricultural equipment, the proportions of male-headed and female-headed households were 83 and 17 percent respectively (Table 3.44).

Table 3.44: Household Status and Ownership of Assets

Status of household	**No. of HHs owning**						**Total**
	Sewing machine	Rickshaw	Rickshaw van	Cattle	Agricultural equipment	Other	
Male headed household	5	6	14	60	34	25	144
	(55.56)	(100.0)	(87.50)	(78.95)	(82.93)	(75.76)	(79.56)
Female headed household	4	0	2	16	7	8	37
	(44.35)	(.00)	(12.50)	(21.05)	(17.07)	(24.24)	(20.44)
Total	**9**	**6**	**16**	**76**	**41**	**33**	**181**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

3.7 Social protection

Social protection refers to the security of citizens against the adversities of life. It includes social security and safety nets. Social security serves to meet people's urgent subsistence needs and to provide protection against contingencies such as unemployment, sickness, widowhood, disability and destitution in old age. Safety net programs are designed to provide employment and income to the people to overcome periodic crises. Given that poor workers in Bangladesh suffer from low wages, lack of adequate jobs due to seasonality in agriculture and cyclical fluctuation in industrial output, from diseases and disabilities arising hazardous working conditions and lack of alternative options to survive, the need for social protection can hardly be exaggerated.

The need for social protection for the workers has rightly been recognised by the ILO constitution. The Resolution on Social Security adopted by the International Labour Conference in 2001 defines social security as a basic human right and a means of fostering social cohesion, human dignity and social justice. The Social Security (Minimum Standards) Convention, 152 (No. 102), establishes nine classes of benefits: medical care, sickness benefit, unemployment benefit, old-age benefit,

employment injury benefit, family benefit, maternity benefit, invalidity benefit and survivors' benefit. Any system of social protection should aim at capturing three main dimensions for each contingency covered: population coverage, benefit levels and expenditures (Anker et al., 2003).

Everywhere, a major limitation of the system is that it covers only a small portion of the working population and excludes many who are in need of income security. The ILO has estimated that only 20 percent of the world's workers and their dependants have truly adequate social protection. In sub-Saharan Africa and South Asia, formal social security coverage is estimated at 5 to 10 percent of the working population, while it varies between 10 and 80 percent in Latin America, and between 10 and 100 percent in South-east and East Asia (Ghai, 2003). For social protection, the indicator used is public social expenditure as a proportion of GDP. Based on this indicator, the best performers are Sweden, Denmark, Finland, France, Germany, Norway, Belgium, Netherlands and the USA: their public social expenditure–GDP ratios range between 27 and 34 percent. The lowest ranking countries include Ireland, Portugal and New Zealand, whose ratios vary between 15 and 20 percent.

Measured as a proportion of GDP, public expenditure on social welfare is significantly lower in Japan and East Asia's four newly industrialised countries, Korea, Taiwan, Hong Kong and Singapore, than in Western countries. Singapore spends more or less 5 percent on social welfare and Hong Kong a little more. Korea's expenditure runs at about 10 percent, and that of Taiwan is slightly higher. Japan comes next at around 15 percent. Western countries, on the other hand, spend between 20 percent (United States) to 45 percent (Sweden) of their GDP on welfare (Jacob 2000). In Bangladesh the ratio is about 15 percent as of 2007 (BBS, 2008)).

In Bangladesh safety net programs are undoubtedly an important element of social protection, particularly for the vast majority of the working poor. To protect the poor from hunger and starvation and to create productive employment for them, the government contributes 30 percent in cash to the Food for Works Program (FWP), Vulnerable Group Development (VGD) and the Rural Maintenance Program (RMP). Education programs such as food for education (FFE), special financial/ stipend benefits to female students, and free primary education also directly contribute to lower educational expenses for households. Currently about 6000 major safety net

programs (FWP, VGD and RMP) are under way, and have created more than 70 million person days of employment since the 1970s. The FWPs and RMPs aim at improving the performance of the rural economy through construction and maintenance of physical infrastructure. VGD, reaching over 85,000 beneficiaries, is designed to improve income and employment among destitute women. The FFE programs are directed towards distressed families, to facilitate the education of their children.

In the informal sector, different poverty alleviation programs have been undertaken by both government and non-government organisations, catering to the needs of various target groups. Government programs include: macroeconomic and sectoral policies to improve efficiency and productivity, and, income and employment generating programs to bail the poor out of poverty. The purpose of the programs was to increase incomes, savings and assets of the poor so that they could start their own business and improve economic conditions. Along with this, schemes for education, health, nutrition and the like improved the socioeconomic security of the poor.

The government has launched three safety net programs and provided the necessary allocations in the budget since 1997–98. It is expected that these three programs will directly contribute to the alleviation of poverty. These programs are the creation of pensions for elderly but poor persons, of a housing fund for the homeless poor, and of an employment bank for unemployed youth. The old age pension program includes monthly payments to 10 elderly poor persons in each ward of each union in the country. Of these elderly persons, at least 5 are to be women. It is expected that about 0.4 million persons will benefit from this program. The housing loan fund allows each family to receive a loan of Tk. 20,000, to be repaid in 10 years (Ahmed 2002). The employment bank extends loans to educated but unemployed youth to sett up income- and employment-generating activities.

In our study area, only 43 (6 percent) households were found to be covered by safety net programmes. The FWP covered 12 households, VGDP 10 and RMP 9 ; the stipend for girls' education went to 5 households, the widow allowance to 4 households and old age pension to 3 households only. We did not try to evaluate the government safety net programs because it was not our objective; but we did try to

assess the impact of the programs on the beneficiaries. These households were found to benefit from the programs as indicated by their level of consumption, which was marginally higher than in non-target group households (Table 3.45)

Table 3.45: Access to Safety Net Programs and Food Intake (in grams)

Programs	**Daily average per capita intake (in grams)**				
	Meat	Fish	Milk	Rice	Lentil
Within the program	9.45	32.5	28.3	430.2	15.6
Outside the program	8.30	31.4	27.2	430.0	15.1

Source: Calculated from data obtained from the sample survey.

3.8 Conclusion

We selected a sample of 660 households for intensive study. Corresponding to these 660 households, there were 660 respondents who were the head of households and our focus of study. There were 2984 household members; and the numbers of male and female members were almost the same. The majority of the respondents in the study belonged to a highly productive age group (15–34 years) and were economically active. The average household size was found to be smaller than the national average, implying that the respondents kept their family size small due to the high cost of living and their low incomes. The majority of the respondents were married: the widowed, divorced and separated together constituted about one tenth of the total. The proportion of married persons was relatively high compared to singles. The respondents were mostly illiterate and untrained; the majority never went to school. In terms of education and training, females lagged far behind males at all levels. The educational status of household members was not dissimilar to that of the heads. About fifty percent of household members never attended school, and among those the proportion of females was relatively high.

The demographic impact of female education is revealing. On the whole, as the level of female education increased, the average number of children per women decreased. Data also revealed that educated married females had fewer children on average than educated married males.

Apart from examining the demographic impact of female education, we tried to capture the impact of household status on household size. The findings in this regard were illuminating. The size of female-headed households was found to be smaller than that of male-headed households. Single-parent households were economically worse off than two-parent households. Data show that the average monthly income of female-headed households was lower than that of male-headed households. It was also found that the incidence of poverty and vulnerability was more pronounced among female-headed households than male-headed ones, because female-headed households lacked income from the spouse if he was dead or unemployed. In addition, women's role in household activities constrained their participation in the labour market participation and hence affected their income: female-headed households were found to have lower income than male-headed households.

The composition of households under study revealed an overwhelming prevalence of children aged 14 years and under. A high proportion of children increases the dependency burden and increases the risk of a household being poor. The economic condition of each household depended to a large extent on the number of children. Data indicate that the per capita income of households having more than two children was lower than that of the households with no more than two infants. Interestingly, in our study women's employment appeared as an important factor in determining household size. Data show that average number of the children per wage earning woman was lower than that of non-wage earning women. This implies that women wage earners are aware of the detrimental effects of large families, and try to keep limit numbers. The policy implication is providing women with jobs will work as a deterrent to population growth.

Widowhood is an inseparable feature of the family and a burning issue for society. A husband's death results in economic hardship for his relict because most widows were dependent on their husband's income and suffer from lost income with the death of their spouse. The findings of our study reveal that the average income of the households with widows was lower than that of the other households.

Like widowhood, disability is a factor constraining the economic wellbeing of the household. Disability is a cause as well as a consequence of poverty. Disability adds to the risk of poverty, and poverty increases the risk of disability. Apart from

income-related factors, medical and caring costs make an individual or a household economically worse off. Disabled people, having low education and income, are more likely to be poor than other people. Data show that the per capita income of household members without disabled persons is higher than that of those with disabled persons.

There is no denying that unemployment is a contributory factor in the poverty of a household. The presence of unemployed persons within the household is a common feature in rural Bangladesh, and our study area was no exception. In the rural area, that is, the agricultural sector, about one third of households had a family member unemployed; this proportion was fifty percent for the urban area. The proportion of households with two members unemployed was higher in the urban area than the rural area. The poverty of households was compounded by the presence of unpaid family workers along with the unemployed. About one third of the rural households were found to contain one unpaid family worker, while this proportion is more than fifty percent for urban area.

Sharing the income of the breadwinners, unemployed and unpaid family members put downward pressure on total household income. Lack of employment opportunities in the rural areas and the seasonal nature of agricultural work contribute to unemployment in the labour force. Factors causing unemployment of urban workers include the small size of the formal sector, cyclical fluctuations in manufacturing output, the closure of industries and so on. Household income has been found to co-vary with seasonality: that is, a decrease in seasonal income lowers household consumption. Data show that household income and consumption are much lower during lean seasons than in other seasons. During lean seasons in the rural area, 7 percent of households reported they ate one meal a day, 81 percent ate two meals and 12 percent had three meals a day. Occasional hunger and starvation were not unusual. The food crisis in the lean pre-harvesting period was due to lack of adequate employment opportunities, lack of income and rises in the price of essential food items.

As indicated earlier, a large number of respondents were unable to afford a square meal for family members. Food intake was not only inadequate but lacked the necessary calories to keep people healthy and active. Meals usually consisted of

coarse rice, potatoes, lentils, and vegetables. They rarely obtain foods such as meat, fish, milk, or eggs. These findings suggest that a large number of sample households suffer from food deficits leading to malnutrition and disease, sickness, suffering and premature death. The households were found to spend a high proportion of their income on food items; this conforms to the proposition that the poor spend relatively more on food items and that their MPC is high compared with the non-poor. The extent of the propensity to consume differed across rural and urban areas. Estimates reveal that the marginal propensity to consume food items was about 10 percent higher in the rural area than in the urban area.

The living condition of the respondents has been described in terms of the ownership of the house, the construction of the house, and the sources of lighting, drinking water and fuel. In the study area 60 percent of household heads lived in their own houses. Although they owned house, they did not own the homestead land, which was provided by the government free of cost. Data indicate that majority of the households lived in *kutcha* houses in both rural and urban areas. There were two sources of lighting in the study area: electricity, the main source of lighting for the majority of the households in the urban area; and kerosene oil. As a source of drinking water, tube wells were predominant in the rural area while tap water was widely used in the urban area. Firewood was the main fuel in both rural and urban areas. Urban respondents use firewood because they could not afford electricity for cooking.

We examined the relationship between living conditions and the economic wellbeing of the respondents in terms of monthly per capita income. Data indicate that the respondents living in rented houses were economically better off than the rest. Those who used electricity as a source of lighting were more solvent than kerosene oil users. The economic condition of the households using tap water was better than others'. Comparing cylinder gas and firewood as fuels for cooking, those using the former were better off.

Land is an important asset determining the solvency and social status of a person. Landless households were more vulnerable to poverty than land-owning households. The landholding size and poverty were inversely related. According to official sources, the incidence of poverty is highest among the landless and marginal land

owners. The incidence of landlessness in the study area was higher than the national average, perhaps because it is a poverty-stricken area. Distribution of land ownership was found to be highly skewed, with discernible gender disparity: land ownership was much higher among male-headed households than female-headed households.

Apart from land, the ownership of other assets was also meagre. Data indicate that only one quarter of the households owned other assets, whether in rural or urban areas. We found discernible gender discrimination in the ownership of assets as well as of land. The proportion of female-headed households owning cattle was one tenth that of male-headed households. Female-headed households accounted for only one fifth of the ownership of agricultural equipment. Moreover, their access to social security programs was negligible. In the study area, only 6 percent of households were found to be covered by social security and safety net programs. Social protection schemes in Bangladesh should be developed in such a way that workers receive support during crisis periods, as when there is little or no work. Gender-specific targeting of women is necessary in safety net programs because women in Bangladesh are disadvantaged by both deprivation and exploitation.

CHAPTER 4: HOUSEHOLD CHARACTERISTICS AND POVERTY: A LOGISTIC REGRESSION ANALYSIS

4.0 Introduction

Poverty of the working people is a complex issue, a product of both household and labour market characteristics. The incidence of poverty is determined by multiple interactive factors operating at micro (household) as well as macro (national) levels. In this paper I examine how household characteristics affect the probability of a household being poor via labour market interactions. Household characteristics such as-dependency ratio, child–woman ratio, proportion of female members in the household, age of the household head, education of the household head, household status, disability and household size will be taken into account to examine how these affect poverty through the labour market participation of the workers. The issue is thus addressed at two separate but complementary levels: the household to which the individual worker belongs, and the market in which he/she works.

The central premise is that, the ability of a household to exploit available income-earning opportunities is shaped by characteristics inherent to the household. For a given household the probability of its being poor is determined by the extent and nature of its participation in the labour market, with that participation in labour market in turn conditioned by the characteristics of the household. The main task of this work is to identify and integrate the factors that explain the relative effects of these two determinants on poverty, in measured form. Using a logistic regression model, coefficients of these factors have been estimated to examine which factors increase the likelihood of a household being poor and to understand the policy implications for alleviating poverty at national level. The model is based on micro level data obtained from a sample survey conducted in Bangladesh during 2008-09.

4.1 Literature review

Poverty is closely and positively associated with the dependency ratio and the child–woman ratio. Sundaram and Tendulkur (2002) in their study link household characteristics to the probability of the household being poor. To examine the linkage at micro level they conducted an analysis of poverty in the Indian state of Madhya Pradesh, using a PROBIT

model framework. The results show that, a one percentage point increase in the child-woman ratio raises, at the margin, the probability of the household being poor by 0.1 percent. Rani (2007), examining the linkage between household characteristics and poverty in India, finds that the probability of a household being poor increases with the size of the household. Results show a high probability of poverty among female-headed households. Dependent household members significantly increase the probability of a household being poor. In balance, land ownership significantly lowers the likelihood of being poor.

Sikander and Ahmed's (2008) study on Pakistan finds a high dependency ratio, with disability of the family head and larger family size contributing positively to the probability of a household's being poor. Marginal effects of the dependency ratio explain a contribution of almost 4 percent in increasing the likelihood of being poor. Asif (2007) analyses the impact of household characteristics on the poverty status of the household, showing that household size, educational attainment, the male ratio of workers, the dependency ratio, livestock population, landholding and age of the household head tend to be significant determinants of poverty across the sample households. In that study, household size, the dependency ratio and household structure are found to be positively and significantly correlated to the probability of the household being poor, while the educational attainment of household members, age of the household head and landholding are found to be negatively and significantly correlated to the probability of the household being poor.

The World Bank Poverty Assessment for Latvia (2000) shows that poverty in Latvia is most closely correlated with the dependency ratio, ownership of financial and real assets, unemployment and the spatial location of households. Mok et al. (2007) estimate the probability of Malaysian households with particular characteristics to fall below the poverty line. Their results show that an increase of one year of formal education after the mean number of years of the sample reduces the probability of a household falling into poverty by 0.0047, while a higher proportion of children under 15 years of age and female adults in the household increases the probability of a household being poor. Number of children has generally been found to be associated with poverty in studies across the developing world (Carter and May, 1999; Dreze and Srinivasan, 1997; Ray, 2000).

Litchfield and McGregor (2008) analyse the determinants of household welfare in the northwest region of Tanzania, using micro level cross section data. Results show that individuals living in female-headed households face higher probabilities of being poor and having lower living standards than those in male-headed households. The probability of their being poor is higher, on average and *ceteris paribus*, by about 13 percentage points, and they experience about 13 percent lower per capita expenditure levels. Having educated parents is estimated to have a positive effect on a household's per capita expenditure and negative effect on the probability of being poor. An increase in the size of a household is linked to an increase in the likelihood of being poor and a reduction in living standards. Having more dependents and a greater share of women in a household increases the probability of being poor.

Age is one of the major determinants of poverty. Poverty among households with very young and very old heads is higher than among those with middle-aged heads; and the household wealth steadily decreases as the household head ages. Kitov (2006) found that between 1994 and 2002, observed annual personal incomes in the US reached their relative maximum value at some age between 45 and 55 years, and then dropped. Study findings in Nepal suggest that the increasing age of the household head deepens the poverty of a household (Wagle, 2006). Empirical evidence has demonstrated that across countries and time, younger relative cohort sizes tend to be associated with lower incomes (Higgins and Williamson, 2003).

Households, whose heads are in a higher age group significantly lower the possibility of remaining poor (Meng and Gregory, 2007). Age (to a limit) is associated with skill enhancement (experience), accumulation of resources, extensive social capital and other qualities that ought to contribute positively to well-being (Bashaasha et al., 2006). The findings of a study by Bogale and Korf (2009) on Ethiopia corroborate this assumption. In their study, age of the household head is found to be positive and statistically significant, implying that among the sample households, older households have greater likelihood of being non-poor. More specifically, an increase in age of the household head by one year increases the probability of being slightly non-poor and non-poor by 0.11 and 1.64 percent respectively; it also lowers the likelihood that a household will fall under the category of extremely poor and moderately poor by 0.66 and 1.09 percent respectively.

Poverty is positively related to the level of education: that is, poverty lessens as the level of education increases. In South Africa, Maitra (2002) finds a significant effect of education of the household head on the poverty status of the household. Results show that the highest level of education attained by the household head significantly reduces the probability of the household being poor. In Indonesia, better-educated households are less likely to be poor (Widyanti, 2009). Huang (1999) in his study of Taiwan finds the impact of education on wages highly positive and statistically significant. Years of schooling of the head of the household significantly reduce the probability of remaining in the poor group (Meng and Gregory, 2007; Mok et al., 2007).

Poverty has been found to increase with the increase of the household size. In Indonesia, higher household size is found to increase the probability of a household being poor or vulnerable (Widyanti et al., 2009). Family size indicates the number of units among which household resources need to be allocated according to the weights of each unit. Family size may have an ambiguous role in the poverty status of rural households, depending on the relative strength of size economies in consumption as against the diminishing return to scale.

In their study, Bogale and Korf (2009) find that an increase in household size by one adult equivalent increases the probability of being extremely poor and moderately poor by 3.13 and 5.16 percent respectively; it lowers the likelihood that a household will fall under the category of slightly non-poor and non-poor by 0.49 and 7.79 percent respectively. In Pakistan, the impact of very large households on the poverty of the household has been found to be negative (Sikander and Ahmed, 2008). This may be because large households have more potential earners, and may reduce poverty through greater participation in the work force.

Female-headed households have been found to be particularly vulnerable to poverty. Maitra (2002) shows that in 1993, female-headed households in South Africa were significantly worse off - poverty rates were significantly higher and living standards significantly lower relative to those of male-headed households. Higher incidences of poverty in female-headed households is also a significant finding in studies of India (Meenakshi and Ray, 2000), South Africa (Aliber, 2001), and Kenya (Muyanga, 2008). A similar result is found in Hungary, where female-headed households are associated with a higher rate of long-term poverty (World Bank, 2001). Bertranou and Khamis (2005), exploring the link between poverty and

labour market characteristics, found that if the household head was employed in manufacturing, construction, retail trade or hotels and restaurants, the probability of being poor increased in most time periods. Though these sectors are dynamic and growing, they are labour intensive, with low wages, which do not help workers to escape poverty.

4.2 Analytical framework

I have considered household characteristics such as-dependency ratio, child-woman ratio, proportion of female members in the household, age of the household head, education of the household head, household status, disability and household size to examine how these variables explain poverty of the household. Theories and empirical findings suggest that larger the ratio of children (0 -14 age group) to adults (15-64 age group) – that is, the larger the dependency ratio – the lower, *ceteris paribus*, will be the overall labour force participation rate. If dependants are proportionately more than adults, the household lacks a potential labour force, leading to reduced total household income; therefore, it is very likely that households with high dependency burdens will live in poverty. Another demographic characteristic is the child–woman ratio or the ratio of the number of children in the 0-4 age group relative to the number of women in the reproductive age group of 15-49. The child-woman ratio can be viewed as a factor constraining participation of women in the labour force and so lowering the average poverty-reducing effect of household income.

It is plausible that the probability of poverty at household level will increase if the proportion of women workers to total workers is larger. The economic environment and the nature of occupations are such that women earn less than their male counterparts for the same work. This assumption conforms to the proposition that, given the number of workers, a high ratio of female workers could, *per se*, be a factor raising the probability of the household's being poor. One additional female worker in the household would directly lower the probability of the household being poor by raising the earner strength of the household: however, the extent of this favourable effect is partially offset by the widely observed lower returns to female labour relative to that for male.

There is an apparent link between disability and poverty. It is a two-way relationship – disability adds to the risk of poverty, and conditions of poverty increase the risk of disability.

Particularly, if the household head is disabled, it exacerbates poverty of the whole family due to increased expenses, lack of income from the bread earner and lack of opportunities due to social exclusion. Besides household heads, if any of the household members is disabled, the parents have to take care and spend a significant portion of their labour time for her/him. Caring for them reduces labour market participation of the carers, incurring high opportunity cost in terms of forgone income; it is likely that the households with disability will live in poverty (Elwan, 1999).

There is a close connection between literacy and poverty. Study findings suggest that higher educational attainment affects poverty status by enabling one to make more informed decisions regarding consumption and other quality of life issues (Sen, 1992). Poverty breeds illiteracy by forcing children to drop out of school to work. These illiterate people constitute a low productive work force and remain either unemployed or, even though they succeed in their efforts, in jobs that are usually low-paid and casual in nature. It is likely that households with these types of heads will live in poverty. It can also be presumed that an increase in household size will exert an extra burden on the household if negative income changes of the household members are predominant or even if they are not. There is considerable evidence of a strong negative correlation between household size and consumption (or income) per person in developing countries (Visaria, 1980; Sundrum, 1990; Lipton and Ravallion,1994).

Female-headed households tend to live in poverty. Total income is chronically low in many female-headed-households because of the presence of female wage earners and their low earnings in the labour market. Because of women's low levels of education, training and experience their labour market access is restricted to a few jobs with low level of wages. The dependence of earnings on age is a firmly established fact. Inequality of income maintains positive relationship with a younger age population (Barro, 1999; Chang, 1994; Deininger and Squire 1996; Kuznets 1955). For the aged people, income becomes limited because their physical inability limits employment opportunities; therefore, households with younger and aged people are most likely to live in poverty.

4.3 The model

I have used a logistic regression model to assess the probability of a household being poor. The pioneer of the logistic regression model was Cox (1958); subsequently his model was developed by Walker and Duncan (1967), and Cox himself (1970). More recently, Lee (1980) and Fox (1984) have further developed the model.

I have estimated the following model:

$$Y_i = \alpha + \beta_{1J1}X_{1J1} + \beta_{2J2}X_{2J2} + \beta_{3J3}X_{3J3} + \beta_{4J4}X_{4J4} + \beta_{5J5}X_{5J5} + \beta_{6J6}X_{6J6} + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \varepsilon_i \quad (1)$$

Where

Y_i = Landholding of the households (i = 1..... n).

X_{1J1} = A vector of occupational status of the workers. X_{11}= agricultural workers, X_{12}= factory workers, X_{13}= transport workers, X_{14}= construction workers and X_{15} = service workers. J1 = 1, 2, ... 5.

X_{2J2} = A vector of age of the workers. X_{21} = under 25 years, X_{22} = 25-49 years, and X_{23} = 50 + years. J2 = 1, 2, 3.

X_{3J3}= A vector of education of the workers. X_{31}= illiterate, X_{32} = class I-V and X_{33} = class VI+. J3 = 1, 2, 3.

X_{4J4} = A vector of household status. X_{41} = male-headed household and X_{42} = female-headed household. J4 = 1, 2.

X_{5J5}= A vector of household condition. X_{51}= households with able-bodied persons and X_{52} = households having persons with disability. J5 = 1, 2.

X_6 = A vector of household size. X_{61}= less than 4 persons and X_{62} = 4-5 persons. J6 = 1, 2.

X_7 = Proportion of female members in the household.

X_8 = Dependency ratio.

X_9 = Sex ratio.

X_{10} = Child-woman ratio.

X_{11} = Proportion of woman workers to total workers.

ε_i = Random error term.

The dependent variable, i.e., landholding, indicates poverty status of the household and is assumed to be dichotomous.

4.4 Data and empirical results

4.4.1 Data

See sub-section 1.2.1 of chapter 1.

4.4.2 Empirical results

Based on data obtained, I examine the relationship between a dichotomous dependent variable (landholding of the household) and a set of independent variables explaining the probability of a household being poor. The main feature of the analysis is to identify the factors that explain poverty status of the households and to determine how these factors influence the risk of poverty of a household. The estimated regression coefficients from equation (1) are presented in Table 1. Since the dependent variable is coded one if the household is landless, the positive coefficient indicates that the household is more likely to be poor, and vice versa.

In the occupational category, all of the explanatory variables have highly significant coefficients except transport workers. As indicated by the estimated coefficient (-1.360) and the odds-ratio (0.256), factory worker households are found to be poorer than other groups of worker households. The plausible reasons might be that the enterprises where they work are

small, and that the products are subject to cyclical fluctuation in demand. The workers lack year-round employment and are paid low wages, utterly inadequate to escape poverty. The estimated coefficients for the age of the household head indicate that households with very young heads (under 25 years) have a greater likelihood of living in poverty (0.186) than those belonging to 25-49 years (-0.129). The odds ratio reveals that the former have a 33 percent higher risk of being poor than do the latter.

Similarly, the estimated coefficient for illiterate household heads (0.824) suggests a higher chance of being poor for households with low levels of education. In Bangladesh, Quisumbing (2007) finds, the probability of a household being poor is negatively associated with the years of schooling of the household head. Moreover, the odds ratio shows that the risk of their being poor is about 96 percent higher for households with illiterate household heads than for those with a I-V (primary) level of education. The estimated coefficient for female-headed households, at 0.588, indicates that these households are more likely to live in poverty, compared with male-headed households. The odds ratio (1.800) also indicates a high incidence of poverty among female-headed households. The estimated coefficient (0.385) indicates that households having persons with disability are more likely to live in poverty than households of able-bodied persons. The odds ratio (0.680) is indicative of relatively high poverty among households having persons with disability.

As indicated by the estimated coefficient (-0.197), households having fewer than four persons on average are less likely to be poor than those with more than 4-5 persons on average. The odds ratio indicates that smaller households have an 82 percent lower risk of being poor than larger households. The data reveal that 27 percent of households surveyed had fewer than 4 persons on average; those having more than 4 persons on average accounted for 73 percent of the total households under study. The estimated coefficient (1.389) suggests that, the risk of being poor is high for households where female members are predominant. If we compare the households having a high proportion of female workers with the households holding a high proportion of female members (non-working women), we find that the extent of poverty is much higher in the case of the latter (odds ratio, 4.013) than the former (odds ratio, 1.184).

Similarly, the estimated coefficient for the child-woman ratio at 0.023 indicates that households with proportionately more children are more likely to live in poverty. In

Bangladesh, Quisumbing (2007) finds, the probability of a household being poor positively relates to the dependency ratio. If we include elderly with children to define dependency, we find that households with more dependants are at high risk of living in poverty, as indicated by the regression coefficient (0.210). As indicated by the odds ratio, the extent of poverty is about 21 percent higher in the households with more dependants (1.234) than in households with more children (1.023).

Table 4.1: Logistic Regression of Poverty Status of Households

Explanatory Variables	**Estimated-coefficients**	$P>\|z\|$	**Odds ratio**
1. Economic characteristics			
a. Occupational status of the household head			
i) Agriculture worker	-2.536***	0.000	0.079
ii) Factory worker	-1.360***	0.000	0.256
iii) Transport worker	-0.208	0.958	0.971
iv) Construction worker	-2.266***	0.000	0.103
v) Service worker [a]	-		
b. Age of the household head			
i) Under 25 years	0.186**	0.043	1.204
ii) 25-49 years	-0.129	0.695	0.878
iii) 50+ years [a]			
c. Education of the household head			
i) Illiterate	0.824***	0.009	2.279
ii) Class I–V	0.274	0.372	1.315
iii) Class VI+ [a]	-		-
2. Household characteristics			
a. Household status			
i) Male-headed household [a]	-		-
ii) Female-headed household	0.588***	0.007	1.800
b. Household condition			
i) Households with able bodied persons [a]	-		-
ii) Households having persons with disability	0.385**	0.016	0.680
c. Household size			

i) Fewer than 4 persons	-0.197*	0.057	0.820
ii) 4 – 5 persons [a]	-		-
3. Other characteristics			
a. Proportion of female members in the household	1.389**	0.031	4.013
b. Dependency ratio	0.210**	0.023	1.234
c. Sex ratio	0.293	0.170	1.340
d. Child–woman ratio	0.023**	0.031	1.023
Proportion of female workers to total workers	0.169**	0.047	1.184
4. Intercept	-0.523		
- Log likelihood	345.57		
Model chi-square	104.12		
$\overline{R}^2$	0.37		

a , reference group
*****, **, *** imply significant at 1%, 5% and 10% levels respectively.

4.5 Conclusion

Based on these findings, we may conclude that poverty is high in households with low income and young household heads, low-level education of the household heads, female heads, disability of household members, larger size, a predominance of female members, excessive dependency burden or a high proportion of female workers. Manufacturing worker households are found to be poorer than agricultural, transport, service and construction worker households. Households headed by younger persons are less likely to live in poverty than households headed by older persons. The risk of being poor is high for households with illiterate household heads than for those with a primary level of education. Female-headed households are more likely to live in poverty than male-headed households. Households having persons with disability are more likely to live in poverty than the households with able-bodied persons. Smaller households are likely to be less poor than larger households. Households with proportionately more children and elderly are more likely to live in poverty. The risk of being poor is found to be high for households where female members and female workers predominate.

The implications of the above findings for policy development are enormous, particularly for a country such as Bangladesh where poor workers constitute an overwhelming portion of the

total labour force. Manufacturing worker households are worse-off than farm worker households, perhaps because of the incomes that non-farm jobs offer. It is not only that jobs in these occupations pay considerably lower wages: the majority of these jobs are in the informal sector, paying less than the legal minimum wages. Apart from low level wages, these enterprises are subject to a cyclical fluctuation of demand for goods and services. When demand is high workers are over-employed, and when there is low demand they are underemployed or lose their jobs. This suggests that there should be a policy to ensure payment of a minimum wage high enough to meet the basic needs of the workers. The government should introduce schemes such as employment guarantee scheme to protect the workers left unemployed due to slump in the business cycle.

The poverty of female-headed households underscores the need for bringing them under the umbrella of social protection. In the short run, this may be in terms of cash to meet immediate needs for basic necessities of life. In the long run, measures should be undertaken to absorb the female heads of households in remunerative employment which is adequate to maintain a plain living. Emphasis should be given to gender-specific social protection schemes so that females gain access to the wherewithal to combat poverty. Having an illiterate household head increases the probability of being poor while having a household head with some level of education decreases poverty substantially. This clearly suggests that introducing education for all is one desirable policy option for the government. It is gratifying to note that in Bangladesh primary level education is compulsory. Data indicate that larger the household size, the poorer is the household. The policy prescription in this regard would be to educate people regarding the benefit of small household size. The family should be so planned that it remains small at all times. A one-child policy like China may be introduced and enforced in Bangladesh. At the same time attitude towards small family size should be nurtured in the society.

As disability determines poverty of the household, households having disabled persons should be brought under the social security scheme. To this end, the scheme should be both household-and individual-specific. The care-takers of the persons with disability could be treated as being employed, and paid by the government. At present budgetary provision for the persons with disability in Bangladesh is scanty, so there is room for a certain portion of

the GDP to be provided to address the problem of disability at national level. Resources thus obtained may be utilised to educate them and develop their skill so that they could be productively employed. On the other hand adequate cash facilities should be provided to those who are severely disabled. There must be legislation to ensure equal opportunity of education, health and employment for them. Efforts should be made to transform them from liability to assets. Pro-active plans and programs should be directed towards incorporating them into the development process of the country.

CHAPTER 5: DISCRIMINATION AT WORK AND THE GENDER WAGE GAP: AN EMPIRICAL ANALYSIS

The key question is how to get about regaining our lost position. What must we do to stand up and be counted as worthy daughters of our country? To start with, we need to take a firm resolve that in our daily life we shall be on an equal footing with men, and that we must have intense self-confidence not to feel a burden to any man. We will do whatever we have to do, to gain equality with men. If the means to our attaining independence is through our ability to earn our living, then we must do so. From office workers to lawyers, and magistrates, even judges – we shall get entry to all jobs and professions, presently the privileged precincts of men. Perhaps fifty years down the road we may see a woman installed as Viceroy, thus elevating the status of all women. Why should we not have access to gainful employment? What do we lack? Are we not able-bodied, and endowed with intelligence? In fact, why should we not employ the labour and energy that we expend on domestic chores in our 'husbands' homes' to run our own enterprises?

Rokeya Sakhawat Hossain (1904), *Strijatir Abanati*
(Deterioration in Women's Situation).
Translated by Bharati Ray, 2002.

5.0 Introduction

To discriminate is to make a distinction between people on the basis of class or category without regard to individual merit. The gender wage gap is one manifestation of discrimination in the workplace. Significant gender-based wage differentials continue to exist in both developed and developing countries. The gender wage gap is also referred to as gender wage inequality, male-female wage differentials, or the gender pay gap. Theoretically speaking, rational employers are indifferent about the sex of their workers; they count on maximising profit only. A profit maximising employer will hire the most productive and long-working staff to improve productivity in the long runs (Perlman and Pike, 1994). Since the majority of the women have babies and take maternity leave or give up their jobs, employers believe that the average female turnover will be higher than for men (Banton, 1994). Women are, therefore, subject to discriminatory measures in competitive labour markets, as they are seen to have a higher risk of work discontinuity and lower productivity.

The relationship between demographic status and pay is different for men and women. While married men typically earn more in the labour market than unmarried men, for women the relationship is reversed. Children are associated with lower wages for women but not for men, in part because children tend to reduce only women's work experience and time with their employer. As a result there remains a significant differential between women's and men's pay. Investigations into the reasons for women's lower wages and their skewed distribution among occupations often postulate that the opportunity cost of home-keeping tends to limit women's participation in the labour market as well as the amount of human capital (education) they can invest.

Skill and experiences are considered important determinants of the wage gap. The argument is essentially that women, realising they will be bearing and rearing children, invest less in their personal education. As the forces of supply and demand are regarded as the most powerful reason for explaining wage differentials based on skill, so, we can expect that an increase in relative demand for skilled labour may widen the wage gap by skill and or occupation. There is no denying that wages differ between men and women because of differences in skill and experiences. However, empirical evidence suggests that even after controlling for differences in skills and job characteristics, women still earn less than men.

Theories abound about how and why women face discrimination in the labour market. An employer may dislike female employees or underestimate their abilities; customers may have prejudices about female employees or male co-workers may decline working with women. Researchers cite the crowding of women in a very few occupations, consideration of sex as a screening device for recruitment, employers' prejudices about women being less productive, and different payment rules for men and women with the same productivity characteristics (Ehrenberg and Smith, 1991) or differences in human capital (Becker, 1964) tend to differentiate compensation of males and females. Some authors (Duncan, 1991; Chapman and Harding, 1986; Ehrenberg and Smith, 1991), however, consider inter-personal differences in ability as a major factor determining wage inequality. Ability includes physical and mental characteristics such as: strength, energy, intellectual ability and personal characteristics.

This chapter examines discrimination in both rural and urban areas, with particular reference to wage inequality. This chapter will consider the determinants of disparity in wages between

the male and female workers under study. First, male-female wage inequality in the study area, across various sectors and occupations, is described. This is followed by a brief overview of wage discrimination against women. The issue of male–female wage inequality has been analysed from both theoretical and empirical points of view. Here, an attempt is made to capture the earning differential quantitatively, using the standard regression technique. The views of both employers and workers regarding wage inequality are then summarised.

5.1 Defining discrimination

Discrimination between men and women in respect of wages is a labour market reality almost everywhere in the world. Discrimination at work involves denial of equality of treatment and opportunity to individuals in their own right or as members of a social group (Ghai, 2003). The ILO's Discrimination (Employment and Occupation) Convention 1958 (No.111) identifies discrimination as 'any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation' (Article 1, para. 1(a)).

The International Labour Conference at its 86th session in June 1998 approved a historical document, the ILO Declaration on Fundamental Principles and Rights at Work. The Declaration affirms that all ILO member states have the responsibility 'to respect, to promote and to realise, in good faith and in accordance with the Constitution of the ILO, the principles concerning the fundamental rights' which include, among others, the elimination of discrimination in respect of employment and occupation (Fields, 2003). This principle was reiterated in the World Summit on Social Development at Copenhagen in 1995. In 2000, the 33 countries of the OECD incorporated the principle into their revised *Guidelines for multinational enterprises: global instruments for corporate responsibility* (OECD, 2000a).

Discrimination at work thus refers to difference in treatment based on the personal characteristics of an individual such as race or sex, irrespective of whether that individual's profile matches the requirements of a particular job. Particular forms of discrimination against women exist in the labour market which put her at a disadvantage or limit her access to

benefits and opportunities available to other members of the society. Even in societies where equal opportunity is a norm, women are prevented from enjoying fully equal status with men.

Discrimination may be direct or indirect. It is direct when rules and practices explicitly exclude or give preference to certain individuals solely on the basis of their belonging to a particular group. Job vacancy announcements, which overtly discourage applications from married workers or from people above a certain age or with a certain colour or complexion, are examples of direct discrimination. These are rooted in prejudices and biased perceptions of the abilities or work ethics of individuals belonging to certain groups. Such stereotyping is discriminatory because it implicitly requires that individuals from a disadvantaged group reproduce the characteristics commonly ascribed to individuals from society's dominant group (Sheppard, 2002).

Indirect discrimination refers to norms, procedures and practices that artificial distinction between various groups of people in the society. In some countries, for example, height requirements for filling certain positions have the effect of excluding members of certain ethnic minorities whose average height tends to be below the overall national average. Indirect discrimination may also occur when distinct categories of workers are treated differently. Proving the existence of indirect discrimination is difficult if it does not completely exclude certain groups of people from the workplace. In Canada, for instance, cases of indirect discrimination against members of religious minorities or people with disabilities are much easier to prove than cases involving gender-based or racial discrimination that generate disparities, but do not result in absolute exclusion of either women or members of racial minorities from work (Sheppard, 2002).

5.2 Wage inequality in the study area

There is no denying that female labour force participation has increased substantially during the past half century in advanced economies (Fullerton, 1999). In addition, women's educational achievements are on the increase. Women's vertical mobility along occupations is also discernible. Nevertheless, despite these advances in women's labour-force position and the adoption of equal pay for equal work regulations in many countries, women do not seem to be earning the same pay as men (Chichilnisky and Frederiksen, 2008). Research provides

compelling evidence that women workers in Bangladesh suffer disproportionately more than men from inadequate policies and adverse practices in the labour market.

These sufferings are manifested in terms of wage rates, night work, family responsibilities, sexual harassment and reproductive health concerns. Based on the preconceived idea that women are less productive than men, they are given lower wages. The female workers are never considered as partners in the wage-setting process. They are wage takers, mainly because of their oversupply and non-unionisation. Lack of appropriate platforms to ventilate their demand is also a determining factor in their becoming wage takers. Employers take advantage of the situation and tend to pay them less than they deserve. There is no monitoring mechanism following such practices of the employers, and a gender wage-gap thus persists in the labour market of Bangladesh.

Economic theory suggests that competition will eventually overcome employers who discriminate against female employees because they pay higher labour costs than their non-discriminating counterparts, and so will be less profitable than their competitors and be driven out of business (Becker, 1957): hence, in a competitive market, gender discrimination is unsustainable (see Krueger, 1963; Madden, 1975; Caldwell and Rosenzweig, 1980). However, when both employers and employees (including females) share the same discriminatory attitude toward females, employers who do not discriminate will be unable to benefit from cheaper female labour. Therefore large, persistent wage discrimination exists.

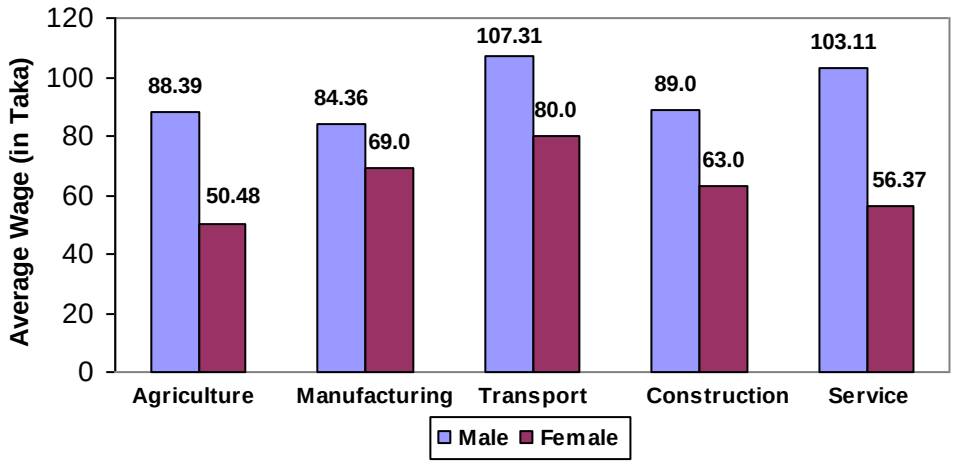
In the study area we have noticed discernible wage differentials between male and female workers. The gender wage gap is usually expressed as the ratio of female to male earnings. If we compare wage differentials across different sectors and occupations, we find that male workers' wages are significantly higher than female workers'. In the agricultural sector, the average daily wage for a female worker is Tk. 50.00, while for male worker it is as high as Tk. 88.00. In the service sector, a female worker's wage is roughly fifty percent of a male worker's. We observe the same trend in other sectors. In the manufacturing sector female workers earn 18 percent less than male workers, while this proportion is 45 percent in the service sector. In the agriculture, construction and transport sectors the proportions are 43 percent, 29 percent and 25 percent respectively (Table 5.1) and (Figure 5.1).

Table 5.1: Daily Average Wages by Sector and Sex (in Taka)

Sector	**Number**		**Daily average wage**	
	Male	**Female**	**Male**	**Female**
Agriculture	177	71	88.39	50.48
Manufacturing	147	53	84.36	69.00
Transport	59	1	107.31	80.00
Construction	25	27	89.00	63.00
Service	46	54	103.11	56.37

Source: Calculated from data obtained from the survey.

Figure 5.1 : Daily Average Wages (in Taka) by Sector & Sex



Source: Drawn from data obtained from the sample survey.

The manufacturing sector in our study has been sub-divided into five sub-sectors: garments, textiles, steel and engineering, electronics, and leather and footwear. In the garments sub-sector, male workers get Tk. 10.0 more than female workers daily for equal work. Interestingly, in the textile sub-sector, daily average wages for both male and female workers are almost same (Table 5.2).One plausible explanation for such equality of wages may be that both types of workers in the textile sub-sector are equally skilled. There is no work for unskilled workers in the textile sub-sector. As there were no female workers among our

sample in steel and engineering, electronics, or leather and footwear, we could not compare female workers' wages with those of male workers.

Table 5.2: Daily Average Wage by Manufacturing Sub-sector and Sex (in Taka)

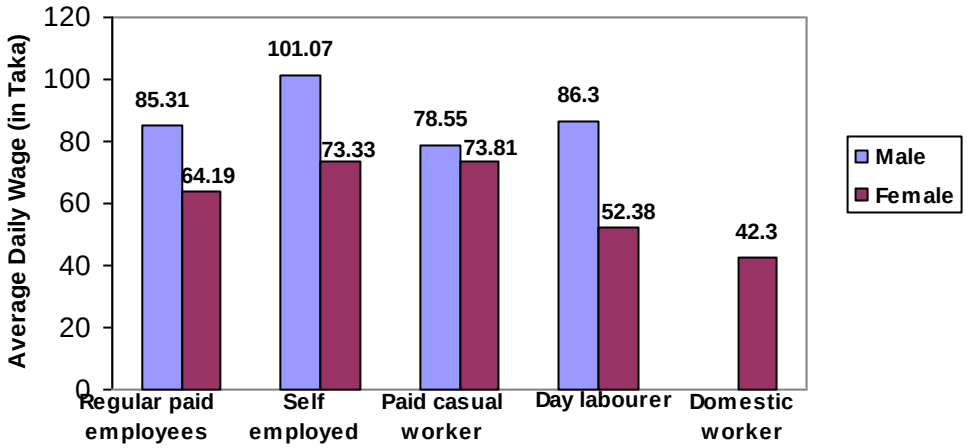
Category of manufacturing sector	**Number**		**Daily average wage**	
	Male	**Female**	**Male**	**Female**
Garments	29	31	74.72	64.19
Textiles	18	22	75.28	75.77
Steel & Engineering	40	–	88.40	–
Electronics	30	–	76.60	–
Leather & Footwear	30	–	101.50	–

Apart from examining wage differentials between males and females across various sectors, we also examined differences in the employment status of the workers. We found marked a difference in wages between males and females as viewed from employment status of the workers. The daily average wage for female regular employees was found to be Tk. 64.00, while the figure for their male counterparts was Tk. 85.00. Data indicate that female day labourers' daily average wages are about 60 percent of male day labourers' wages; but for casual workers, the female rate was close to that of males (Table 5.3) and (Figure 5.2).

Table 5.3: Gender Wage Gap by Status of Employment (in Taka)

Status of employment	**Number**		**Daily average wage (in Taka)**	
	Male	Female	Male	Female
Regular paid employee	124	31	85.31	64.19
Self-employed	183	9	101.07	73.33
Paid casual worker	51	47	78.55	73.81
Day labourer	96	92	86.30	52.38

Figure 5.2 : Daily Average Wages (in Taka) by Status of Employment & Sex



Source: Drawn from data obtained from the sample survey.

It follows that female workers are paid less than male workers for jobs of equal worth. Female workers are also paid less even though they work more than their male counterparts. To test this observation, we estimated the number of days worked and wages earned by both male and female workers during the month preceding the date of interview. The findings are interesting and revealing: in all sectors except agriculture, females worked more but were paid less than male workers. During the month preceding the date of interview, in the agricultural sector female workers worked only 0.25 days less but were paid Tk. 889.87 less than male workers. In the manufacturing sector, female workers worked 3.04 days more than the male workers but were paid Tk. 133.31 less (Table 5.4 and 5.5). This is in line with research findings that in practically all countries, the total amount of work done by women exceeds that of men (UNDP, 1995).

Table 5.4: Average Days Worked Last Month by Sector and Sex

Sector	**Average days worked last month**	
	Male	Female
Agriculture	22.10	21.85
Manufacturing	21.68	24.72
Transport	18.86	19.00

Construction	19.34	23.14
Service	21.50	22.95

Table 5.5: Average Wages Earned Last Month by Sector and Sex (in Taka)

Sector	**Number**		**Average wage last month**	
	Male	Female	Male	Female
Agriculture	177	71	2064.60	1174.73
Manufacturing	147	53	1947.01	1813.70
Transport	59	1	1887.29	1520.00
Construction	25	27	1953.40	1671.30
Service	46	54	2042.65	1555.74

Females are paid less than males because females tend to be concentrated in low-producing and low-paid jobs. In order to examine this tendency, we estimated the extent of sex segregation of workers across the various sectors under study. This was estimated through the Duncan Index (DI),[13] and results show that the transport sector is highly segregated as indicated by DI (0.48), which means that this sector is dominated by male workers. Segregation is relatively low in the construction sector, with a DI of 0.02, and service sector (DI 0.04). Indeed, female workers are predominant in these sectors. The indices for manufacturing and agricultural sectors turn are 0.23 and 0.21 respectively, indicating that the proportions of male and female workers are closely balanced. There are some occupations belonging to the service sector, such as domestic work, which are predominantly female.

Findings of previous studies conducted at macro level have similarity with those of this study. In the export-oriented garments sector, the gender wage gap is substantial, and has widened over the last few years. A female worker's average earnings are about 66 percent of a male worker's. Such gender difference in earnings prevails in almost every job category. The gap

[13] $D = 0.5\sum_{i=1}^{N}\left| f_i - m_i \right|$

in wages widens further if only regular pay is taken into consideration, since overtime and other income account for more than 23 percent of female workers' total earnings but for only 16 percent of male workers' total earnings ((Majumder and Zohir, 1993).

Employers often justify the difference by claiming that women workers have low productivity compared with their male counterparts, due to their low level of education, training, experience, and labour market participation; but the gender wage gap persists even after controlling for all these factors. A few studies have measured the productivity of female and male workers to determine whether pay differences can be directly linked to productivity differences. One, using a large linked employer-employee data set for the US (1996), showed that women were 85 to 96 percent as productive as men but were paid only 66 to 68 percent as much (Council of Economic Advisers, 1998). The low wage rate for women workers represents a violation of the minimum wage ordinance as well as of ILO Convention No. 100: Equal Remuneration (1951) and Recommendation No. 90, which lay down the principles of equal pay for work of equal value.

5.3 Wage discrimination against women: an overview

A large body of empirical literature analyses the gender wage gap across countries irrespective of the level of development. A gender wage gap may be caused by three factors: gender–labour–productivity differences, gender occupational segregation, and internal occupational gender discrimination (Becker, 1957; Blinder, 1973; Oaxaca, 1973; Brown et al. 1980). Mincer (1958) and Becker (1957) adopt a dummy variable approach; Blinder (1973) and Oaxaca (1973) use the decomposition method to estimate the gender wage gap. Recent studies adopting the former approach suggest that by controlling for a wide range of productivity-related characteristics that determine wage (e.g. human capital and family background variables), women working in foreign (American and Japanese) firms in Thailand earn 11 to 15 percent less than men who are similarly employed (Lawler et al., 1991); a similar differential of 9 percent was found in China's urban sector (Byron and Manaloto, 1990), while a 20 percent difference was discovered in China's rural industrial sector (Meng, 1992).

The dummy variable approach ignores the fact that the market may pay men and women differently for their human capital and other endowments. Blinder (1973) and Oaxaca (1973) postulate that the wage differential is due to a difference in productivity plus an unexplained component that is often referred to as discrimination and which includes the intercept and slope differences. Studies based on this approach are few for developing countries. The results, however, are interesting from a policy point of view. Study findings reveal that market discrimination against women does not correlate highly with economic development but does relate to government legislation and cultural influence (Meng, 1992). The case of China is a living example in this regard.

China's urban state enterprises are controlled by central and provincial governments. Before economic reform began in the 1970s, individuals' earnings in this sector were determined centrally. Economic reform has altered this situation slightly, but the basic wage-setting system has changed little. Since the Chinese government follows an equal-opportunity policy for political and ideological reasons, gender–wage discrimination is certainly less serious in China's state enterprises than in the rural industrial sector (Meng and Kidd, 1995). On the other hand, China's rural industrial sector is newly developed and decentralised; company managers rather than government set wages sector. Here cultural factors are a significant influence on the influence wage-setting process.

Regarding the role of government legislations and policies constructing the gender wage gap, Gunderson (1994) points out that the earning gap tends to be smaller in countries with centralised collective bargaining that emphasises egalitarian wage policies in general (e.g. Sweden, Norway and Australia). It tends to be the largest in countries that emphasise traditional non-egalitarian role for women in the labour market (e.g. Japan) or that have decentralised , market oriented wage determination with enterprise level bargaining e.g. United States and Canada). Although this statement refers to developed countries, it is applicable to developing countries also.

Some researchers (Terrel, 1992; Chapman and Harding, 1986) observe that wage inequality is inherent in the broad structure of wage and hierarchy within an organisation. Terrel (1992) argues that the gender wage gap is to some extent due to the relative distribution of men and women across occupations. If we analyse the issue from this point of view, we see that the

average wage gap between men and women is sensitive to two factors. The first is the position of female employees in the occupational hierarchy of pay, which in turn depends on both objective differences in productive characteristics and on discriminatory practices. The second factor is the dispersion of wages, which determines the extent to which women are penalised on account of their position. In other words, the greater the inequality in the overall structures of wages, the wider the gap between men and women (Blau and Kahn, 1995). Indeed, given two countries with similar structures of employment by sex, the country with the widest wage dispersion will be the one with the widest wage gap between men and women, because women's unfavourable position in that country's hierarchy is bound to have more serious financial implications than in the country with less overall wage inequality.

In most countries, the difference in the return to an additional year of schooling or experience, rather than the difference in the male-female levels of education and experience, accounts for most of the observed earnings gap. It is evident from the above findings (Blau and Kahn, 1995) that women are getting lower returns on education and experience. Terrell (1992), however, points at occupational structure and sex segregation to explain earnings differentials.

5.3.1 Occupational structure

The most dramatic effect of occupational structure on the male–female wage differential was found in Malaysia by Chapman and Ross Harding (1986). They showed that, if Malaysian women had had the same occupational structure as men in 1979, the wage gap would, *ceteris paribus*, have been reduced by 61.6 percent. House's (1983) study of Cyprus showed that different occupational structure between the sexes and the difference in returns for men and women within the same occupation accounted for 16 percent of the earning gap. In Tanzania, Knight and Sabot (1982) found that the differences in 1977 in the distribution of men and women across five occupational categories explained 22 percent of the wage gap. The study by Ronald Oaxaca (1973) of the US labour market suggested that equalising the occupational distribution of men and women with the same education and years of experience would reduce the earning gap by 22.5 percent.

For Latin American countries, Gindling (1990) and Tenjo (1991) have shown that the distribution of women across occupations is important in explaining the wage gap. Using

1979 data on all working women in Bogota, Columbia, Tenjo (1991) found the earnings gap between men and women to be 28 percent, of which four-fifths was explained by different human capital endowments and only one-fifth by differences in the returns to endowments. He, however, concluded that within each occupation men still had more opportunities than women.

Many studies have reported that women are ranked at the lower end of the occupational hierarchy (See Levin, 1991; Anker and Hein, 1986). As Gunderson (1994) points out, much of that gap (gender wage gap) reflects the fact that women tend to work in female dominated occupations that are low paid. Even when these occupations involve the same skill, effort, responsibility and working conditions as the male-dominated jobs, they tend to pay less than the male-dominated jobs.

Occupational wage differentials suggest that male-dominated jobs provide higher wages than female-dominated jobs. In Latin America, the proportion of women in the professional and technical category was 30 percent, and in service category it was 61 percent – twice as high. Domestic service often represents the most important occupation for women in Latin America: 29.2 and 17.9 percent of the employed women in Guatemala City and Bogota respectively were domestic servants in the late 1970s (Terrel, 1989; Tenjo, 1991). On the other hand, among all occupations females are most underrepresented in managerial positions. Knight and Sabot (1982) note that in Tanzania's manufacturing sector 34 percent of male workers but only 4 percent of female workers were in supervisory or skilled occupations in 1977. The situation in Asian countries is not significantly different from that of Latin American and African countries.

5.3.2 Occupational segregation

Blinder and Oaxaca's (1973) decomposition approach is an improvement over Mincer's (1974) dummy variable approach in that the former distinguishes gender productivity differences from gender wage differentials. Nevertheless, they ignore another possible cause of gender wage gap, namely occupational segregation. It is obvious that, since wages vary considerably across occupations, occupational segregation on the basis of gender will affect gender wage differentials. Brown, Moon and Zoloth (1980) extend Blinder's decomposition

approach to capture the impact of gender occupational segregation on gender wage differentials. The only study of this type on Asian countries is Meng and Miller's (1995) paper on China's rural industrial sector. Their findings suggest that, although occupational discrimination in this sector is less important than wage discrimination within each occupation, both within-occupation and inter-occupational wage discrimination are higher in China's rural industrial sector than in industrialised countries.

Empirical evidence suggests that the distribution of women across occupational categories is an important determinant of the sex earnings gap because the concentration of women in a very limited number of occupations exerts downward pressure on wages in these occupations. Singh (1996) shows that in India, growth in agricultural output due to the green revolution has benefitted the agricultural female wage labour force, helping women's real wages to rise significantly. His study also finds that although women's wages increased, the crowding of female wage workers in agriculture actually reduced real wage rates. Agricultural growth alone did not cause a significant decline in male–female agricultural workers' wage differentials.

There is considerable segregation of women by occupation and industry. Distribution of employment between men and women by occupation is remarkably similar in the international context. Anker and Heins (1986) analyse women's occupational distribution among six main non-agricultural occupations. Their findings suggest that in most Asian countries under study, females dominate in clerical, sales and service occupations. In the professional category, women are concentrated mainly in teaching and nursing jobs (Anker and Heins, 1985). In India, in 1971, 90 percent of women professional workers were nurses or teachers as compared with 57 percent of male professionals (Anker and Heins, 1985). Similarly in Cyprus, 77 percent of professional women were nurses or teachers, as compared with 40 percent of men in 1979 (House, 1983).

Gindling's (1990) findings for Costa Rican women are similar to those of Tenjo's (1991). A study by Boulding et al. (1976) applies the Duncan Index to occupational data for the 1960s and finds that occupational segregation is the highest in Latin America (with an index of 0.49), followed by North Africa and the Middle East (0.39), Europe and North America (0.37), Africa (0.30) and Asia (0.28). More recently, Tzannatos (1991) applies the same

Duncan Index to five Latin American and Caribbean countries using 1980–82 data, and compares their values with the 1960 figures. He finds a slight improvement in three countries (Ecuador, Mexico and Venezuela) and a worsening in two (Jamaica and Peru).

In Bangladesh, female workers tend to concentrate in low-status occupations both at micro and macro levels. The occupations are mainly secretarial, clerical, nursing, primary level teaching and domestic work. At enterprise level, female workers are assigned low-profile jobs. For example, in the garments industry tasks are allocated largely on the basis of gender. Women are employed as operators and sewing helpers, based on the notion that women do better in these jobs since the work involves traditional female sewing skills. The perception that women are unable to provide the required manual labour they are not employed in the cutting section, where jobs are better paid. Most jobs in the sewing sections are unskilled, low paid and temporary in nature.

The issue of gender wage discrimination is given little attention by the policy makers in developing countries. Many Asian countries, such as Hong Kong, Korea, Malaysia, Singapore, Thailand and China, have not ratified the equal-pay-for-equal-work convention (Standing, 1989). Anti discrimination policies – including equal-employment opportunities, equal-pay-for-equal-work and comparable-worth policies – are especially hard to implement in developing countries because and informal urban sector and a rural subsistence sector dominate their economies (Gunderson, 1994). In such informal and rural sectors, government policies play a negligible role or no role at all. Thus traditional gender discrimination affects both gender-occupational attainment and wage determination patterns. This cultural influence normally affects employers and employees, including females.

5.4 Theoretical interpretation of wage discrimination against women

Existing literature provides three main theories: human capital theory, labour market segmentation theory and gender discrimination theory, to explain wage inequality. Human capital theory considers the labour market as a commodity market, where workers sell their labour and are paid according to their productivity, which is a function of their human capital such as education, training, skills and experience (Becker, 1964). Segmentation theory divides the labour market into primary and secondary sectors, with jobs in the two sectors totally

different in terms of pay, security, service benefits, training opportunities and working conditions. This segmentation of the labour market reduces wages in female occupations through an overcrowding effect described earlier. Gender discrimination theory seeks to identify non-labour market factors to account for the persistence of wage differentials.

5.4.1 Human capital theory

Education is one of the most important components of human capital investment. People invest in education and acquire skills so that they will be valuable to potential employers and capable of earning higher wages. They continue to invest in education until the marginal costs exceed the marginal benefits. Higher education is strongly correlated to higher income. The positive relationship between education and productivity encourages employers to compensate educated workers highly. Educated workers in turn make profits for the enterprise because of their improved productivity. It may be assumed that employees with a better educational background have generally been more diligent than less well educated employees in the pursuit of knowledge. We may further accept the proposition that more knowledgeable employees benefit more from the improved productivity of the enterprises.

Some economists however, differ with the above argument. Spence (1973) for example, in his signalling model, advocates that employers regard formal education mainly as a sorting device that signals which applicants are likely to be more productive after training. It is difficult to suggest which theory – education as a developer of productive skills or as a signalling mechanism – is more realistic. However, it seems intuitively reasonable that, at least, certain positive attitudes gained through long-term education may seem valuable to employers, and may translate into higher wage levels for the highly educated.

Human capital theory also recognises work experience as an important productivity-enhancing factor. The wage level is relatively high for those who have longer work experience. Hashimoto and Raisian (1985) show that the cumulative percentage increase in wages of workers with 15 years of service is 21.6 percent, while the increase is 56.2 percent for workers with 30 years of service. There are several explanations justifying the positive relationship between work experience (length of service) and wage level. First, a wage increase may be viewed as a reward to workers for the training and work experience that they

have accumulated over their working lives, a reward justified by the extra productivity and profit that their training and experience have generated (Brown, 1989). Second, companies offer higher wages to retain senior employees, whose resignation would represent a serious loss of human capital investment for their employers (Hutchens, 1989). Third, wage increases are offered to senior employees as a reward for their superior performance and higher productivity. These arguments should be enough to justify a positive relationship between work experience and the level of wages.

Theory suggests that human capital components such as education, training and experience determine both the wages and the productivity of workers. Not only that: those factors play a significant role in shaping the relationship between wages and productivity at both micro and macro levels. Skill and leadership needed to perform a job are attained through education and training. The human capital theory (Becker, 1964) explains the effect of education and training on income. The group of human capital theorists such as Mincer (1974) and others (Standing, 1987; Anker, 1985; Arrow, 1973; Byron, 1990) offer empirical analysis of the effect of training on wage growth. Empirical evidence suggests a positive relationship between skill and income.

5.4.2 Labour market segmentation theory

The dual-market theory (Cain, 1976; Standing, 1987) is often invoked to account for gender-based wage differences. This theory contends that the labour market is divided into primary and secondary sectors which are mutually exclusive in terms of transactions. The former provides high pay, stable employment, a favourable working environment and ample opportunities for promotion and future development, while the latter is characterised by unsatisfactory wages, unfavourable working conditions, little or no job security and nearly zero potential for future development. Cain (1976) observes that females not interested in career development are more willing to work in the secondary sector than males, resulting in unequal employment status between the sexes.

This theory also implies that occupational segregation by sex results in comparatively low wage rates in female-dominated occupations because many female workers are crowded into a relatively small number of jobs, putting downward pressure on wages (Bergmann, 1974).

The concentration of women in a few occupations means that their labour supply curve in these occupations is shifted farther to the right than it would be otherwise. As the total labour supply curve in these occupations rises, employers will tend to offer lower wages to minimise costs of production and maximise profit.

Comparable-worth studies provide good illustrations of gender wage discrimination. In the case of similar-worth jobs, male-dominated occupations usually offer higher pay rates than female-dominated occupations (Anker, 1997). In addition, horizontal segregation (the distribution of men and women across occupations) and vertical segregation (the assignment of different positions, grades or levels across gender) have been identified as important determinants of gender pay differentials (Hakim, 1992). Vertical segregation may result in lower pay for female workers. According to gender discrimination theory, we may assume that gender is an important predictor of wage levels even when differences in human capital are taken into account.

Another economic explanation for the persistence of female-male wage differentials is statistical discrimination theory. This theory offers an explanation for occupational segregation based on the behaviour of enterprises (Arrow, 1973; Phelps 1972) and states that most employers use statistical device while measuring the potential productivity of new job applicants. It is a process whereby average differences between population sub-groups are used as a basis for discriminating against all members in a particular sub-group. The measurement is based on applicants' educational background, work experience, age, and performance on a pre-employment examination. Lacking perfect information on job applicants, employers tend to use characteristics such as sex, race, age and place of education as screening devices.

In the absence of objective measurement, employers may be influenced by stereotypes of female job performance (less dedication to the job, the inability to fulfil job requirements because of family obligations, the stronger likelihood of career breaks). Influenced by these unfavourable stereotypes, they may be persuaded that female employees are less capable than males and therefore assign them to low-paid jobs or be unwilling to invest in professional training for them (Aigner and Cain, 1977). As a result, women get relegated to low-profile

jobs that encourage them to leave the labour market altogether, thus retroactively validating the employer's preconceptions.

Huang (1999) in his study on Taiwan finds the wage effect of current length of service for female workers slightly higher than that for male workers. This finding seems consistent with the argument of statistical discrimination theory: that when lacking objective measures of potential productivity, employers may be influenced by stereotypes of female job performance and therefore may initially pay women a wage lower than that of their male counterparts. With the increase in seniority it is expected that wages for females will increase, but for Taiwan it is found that the current average length of service of females (6.28 years) is markedly shorter than that of males (9.82 years). According to gender theory, a major reason why women have shorter lengths of service is that they are overwhelmingly responsible for the provision of child care at home (Anker, 1997).

Despite valuable contributions of human capital theory and labour market segmentation theory to the understanding of gender wage differential, these theories are not exhaustive. When female–male wage differentials are decomposed, economic theories can explain only part of the differences. The usual approach is to divide the gender wage gap into two separate components: one part attributable to gender differences in productivity- related characteristics, and a residual component. The residual component explains a significant portion of earnings differentials. Grimshaw and Rubery (2002) note that gender wage gaps have now been used as structural criteria to judge economic equity; but to make such a judgement requires that one takes into account the different skills and levels of experience that men and women may bring to the labour market –exactly what the Oaxaca decomposition seeks to do. In this regard, the unexplained portion of the wage gap is identified as the outcome of discrimination. Once differences between men and women in the relevant determinants of wages are captured, any residual difference in pay must be due to discrimination.

5.4.3 Gender discrimination theory

Gender discrimination theory argues that women's disadvantaged position in the labour market is the result of a patriarchal power structure and women's subordinate position in the society and the family (Anker 1997). Because of some perceived characteristics such as a

caring nature, skill in household-related work, attractive physical appearance, lesser ability than males in science and mathematics, disinclination to supervise others, less need for income, and the like, women are channelled into typical female occupations such as nursing, housekeeping, sewing, and secretarial work. Gunderson (1994) identifies a negative relationship between pay level in an occupation and the degree to which it is feminised. Women are much more likely to be concentrated in the low-status (Melkas and Anker, 1997) and low-paying occupations (Hotchkiss and Moore, 1996).

Anker and Hein (1985, 1986) in their study on employers and employees in seven Third World urban areas capture employers' views towards women workers. Employers express the view that pregnancy, childbirth and child rearing create various direct and indirect costs for them. They are reluctant to hire women because they see them as less productive during pregnancy. They do not want to have the problem of replacing them during maternity leave since it creates discontinuities; they fear that women will not return after child birth. Anker and Hein assess the accuracy of the two most frequently cited complaints from the employers: absenteeism and higher turnover. Data in these countries did tend to confirm the impression of higher female absenteeism, mainly because of childcare responsibilities.

In advanced countries, time-use studies consistently show that wives spend relatively more time in household activities than do husbands, while husbands spend relatively more time in the workplace than do wives. Davis et al. (2007) in their study of 28 nations find that women perform more household work than men. Their data also indicate that women do 2–3 times more household work than men, a ratio confirmed by Coltrane and others (2000). Moreover, they find a negative correlation between the gender wage gap and the male share of household work. The less men participate in household work, the greater the difference between male and female pay in the market place.

False assumptions about women's work ethics prevail in a masculine work culture, and men working in such a culture are likely to remain oblivious to the needs and concerns of female workers. Acts of sex discrimination committed by men in a masculine culture are generally subtly conceived and not readily discernible, and their existence may be difficult to establish. Men in a masculine culture tend to emphasise the differences between the gender-role expectations of men and those of women as they relate to child rearing responsibilities, and to

conclude that a women's family obligations conflict with her work responsibilities, thus requiring women to aspire to less demanding positions. Still other false perceptions of working women lead to unrealistic conclusions regarding women's proper role in the workplace.

If traditional attitudes persist in a society, women will continue to be discriminated against both socially and economically. Asian countries generally have long histories of nurturing such traditional attitudes. Their male-dominated cultures have had a deeply ingrained influence on all aspects of social life. As pointed out by Gunderson (1994), Discrimination in the developing countries tends to be more overt, with all parties (employers, males and even females) often adhering to traditional attitudes about what jobs are suitable and proper for women, and what pay is appropriate given perceptions about who is the breadwinner. Wage discrimination is most severe in areas where other indicators of entrenched gender inequality such as patriarchal and/or religious restrictions on women's mobility and visibility are also present (Park, 1993).

Since women are less trained and educated, their scope of getting into the labour market is very much limited. Faced with limited employment opportunities, they are willing to work at low wages, for long hours and in unfavourable working conditions. Their 'oriental docility' normally does not let them join unions and agitate against the management (Standing 1989; Barbezat 1993). Lack of bargaining power and unionisation means they cannot negotiate with the employers on level playing field and so employers can and do pay them less than men for the same job. Female workers are helpless in the face of unlawful practices of the employers, the allegedly partisan role of trade unions, lack of enforcement of labour laws and inadequacy of policies protecting the rights and privileges of the female workers; and they suffer from perpetual discrimination in the labour market as well as in society.

5.5 The model

Econometrically, there are different ways to examine gender wage differentials. The simplest way is to assume that only initial wage levels (intercept differential) are affected by gender factors, while the market does not pay males and females different prices for their endowments (slope differential). Hence the gender wage differential can be captured by

adding a gender dummy variable to a wage equation to detect the degree to which women suffer discrimination. This is a popular and widely used method of analysing gender wage differentials. The issue of discrimination is been addressed here by estimating the earning function (for both men and women) that incorporates productivity-related variables on the right-hand side plus a dummy variable for sex; hence the test for discrimination is a test of whether the coefficient on the sex variable is significantly different from zero. This methodology conforms to earlier methodologies, most important of which is that of Mincer (1974). The specification of the model is as follows:

$$Y = \alpha + \beta_1 A + \beta_2 E + \beta_3 Ex + \beta_4 Ex^2 + \beta_5 G + U \qquad (1)$$

Taking log of equation (1) we get equation (2):

$$\ln Y = \alpha + \beta_1 \ln A + \beta_2 \ln E + \beta_3 \ln Ex + \beta_4 \ln Ex^2 + \beta_5 G + U \qquad (2)$$

Where:

$Y =$ Wage earnings

$A =$ Age

$E =$ Education

$Ex =$ Experience

$Ex^2 =$ Square of experience

$G =$ Gender dummy (female = 1 and male = 0)

$U =$ Stochastic term

5.6 Data source

See sub-section: 1.2.1 of chapter 1.

5.7 Results

The regression equation has been estimated applying the Ordinary Least Square (OLS) method. The estimated regression turns out as follows:

$$Y = 43.27 + 0.18A + 0.12E + 0.09Ex - 0.17Ex^2 - 0.21G + e$$

(14.21) (9.53) (7.22) (8.67) (-5.34) (-4.12)

$$\overline{R}^2 = 53.4 \quad d.f. = 506 \quad n = 512$$

The data fitted to the earnings functions show that only about 53 percent of the observed variations in earnings are explained by differences in age, educational attainment, on-the-job experience and gender. Coefficients of all variables are significant at less than 0.05 level of significance as indicated by t-statistics in the parentheses. The unexplained part may be due to personal characteristics (e.g. ability, patience, commitment), scale effect of enterprises, employers' stereotypes about female workers, etc. The impact of education on earnings is positive, implying that earnings rise with an increase of age. The earnings are at a low level at the prime age, then as age increases earnings also increase. At the final stage of the career, earnings show a downward trend.

Educational attainment has a highly significant effect on earnings, and the level of earnings generally rises with the level of education. An extra year of schooling increases earnings by about 12 percent across all occupations. This suggests that men and women who achieve a higher level of education are better off economically. An additional year of on-the-job experience improves earnings by about 9 percent, contributing less than does a year of additional schooling. Ex^2 is significant across all occupations. This means that workers' productivity level gradually increases up to a certain level in the life cycle, then gradually declines as they grow old because at the later stage the law of diminishing marginal productivity takes effect.

The earnings of workers follow their productivity, showing an upward trend at the earlier stage and a downward trend at the later stage of the life cycle. There is a tendency among employers to retrench relatively old workers, particularly during economic crises. The gender variable G, has a statistically significant and negative coefficient. The regression analysis

indicates that, controlling for age, education and experience; female workers are paid 21 percent less than male workers. This difference is attributable to gender discrimination.

5.8 Empirical evidence of wage discrimination against women

Wage inequality between males and females is a stark labour market reality throughout the world. It has been a contentious issue, widely protested everywhere and relevant not only to workers and employers but to policy makers as well. Empirical evidence suggests widespread existence of gender wage inequality in both developed and developing countries. A description of wage inequality prevailing in both developed and developing countries has been provided below in brief.

5.8.1 Wage inequality in developing countries

Some economists consider wage inequality an elusive labour market failure, because it means that employers pay workers different wages for doing the same job. Empirical studies on this issue are many. Many studies have endeavoured to measure the wage gap between men and women arising out of differences in human capital and factors that can not be traced to differences in characteristics, thereby reflecting outright discrimination. In the context of developing countries, research has tended to emphasise the supply of female labour in relation to household characteristics. Researchers highlight the obstacles to women's entry into the labour market, focusing particularly on wage employment in the formal sector. In contrast, studies on the demand side of the labour market are scarce.

A serious problem causing gender-wage discrimination in developing countries is extensive unemployment in rural and urban areas. The pools of unemployed in developing countries encourage, by and large, gender discrimination, since so many women are willing to work under discriminatory conditions. As the Work Bank recently pointed out, 'women in developing countries are often overrepresented in the informal sector and are so eager for jobs in the modern sector that they willingly ignore employer's failure to implement government-legislated standard' (World Bank, 1994).

Empirical evidence shows that earnings differentials between men and women are substantial in most Asian and Latin American countries. Table 5.6 below presents female–male wage

ratios for selected Asian countries both developed and developing. Of all those listed in the table, women in Japan and Korea seem to earn the least relative to their male counterparts, whereas women in China seem to have the highest relative earnings. Some surveys indicate that women in Vietnam earned about 72 percent of the respective male rate of pay in 1992 (Desai 1995) and that highly educated women in Indonesia earned 88 to 90 percent of the comparable male rate while low-educated women earned 70–75 percent of the associated pay rate for men in 1992 (Manning, 1996). An ILO report strengthens the above findings, indicating that females command only 44 percent of the male wage in Japan, 56 percent in South Korea, 58 percent in Singapore, 61 percent in Taiwan and 66 percent in Hong Kong (ILO, 1997).

Table 5.6: Female Earnings as Percentage of Male Earnings in the Manufacturing Sector

Year	**1980[b]**	**1990**
Hong Kong	74 (81)	70 (90)
Taiwan[c]	66 (81)	61 (90)
Singapore	62 (83)	71 (90)
South-Korea	46 (80)	54(90)
Malaysia	73(80)	n.a.
Philippines	62 (80)	n.a.
Thailand	70 (83)	n.a.
Japan	53 (80)	50 (90)
China	85 (81)	86 (87)

Source: Reproduced from Xin Meng, 'The Economic Position of Women in Asia', IIAS/IISG, CLARA Working Paper, No. 4, Amsterdam.
Notes: (a): Not available; (b): Data from Heyzer 1989; (c): Data for Taiwan are from the *Yearbook of earnings and productivity statistics*, 1992; (d): Survey data on China's state-owned sector in 1981 and 1987.

In Latin American and Caribbean countries, it is found that the average female-to-male earnings ratio in the late 1980s ranged from 0.55 in Jamaica to 0.97 percent in Paraguay, with most falling in the 0.6 to 0.8 percent range. Latin American ratios are not dissimilar to those of other countries. In Guatemala (1977), the average hourly wage of specialised sales staff, of whom 6.5 percent were women, was the equivalent of US $1.91, whereas the average hourly wage of non-specialised sales staff, of whom 56.2 percent were women, was only $0.71 (Terrell, 1989). In Pakistan, household data show that in 1993–94, the earning gap between males and females was 43 percent, rising to as high as 63 percent in 1979 (Siddiqui, 1998). Huang (1999) finds a significant negative relationship between gender and wage level in Taiwan. Comparing the standardised regression coefficients among explanatory variables, he comes to find gender the strongest predictor of wage differential.

The Food and Agricultural Organisation (FAO), using datasets built on household surveys, examines the determinants of the wage gap in 14 developing and transitional economies.[14] To analyse the male–female wage gap, the data for each country were stratified into urban and rural areas, in order to test the proposition that gender pay gaps are affected by institutional differences between the two. There was no clear-cut rural/ urban difference in either the size of the wage gap or the share of it that could be explained by differences in assets. In both city and country, men earn about 25 percent more than women on average, across the sample 14 countries, and only two or three of these percentage points can be attributed to asset differences i.e., human capital or demographic differences (age, education, ethnicity, marital status, number of children); additional characteristics which describe both the job, and, indirectly, the skills of the job holder (public or private sector, main or secondary job, full or part-time status, occupation, industry); and a set of controls for region and the quality of local infrastructure.

The average unexplained wage gaps are actually somewhat larger for gender (22–23 percent) than for the urban/rural or farm/non-farm dimensions (16–17 percent). While these estimates are far from perfect measures of employer discrimination, they are clearly related to the broader issue of gender bias in the society. In Latin America, by contrast, women's attributes are superior to men's in all comparisons except rural Ecuador: if these attributes were rewarded equally, women would earn more than men, but in fact they earn less, a situation which may be termed hyper discrimination (Hertz et al. 2008).

In this regard the study by Doumbia and Meurs (2003) on Mali is worth mentioning. They carried out a standard econometric analysis of wage structure in order to estimate the effects of personal characteristics and thus find whether women are discriminated against, *ceteris paribus*. They showed that the average wage of women was 84.5 percent of that of men. In order to examine wage differentials they estimated wage equations for men and women, using level of education, experience, number of children and nationality as explanatory variables.

[14] The 14 countries and their survey years are: Bangladesh (2000), Indonesia (2000), Nepal (2003), Vietnam (1998), Ecuador (1995), Guatemala (2000), Panama ((2003), Nicaragua (2001), Ghana (1998), Malawi (2004), Nigeria (2004), Albania (2005), Bulgaria (2001) and Tajikistan (2003).

Then, using combined variables, the differential effects of these personal characteristics were compared between men and women. The earnings equations were estimated separately for men and women, and the estimated coefficients were found to differ only slightly. In order to verify findings, combined variables for education, experience and nationality were introduced into a third specification; the estimated coefficients for these combined effects were not statistically significant. In other words, women's educational qualifications and work experience did not explain their wages being lower than those of men. At this point it thus appears that wage discrimination *per se* is not the result of differential returns to personal characteristics.

Wage differential due to personal characteristics has been found in the majority of the export-oriented sectors of Bangladesh, such as food processing, drugs and pharmaceuticals, leather processing, and textile manufacturing – particularly apparel manufacturing (Bhattacharya and Rahman, 1999). In Taiwan Kao et al. (1994) found that, when including the variable that measures individuals' expected investments in human capital, up to 84 percent of the gender wage gap can be explained by differences in individual characteristics. A study by Gindling (1990) of the Costa Rican labour market showed that the decline in the female–male earnings ratio during 1981–82 was due primarily to the entrance of less qualified women to the labour market. For Pakistan, Siddiqui (1998) in her study based on Oaxaca methodology and the *Household integrated expenditure survey* 1993–94 found that differentials in personal characteristics like education and experience accounted for less than 50 percent of the earnings differential between males and females.

Several studies have identified significant portions of wage differentials that cannot be explained by differences in individual characteristics. Using Oaxaca's (1973) decomposition technique, Gannicott (1986) found that 60 percent of the unadjusted gender wage differential in Taiwan could be attributed to market discrimination. Zveglich et al. (1997), applying a similar method, found that the unexplained portion of the gender earnings gap in Taiwan ranged from 37.4 percent to 62.0 percent during 1978–1992. The size of the residual portion in Taiwan was similar to that in the US (Oaxaca, 1973), but lower than that in Jamaica (Hotchkiss and Moore, 1996). Finally, Blackby et al. (2005) suggest that discrimination

causes women to be underpaid; nevertheless, a large fraction of the gender wage gap seems to remain unaccounted for (Blau and Kahn, 2006).

5.8.2 Wage discrimination in developed countries

It is interesting to note that the difference in wages between males and females is not necessarily lower in developed countries than in developing countries. In the US, for example, female white full-time workers have typically earned between 58 and 65 percent of male salaries since 1955. The gap narrowed in the 1980s after a stable period following the 1960s, but since then the convergence of male and female wages has slowed. The gender wage gap in the US has remained almost constant since the early 1990s (Blau and Kahn, 2006). In the US, using 1981 CPS (Current Population Survey) data, Bayard et al. (1999) showed that although a large fraction of the sex-base wage differential was accounted for by segregation of women into lower-paid occupations, industries, establishments and occupation cells, a substantial portion of this gap was due to the individual's sex. About a quarter to a half of the sex-based wage gap takes the form of wage differences between men and women in essentially the same occupation. The overall level of wage inequality is greater in the US than elsewhere, with an obvious adverse impact on women's relative pay.

Similar trends have been observed in other developed countries, such as Sweden and Denmark. In the OECD countries, on average, women earn 84 percent of men's hourly earnings (OECD, 2002). Females employed in manufacturing earn 68 percent as much as their male counterparts in the United Kingdom, and 79 percent in France. Even though the pay differential is smaller in Nordic countries (78–89 percent), female workers still earn less than male workers (Melkas and Anker, 1997). Ornstein (1983) indicates that in Canada, women receive lower returns than men do for each additional year of education or experience.

If a society believes that wages are gender stereotyped, the economy will experience a gender wage gap, with women earning less than men. If (for what could be historical and cultural reasons) women used to be less educated than men and participated less in the labour force, it would have been rational that women historically earned less than men. Yet even though the premises which determined this historical labour market outcome have changed, – if women and men now share the same starting point for becoming equally productive both at home and

workplace – current beliefs about earnings may be historically biased in favour of stereotypes. This reasoning leads us to argue that the persistence of a gender wage gap in developed societies may be explained by a self-fulfilling historical bias in beliefs.

5.9 Views of employers and workers regarding wage discrimination

The preconceived idea of employers is that women's productivity is less than that of men; and they have their own arguments in favour of their supposition. As well as the theoretical interpretations noted above, we tried to capture the views of the employers of our respondents (workers). To examine why women are paid less than men for the equal worthy job we interviewed both employers and female workers in the study area. We interviewed a sample of 32 employers, of whom 12 were from agriculture, 8 from manufacturing, 7 from the service sector, 6 from transport and 5 from the construction sector. The sample employers were selected at random, according to the relative importance of their number across the various sectors under study. They were asked why women get less pay compared to men for the same job. The female workers under study (206) were similarly requested to express their opinions regarding wage disparity between male and female workers. The results of their views have been synthesised in Table 5.7.

Table 5.7: Gender Wage Discrimination: Views of Employers and Workers

Employers' view	Workers' view
1. The female workers cannot perform heavy work such as: carrying and lifting bricks, stones, water, timber, steel sheets, iron bars etc.	1. We are strong enough to perform heavy work such as carrying bricks, water, stones, scrap materials etc.
2. Female workers' productivity is less compared with that of male workers.	2. We work for the same period (e.g. 8 hours a day) as male workers do. The employers pay provided the job is done properly and they are satisfied with the performance.
3. Female workers waste time gossiping among themselves while at work.	3. Male workers waste time smoking and discussing political matters.
4. Female workers take breaks for personal and family-related problems while at work.	4. When we come to work our household activities are taken care of by other persons (mothers, sisters, relatives, servants etc.)
5. They cannot work under unfavourable weather (excessive heat, cold, rain etc.)	5. We are bound to work under all circumstances because if we do not work, we starve.

Employers' view	**Workers' view**
6. They cannot work at night and long hours.	6. We work for the entire period we are hired for. If not, employers will not pay. You see, in our factory (garment), we work till late at night. We perform overtime work over and above the regular work.
7. Female workers are physically weaker and more vulnerable than male workers.	7. We discharge the same workload as male workers because, if we fail to do so, employers will not hire us and we become jobless.
8. They bring kids with them in the workplace and thus waste time taking care of the kids.	8. True, we bring kids with us, but they do not hamper our job. They play around, we just keep an eye on them.
9. They come late and leave early from the workplace.	9. There is no scope to come late and leave early from the workplace because; in that case employers will cut our wages.
10. They are unmindful and less serious about work.	10. We are serious about our job because if we are not serious we lose it.

Box 1.0: Views of a worker on gender wage discrimination

Hasina Begum, a 32 year old woman, is an inhabitant of the East Satnai village of Nilphamari district which lies in the North-western part of Bangladesh. Her life story was documented in December 2008, a period known as *monga* (seasonal poverty). She is a stone breaker by profession. The stone pieces are used for the construction of roads, buildings and bridges. Her husband has abandoned her and is getting married to another woman. She has two daughters – one is 10 years old and another one is 7. She studied up to level 3 at the local primary school but could not continue her studies because of a financial crisis in the family. Her father was a day labourer and the only bread winner in the family. She had six brothers and sisters altogether so it was not possible for her father to bear educational expenses for her and she had to discontinue her education.

She was married at the age of 14 years although this was not a marriageable age. The financial crisis was so severe that her father was compelled to get her married so young. Her conjugal life did not last long. Due to lack of work in the locality her husband used to go the capital city (Dhaka) for work. While in the capital city, he came in contact with a woman and got married. He now stays in the capital city with his new wife. She came to know about her husband's marriage from neighbours.

Hasina is now working as day labourer just to survive with her two daughters. Her job is to collect stones from the river flowing by the side of her village and break them into pieces which are used for construction purposes. She works from dawn to dusk – about 12 hours a day – against a wage of Tk. 50 (less than AUD 1) per day. This is the only source of income for the family. She lives in a small, congested thatched house.

She observes that male workers get more wages than female workers for the same work. She said, 'we are paid less than men just because we are women. We do the same job as males do, in spite of that we are paid less – we are exploited by the employers. We can not protest, because, if we protest the employers will not hire us and in that case we are bound to starve. If I do not accept employer's offer of wage, there are so many women who would be available to work at this rate. We are really helpless. Moreover, there are no alternative job opportunities in and around the locality. This is a *monga* area which means that there is dearth of job opportunities here. We have no education, no training and can not go outside the locality for a suitable job'.

When there is no work, she borrows from neighbours. The irony of fate is that her neighbours are also poor. They can not afford to lend to others. When she is jobless, she and her daughters eat once a day, not enough to keep body and soul together. Under these circumstances, very often they go to bed without dinner.

5.10 Conclusion

One of the manifestations of discrimination at work is the disparity in wages between male and female workers. Different payment rules for men and women, differences in productivity, differences in human capital, different distribution of the sexes across occupations, crowding

of women in a few selected jobs, employers' stereotypes and social values are some of the factors determining disparity in wages. Research findings show that almost everywhere in the world female workers are paid less than their male counterparts for jobs of equal worth, or for the same jobs. Bangladesh is no exception. In the study area, female workers were found to be paid much less than their male counterparts for equal worth jobs, across various sectors and occupations.

In the agricultural sector, the average daily wage of female workers is about half that of a male worker. In the manufacturing sector, female workers earn 18 percent less than male workers; the proportion is 45 percent in the service sector. In the garments industry, male workers are paid Tk. 10.00 more than female workers daily. Data indicate that female day labourers' daily average wages are about 60 percent of the male day labourers'. Female workers are paid less even they work more than their male counterparts. During the last month preceding the date of interview, female workers in the manufacturing sector worked 3.04 days more but they were paid Tk. 133.31 less than their male counterparts. At macro level, in the export oriented garments sector, female workers' average earnings are about 66 percent of male workers' average earnings.

The regression results show that even when male and female workers are similar in age, education and experience, female workers are paid 21 percent less. Results from other studies on male–female wage differentials corroborate our findings that female workers are paid much less than their male counterparts. A gender difference in earnings prevails in every job category in almost every sector of the economy. The finding is not unique to developing countries like Bangladesh. Research findings show that the gender wage gap is substantial in most Asian and Latin American countries. In developed countries, too, female workers earn discernibly less than men for jobs of equal worth.

Almost everywhere in the world, women are underrepresented in managerial occupations and overrepresented in services. Studies report that women are normally ranked at the lower end of the occupational hierarchy, characterised by low wages and status. Empirical evidence suggests that the distribution of women across various occupations is an important determinant of the wage gap because the crowding of women into a limited number of occupations exerts downward pressure on wages there. Study findings show that in

Bangladesh, female workers tend to concentrate in low-profile jobs in both the formal and informal sectors.

The gender wage gap is prevalent in both developed and developing countries, with the problem acute in the latter. Study findings show that women in Japan, South Korea, Vietnam, Indonesia and Taiwan earn the least compared to their male counterparts. Female workers in Pakistan and India earn much less than men for equal work. In Pakistan, the earnings gap between men and women was 43 percent in 1993–94. Similar findings have been made in the Latin American and Caribbean countries such as Guatemala, Panama, Nicaragua, and Ecuador. In Mali, the average wage of women has been found about 85 percent of that of men.

Of developed countries, study findings show that in the US in 1996 women were 85–96 percent as productive as men but were paid only 66–68 percent as much. Similar trends have been observed in other developed countries in Europe and America. In the OECD countries, on average, women earned 84 percent of men's hourly earnings in 2002. Females employed in manufacturing earned only 68 percent as much as their male counterparts in the United Kingdom, and 79 percent in France. Even though the pay differential is smaller in Nordic countries (78–89 percent), female workers still earn less than male workers. Ornstein (1983) indicates that in Canada women receive lower returns than men do for each additional year of education or experience.

The tendency of paying less to women workers has been observed in all sectors in the current study. It is argued that women are paid less than men because of their low levels of skill and productivity. The inability of female workers to perform heavy work is sometimes cited as a reason for paying them less. Employers are sometimes of the view that women workers waste time at work and are not committed to their jobs, claiming that attributes such as regularity, punctuality and commitment are not demonstrated. These views are refuted by women, who claim that they perform jobs to the satisfaction of the employers. They note that if they fail to fulfil work quotas they lose their jobs, and believe that they are paid less than men just because they are women. It is difficult to find substantial empirical support for any argument that women are less productive than men.

The persistence of wage discrimination indicates the need for government intervention to phase out such practices with appropriate programmes and policies. Policies can be directed towards educating and improving skill of the womenfolk so that they become competitive in the labour market. This type of policy intervention can be expected to narrow the wage gap in the long term. The rights and privileges of female workers at work should be protected by adequate legislation. Existing legislation related to wages and employment should be enforced and updated, to ensure justice at work. Legislation like equal pay for equal work must be implemented at all levels of the economy. For all this to be productive there must be a strong mechanism to monitor compliance. In addition, traditional norms, employers' stereotypes, and ingrained social attitude towards women must be changed to eliminate gender wage gap deeply rooted in the broad structure of the society.

CHAPTER 6: LABOUR MARKET CHARACTERISTICS AND THE WORKING POOR

6.0 Introduction

In our society work is considered a way to rise above poverty; but for majority of the working poor this expectation is a far cry from reality, since they work but still live in poverty. Low wages, inadequate employment opportunities, intermittent employment, lack of year-round employment, low productivity and lack of mobility are some of the factors that cause and perpetuate the poverty of workers. Fluctuations in employment in response to changes in demand in the economy create joblessness within both rural and urban labour forces. Such seasonal unemployment is prevalent in a country like Bangladesh where the economy is predominantly agrarian. Due to the seasonal nature of agriculture, a significant portion of agricultural workers remain un- or under-employed during slack seasons. This, coupled with low wages, exacerbates their poverty.

The phenomenon of seasonal unemployment tends to ignite migration of the labouring poor from rural to urban areas. The nature of rural–urban migration in our study was found to be shaped by the degree of need for a job by the workers – they bother little about rural–urban wage differentials; the only issue of concern is the probability of getting a job. The process of this particular type of migration, documented here, is based on an objective analysis of the situation. The workers depend mainly on their primary occupations; the opportunity to earn from secondary occupations is very limited. Over the years the Bangladesh economy has experienced structural transformation, and with it the nature of occupation of the workers changed. We have tried to capture this by analysing the present and previous occupations of the workers. Connected issues such as the extent of unemployment in the transition period, the length of present occupation and constraints encountered by female workers in accessing the job market are also considered.

We found workers working in exploitative and hazardous working conditions. The exploitative conditions manifested as insecurity of employment, irregular payment of wages, unfavourable terms and conditions of employment, long hours of work, non-observance of labour laws by the employers, inability to challenge unlawful acts of

the employers, lack of freedom to unionise, failure to protect their rights and privileges, lack of control over job, maltreatment, and other injustices. Workers were found in physically damaging working conditions, their unsafe workplaces causing health hazards, occupational injuries and even death. Necessary protective equipment such as fire extinguishers, safety helmets, adequate footwear, safety vests, gloves and the like were rarely available in the manufacturing enterprises under study. The construction workers, for instance, were found to work at high risk of endangering their lives. The reluctance of the employers to address matters of occupational safety, coupled with the helplessness of the workers, made their working conditions hazardous.

In addition to the health and safety risks at work, workers were given little leeway to take a day off for illness; and, if they could get off, they rarely were paid. inflexible work schedules offered little or no time to fulfil personal and family needs or to deal with emergencies. Workers often had to choose between taking care of their families or keeping their jobs. Jobs in odd hours, particularly at night, made child-care expensive and difficult to obtain. Particularly for women, such rigidity in work schedules sometimes led to frustration, and in extreme cases to desertion from the job, if the pattern of work schedules affected the balance between work and family life and caused stress, tension and psychological disorder. There were no service benefits in terms of pension or gratuity for those who left.

Such adversities, coupled with meagre earnings, constitute life and living for the working poor. This chapter analyses the issues mentioned above with a view to finding appropriate policies directed towards eliminating the poverty of the workers who constitute the vast majority of the poor in Bangladesh.

6.1 Employment and wages

6.1.1 Level of wages

The wage rate is an important determinant of poverty of the workers, who depend largely on the labour market for their earnings. If the wage rate is substantially low, it is difficult for the workers to escape poverty because they do not have alternative sources of income to supplement their inadequate income. In any society, wages should be enough to provide a humble life with dignity. The preamble to the ILO

Constitution notes that peace and harmony in the world require 'the provision of an adequate living wage', and the 1944 Declaration concerning the aims and purposes of the ILO stresses the solemn obligation of the ILO to ensure a living minimum wage to all employed (ILO, 1996). Article 23 of the United Nations Universal Declaration of Human Rights states that 'everyone who works has the right to get just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity' (United Nations, 1988).

Poverty is closely associated with the level of wages. Hossain (1995) finds a statistically significant relationship between these two variables. We analyse the adequacy of the prevailing wage rate and examine how it affects the poverty of the workers. The average daily wage is estimated based on wage data for the week preceding the date of interview. Except in manufacturing, workers rarely work a full week. They may work for some days and sit idle for others. Data indicate that the average daily wage of the transport workers is the highest (Tk. 106.85) followed by manufacturing workers at Tk. 80.29. The average daily wage is the lowest for construction workers (Tk. 75.50). The average daily wage in the agricultural sector, although not the lowest, is very low at Tk. 77.54 (Table 6.1). The reason for low wages in the agricultural sector is oversupply of workers throughout the year except during the peak period. The manufacturing workers in our sample were mostly unskilled; it is unsurprising that their wage level should be low. Transport and service sector jobs are tedious, and as such the wages are likely to be relatively high.

Table 6.1: Average Daily Wages (in Taka) by Sector

Sector	Number	Average daily wage
Agriculture	248	77.54
Manufacturing	200	80.29
Transport	60	106.85
Construction	52	75.50
Service	100	77.87

Source: Calculated from data obtained from the sample survey.

If we examine the wage level across the garment and textile industries under study we find that the wage level in the garment industry is low for both males and females compared with similar workers in textiles industry. The average daily wage for male garment workers is Tk. 74.72; for male textiles workers it is Tk. 75.28. In contrast,

the average daily wage is Tk. 64.19 for female garment workers and Tk. 75.77 for female textile workers. The Bangladesh Bureau of Statistics wage data for 2005 show that the average monthly wage of skilled workers in the garment industry is 1.5 to 2 times lower than that of similar workers in textiles and other industries.

When compared internationally, this stands out as one of the lowest in the world. Even by South Asian standards, Bangladesh's garment industry wage level is consistently low. For instance, average hourly wages in the garment industry in Bangladesh are 50 percent, 42 percent and 3 percent of those in Nepal, India and Sri Lanka respectively. However, lower wages do not necessarily imply lower unit costs of production: although labour productivity is relatively low in Bangladesh, the per unit production cost still tends to be higher (Muktada, 2002).

Side by side with our examination of wages across various sectors, we analysed workers' wages in accordance with their status of employment. Here, *wages* refer to earnings of wage workers and *income* indicates earnings of self-employed workers. For convenience of analysis, the status of employment has been divided into five categories: regular paid employees, self-employed, paid casual workers, day labourers and domestic workers. Data indicate that average daily wage/income is the highest for the self-employed (Tk. 99.77) and the lowest for domestic workers (Tk. 42.30; see Table 6.2). The average daily wage for a day labourer is about Tk. 70.00, one of the lowest, because of their abundance and availability, and lack of literacy or skills.

Table 6.2: Average Daily Wages (in Taka) by Status of Employment

Status	Number	Average daily wage/income
Regular paid employees	155	81.09
Self-employed	192	99.77
Paid casual workers	98	76.28
Day labourers	188	69.70
Domestic workers	27	42.30

Source: Calculated from data available from the sample survey.

Similarly, we examine the extent of monthly wages of the workers across various sectors and status of employment. The nature of their jobs is almost the same across

a week or a month. We found earlier that workers are often redundant for several days a week; similarly, they do not work all weeks in a month, mainly due to undersupply of jobs. To get a rudimentary idea of working days per month, we estimate the number of days worked in the month preceding the date of interview. Although this will not present a picture of the whole year, it provides a rough idea of the working situation in the study area.

Examining the work calendar for the selected month, we find that the workers worked roughly 3 weeks in that time. Those in manufacturing worked 23.68 days; agricultural workers worked 22.03 days. Transport workers worked for the shortest period: 18.86 days only (Table 6.3). The monthly employment situation of the workers therefore, does not differ significantly from the weekly employment situation.

Table 6.3: Average Number of Days Worked Last Month by Sector

Sector	Average no. of days worked
Agriculture	22.03
Manufacturing	23.68
Transport	18.86
Construction	21.31
Service	22.25

Source: Calculated from data available from the sample survey.

We also examine the monthly wages of the workers across the various sectors under study. The monthly wages are estimated based on wage data for the month preceding the date of interview. Table 6.4 shows that average monthly wages are highest for manufacturing workers (Tk. 1911.68) followed by transport workers (Tk. 1881.17). Agricultural workers earn marginally more than service workers but substantially less than manufacturing and transport workers.

Table 6.4: Average Monthly Wages ((in Taka) by Sector

Sector	Number	Average monthly wage/income
Agriculture	155	1809.84
Manufacturing	192	1911.68
Transport	98	1881.17
Construction	188	1806.92
Service	27	1780.00

Source: Calculated from data available from the sample survey.

If we examine the level of wages by status of employment we find that average monthly wages are the highest for the self-employed (Tk. 1996.64) and lowest for domestic workers (Tk. 1260.00). It should be mentioned here that these wages include food but exclude shelter. Data indicate that the average monthly wages of the regular paid employees and paid casual workers are almost same (Table 6.5). The domestic workers under study are all females, mostly uneducated and unskilled, and often either widowed or abandoned by their husbands. They undertake this type of job for mere survival, and work for low wages. Their wages are not institutionally determined; no are they organised by trade unions, so these women work at rates fixed by their employers, far below mandated minimum wages. Manufacturing workers' wages are relatively high because they are more or less skilled.

Table 6.5: Average Monthly Wages (in Taka) by Status of Employment

Status	Number	Average monthly wage/income
Regular paid employees	155	1916.22
Self-employed	192	1996.64
Paid casual workers	98	1915.09
Day labourers	188	1669.74
Domestic workers	27	1260.00

Source: Calculated from data available from the sample survey.

Our examination of the relationship between the volume of work and the amount of wages of the workers reveals that transport workers work the least but earn the most in terms of both daily and hourly wages. On average they work 6.62 hours a day and earn Tk. 106.85 daily and Tk. 16.14 per hour. Agricultural workers work more but earn less: on average they work 7.32 hours a day and earn on average Tk. 77.54 daily

and Tk. 10.59 per hour. Manufacturing workers work the longest periods, 9.95 hours daily on average, but earn only marginally higher than the agricultural workers and substantially lower than the transport workers in terms of daily average wage (Table 6.6). In terms of average hourly wage, manufacturing workers' earnings are just fifty percent of transport workers' earnings.

Table 6.6: Average Hourly Wages (in Taka) by Sector

Sector	Average hours of work/day	Average wage per day	Average wage per hour
Agriculture	7.32	77.54	10.59
Manufacturing	9.95	80.29	8.07
Transport	6.62	106.85	16.14
Construction	6.72	76.15	11.33
Service	8.75	77.87	8.90

Source: Calculated from data available from the sample survey.

These figures suggest that the wage level is undoubtedly low by any consideration. Anker et al. (2003) define adequate pay as half the median hourly pay among employees or as an absolute minimum, whichever is greater. Workers earning less than this threshold value would be considered low paid. The median hourly pay at national level is not available from official sources in Bangladesh, so it is not possible to claim that the estimated wage is low based on Anker et al's (2003) criterion. Attached to the low pay indicator is a provision for an absolute minimum floor. The proposed thresholds correspond to an hourly pay rate of US$ 0.65, and apply to all countries (Bescond et al., 2003). Based on this criterion, the hourly wage rate found in our study is far below US $0.65 (which is currently equivalent to Tk. 45.50: US $1= Tk. 70.00). Internationally, Switzerland has the lowest percentage of workers with low hourly earnings (5.6 percent) and Mexico the highest at 17 percent (Bescond et al., 2003).

One of the most important reasons for low wage levels is the informal nature of employment. In informal employment, terms and conditions are not determined by institutions or laws. Rather, employers determine terms and conditions of employment at their convenience. These jobs tend to be characterised by low wages and low productivity as well as unsafe working conditions. According to the ILO, in

developing countries wages in the informal sector are 44 per cent lower than those in the formal Sector (ILO 2001).

6.1.2 Overtime and other facilities

In developing countries, overtime work is found to coexist with massive unemployment. The provision of overtime has ample justification from both the employers' and employees' points of view. Beyond regularly scheduled hours of work, workers are paid higher wage rates for additional hours and benefit from the increased income. Employers use overtime hours to deal with rush orders, meet seasonal fluctuation in demand and maintain continuity of production. Employers also provide overtime hours in anticipation of increased future demand for their products, or when new workers are not available. Some employers regularly schedule overtime hours even though additional workers are available at the existing wage rate.

On the demand side, employers may prefer hiring overtime hours over hiring additional workers. The rationale behind such a preference is cost-effectiveness. As wages and fringe benefits for regular workers increase relative to overtime wages and fringe , hiring of additional workers becomes expensive; employers tend to reduce the number of regular workers and increase overtime hours since the overtime premium is just a multiple of the straight time wage. By hiring overtime hours, a significant portion of the variable employment costs such as fringe benefits, liveries and conveyance can be avoided. If there were no hiring costs, employers would prefer hiring workers to paying overtime premium; but the higher hiring costs are relative to overtime wage rates, the more likely employers are to substitute overtime for additional employment.

Theory suggests that overtime hours are influenced by overtime wages and fringes relative to fixed employment costs. As fixed employment costs increase relative to overtime wages and fringes, hiring of additional workers becomes more expensive; employers prefer hiring overtime hours to hiring new workers. It is expected that overtime hours increase with an increase in fixed labour costs. We expect that the more skilled a worker is, the more overtime hours are offered because of the anticipated higher productivity of the worker during overtime. Overtime hours are

predicted to increase with the increase with the level of education and experience of the workers.

In our study, only manufacturing sector was found to provide overtime hours for its workers. The analysis of overtime issue therefore focuses on the manufacturing sector only. The majority (51 percent) of the manufacturing workers reported that there is overtime provision. Of those with overtime provision, half belong to the garment industry and one third to steel and engineering. Rahman (1990) in an earlier study found a relatively high provision of overtime in the textiles industry, attributed to the export orientation of this field. To meet rush orders and high overseas demand, the garment industry provides overtime to workers which supplements their wages. The proportion of workers reporting availability of overtime in the electronics and leather and footwear industries was 6 percent each (Table 6.7).

Table 6.7: Overtime in the Manufacturing Sub-sector

Sub-sector	**Overtime**		**Total**
	Yes	No	
Garments	51	9	60
	(85.00)	(15.00)	(100.00)
	(50.00)	(9.18)	(30.00)
Textile	5	35	40
	(12.50)	(87.50)	(100.00)
	(4.90)	(35.71)	(20.00)
Steel & Engineering	34	6	40
	(85.00)	(15.00)	(100.00)
	(33.33)	(6.12)	(20.00)
Electronics	6	24	30
	(20.00)	(80.00)	(100.00)
	(5.88)	(24.49)	(15.00)
Leather & footwear	6	24	30
	(20.00)	(80.00)	(100.00)
	(5.88)	(24.49)	(15.00)
Total	**102**	**98**	**200**
	(51.00)	**(49.00)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.

Source: Calculated from data available from the sample survey.

In the manufacturing sub-sector, income out of overtime work accounts for Tk. 112.57 daily on average against working for 4.21 hours per day on average. Overtime work done by garment workers has been found to be 5.60 hours/day on average yielding an average income of Tk. 132.84 per day. The next highest earning is from steel & engineering industry accounting for Tk. 110.20 on average daily against working for 3.50 hours per day on average. But the earning is abysmally low for leather & footwear workers – they earn only Tk. 57.33 on average daily working for 4.62 hours per day on average (Table 6.8). The depressingly low level of overtime rate for this type of workers may be due to that – they are not organised, they do not have any participation in fixing the wage rate, their productivity is low, they have to sit idle for a pretty long time in a year etc. In order to guard against the rainy days they do not care to work hard even at the cost of personal comfort and pleasure of family life.

Table 6.8: Overtime and Income (in Taka) in the Manufacturing Sub-sector

Sub-sector	Average hours worked/day	Average income/day
Garments	5.60	132.84
Textile	3.96	94.40
Steel & Engineering	3.50	110.20
Electronics	3.45	64.00
Leather & Footwear	4.62	57.33
Total	**4.21**	**112.57**

Source: Calculated from data available from the sample survey.

The remuneration package of the workers under study consists of basic wages only and do not reflect workers' rights and privileges as endorsed by labour laws and conventions. They do not include fringe benefits, medical allowances, contributory provident funds or pension benefit. This is the case in all the sectors under study except manufacturing.

Under these circumstances, we explore constituents in manufacturing sector workers' remuneration package other than basic wages. Data indicate that 61 percent of the manufacturing workers receive festival bonus along with their salary. There are two such bonuses a year, each equivalent to one month of salary. Apart from this, there are some facilities such as breakfast, snacks, medical care, and gifts for workers in selected enterprises. The majority (61 percent) of manufacturing workers received the festival bonus. Only 35 percent had access to medical facilities, including the cost of treatment, medicine and conveyance. A negligible number got breakfast and snacks at work: 3 percent of the total only (Table 6.9). Among those manufacturing workers getting both medical care and wage bonuses were a relatively high proportion of garments workers.

Table 6.9: Distribution of Facilities in the Manufacturing Sector

Sub-sector	**Type of facilities**					**Total**
	Breakfast	Snacks	Medicare	Bonus	Gift (cloth)	
Garments	0	0	28	32	0	60
	(.00)	(.00)	(46.67)	(53.33)	(.00)	(100.00)
	(.00)	(.00)	(40.00)	(26.23)	(.00)	(30.00)
Textile	0	1	24	13	2	40
	(.00)	(2.50)	(60.00)	(32.50)	(5.00)	(100.00)
	(.00)	(25.00)	(34.29)	(10.66)	(100.00)	(20.00)
Steel & Engineering	0	2	11	27	0	40
	(.00)	(5.00)	(27.50)	(67.50)	(.00)	(100.00)
	(.00)	(50.00)	(15.71)	(22.13)	(.00)	(20.00)
Electronics	2	1	6	21	0	30
	(6.67)	(3.33)	(20.00)	(70.00)	(.00)	(100.00)
	(100.00)	(25.00)	(8.57)	(17.21)	(.00)	(15.00)
Leather & footwear	0	0	1	29	0	30
	(.00)	(.00)	(3.33)	(96.67	(.00)	(100.00)
	(.00)	(.00)	(1.43)	(23.77)	(.00)	(15.00)
Total	2	4	70	122	2	200
	(1.00)	(2.00)	(35.00)	(61.00)	(1.00)	(100.00)
	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

6.1.3 Punctuality in paying wages

Workers need payment of wages in time to meet their financial obligations. Conflicts emerge when payment is late. There are ample examples of conflicts between employers and employees on this issue. Data indicate that half the workers receive payment in time while one third gets delayed payment (Table 6.10). Delay in the payment of wages is evident in both formal and informal sectors, but is more pronounced in the latter.

Respondents were hesitant to answer questions about payment of wages and salary. This perhaps indicates their fear of losing their job if the management disapproves of their opinions. Loss of job gives no alternative than to starve with the whole family.

Table 6.10: Punctuality in Paying Wages by Sex

Punctuality	**Sex**		**Total**
	Male	Female	
In time	211	121	332
	(63.55)	(36.45)	(100.00)
	(46.48)	(58.74)	(50.30)
Delayed	140	76	216
	(64.81)	(35.19)	(100.00)
	(30.84)	(36.89)	(32.73)
Never paid	1	0	1
	(100.00)	(.00)	(100.00)
	(.22)	(.00)	(.15)
NA	102	9	111
	(91.89)	(8.11)	(100.00)
	(22.47)	(4.37)	(16.82)
Total	454	206	660
	(68.79)	(31.21)	(100.00)
	(100.00)	(100.00)	(100.00)

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

The payment culture differs significantly from one sector to another. In timely payment of wages, the agricultural sector fares best: 32.53 percent are paid on time, followed by service workers (22.59 percent). The proportion drops to 19.28 percent for manufacturing workers. It is a custom in rural areas to pay remuneration after each day's work is done. Agricultural workers are day labourers, and their employers are aware that they are dependent on daily earnings for their livelihood. Those whose wages are delayed include manufacturing workers (63 percent – the highest proportion) and transport workers (the lowest, accounting for 2 percent; see Table 6.11). Although not so acute as in our study, there are instances of late payment of wages at national level also. Data indicate that 6 percent of garment factories

inspected in 2007 did not pay wages on time (Table 6.12). In the face of labour unrest, management sometimes had to close the factories or change locations.

Table 6.11: Punctuality in Paying Wages by Sector

Sector	**Punctuality**				**Total**
	In time	Delayed	Never Paid	NA	
Agriculture	108	30	1	109	248
	(43.55)	(12.10)	(0.40)	(43.95)	(100.00)
	(32.53)	(13.88)	(100.00)	(98.20)	(37.58)
Manufacturing	64	136	–	–	200
	(32.00)	(68.00)			(100.00)
	(19.28)	(62.96)			(30.30)
Transport	53	5	–	2	60
	(88.34)	(8.33)		(3.33)	(100.00)
	(15.96)	(2.31)		(1.80)	(9.09)
Construction	32	20	–	–	52
	(61.54)	(38.46)			(100.00)
	(9.64)	(9.26)			(7.88)
Service	75	25	–	–	100
	(75.00)	(25.00)			(100.00)
	(22.59)	(11.57)			(15.15)
Total	**332**	**216**	**1**	**111**	**660**
	(50.30)	**(32.73)**	**(0.15)**	**(16.82)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

Table 6.12: Punctuality in Paying Wages in Garments Factories: 2007

Month	**No. of Factories inspected**	**Payment of wages**		**Remarks**
		Regularly paid	Irregularly paid	
January	–			
February	58	46	12	1 factory changed location
March	121	117	04	
April	142	134	08	
May	122	121	01	
June	107	106	01	
July	85	81	04	1 factory closed
August	102	88	14	2 factories changed

				location
September	108	98	10	5 closed
October	54	52	02	1 closed
November	87	79	08	
December	81	76	05	
Total	**1067** **(100.0)**	**998** **(92.66)**	**69** **(6.40)**	

Source: Directorate of Labour, Ministry of Labour and Employment, Government of Bangladesh, Dhaka (2007).

As indicated earlier, about one third of the workers' wages are delayed. The range of delay is 1–15 days. The majority (52 percent) of delayed wage payments are 1–5 days late; 31.48 percent are delayed by 6–10 days. Workers whose payment is delayed by 11–15 days account for about 17 percent (Table 6.13). In all cases, no matter the extent of delay, the proportion of male workers receiving delayed payments is relatively high compared to female workers. The delay may be caused by lack of liquidity, financial mismanagement, professional incompetence, communication problems, lack of understanding with the dealing banks, delays in receiving fund from overseas, insolvency of the employers, or negligence.

Table 6.13: Extent of Delay in Paying Wages

Delay (in days)	**Sex**		**Total**
	Male	Female	
1 – 5 days	64	48	112
	(57.14)	(42.86)	(100.00)
	(45.71)	(63.16)	(51.85)
6 – 10 days	46	22	68
	(67.65)	(32.35)	(100.00)
	(32.86)	(28.59)	(31.48)
11 – 15 days	30	6	36
	(83.33)	(16.67)	(100.00)
	(21.43)	(7.89)	(16.67)
Total	**140**	**76**	**216**
	(64.81)	**(35.19)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

6.1.4 Employment pattern

In the rural areas employment is subject to seasonal variation in economic activities. In the peak season the majority of the labour force remains employed but jobs become scarce in the lean season. Only 9 percent of agricultural workers work round the year. The other 91 percent remained unemployed or redundant for anywhere from 2–6 months a year. In the urban area, 65.0 percent of workers work round the year. Others may remain jobless for 1–4 months. If we examine the unemployment of the female workers, across all the sectors (manufacturing, transport, construction and service), we find that the proportion of female workers remaining unemployed for a period of 1–4 months is relatively high in the service sector, compared to other sectors (Table 6.14).

Table 6.14: Employment Pattern of Urban Workers by Sex and Sector

Sector	**Sex**	**Employment pattern**					**Total**
		Works all year	1 month	2 months	3 months	4 months	
Manufacturing	Male	108	0	21	16	2	147
		(73.47)	(.00)	(14.29)	(10.88)	(1.36)	(100.00)
		(77.14)	(.00)	(65.63)	(69.657	(50.00)	(73.50)
	Female	32	1	11	7	2	53
		(60.38)	(1.89)	(20.75)	(13.21)	(3.77)	(100.00)
		(22.86)	(100.00)	(34.38)	(30.43)	(50.00)	(26.50)
	Total	**140**	**1**	**32**	**23**	**4**	**200**
		(70.00)	**(.50)**	**(16.00)**	**(11.50)**	**(2.00)**	**(100.00)**
		(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**
Transport	Male	46	–	3	10	–	59
		(78.97)		(5.08)	(16.95)		(100.00)
		(97.87)		(100.00)	(100.00)		(98.33)
	Female	1	–	0	0	–	1
		(100.00)		(.00)	(.00)		(100.00)
		(2.13)		(.00)	(.00)		(1.67)
	Total	**47**	**–**	**3**	**10**	**–**	**60**
		(78.33)		**(5.00)**	**(16.67)**		**(100.00)**
		(100.00)		**(100.00)**	**(100.00)**		**(100.00)**
Construction	Male	5	–	–	13	7	25
		(20.00)			(52.00)	(28.00)	(100.00)
		(50.00)			(38.24)	(87.50)	(48.08)
	Female	5	–	–	21	1	27
		(18.52)			(77.78)	(3.70)	(100.00)
		(50.00)			(61.76)	(12.50)	(51.92)
	Total	**10**	**–**	**–**	**34**	**8**	**52**
		(19.23)			**(65.38)**	**(15.38)**	**(100.00)**
		(100.00)			**(100.00)**	**(100.00)**	**(100.00)**
Service	Male	35	1	5	5	0	46
		(76.09)	(2.17)	(10.87)	(10.87)	(.00)	(100.00)
		(50.00)	(33.33)	(38.46)	(38.46)	(.00)	(46.00)
	Female	35	2	8	8	1	54
		(64.81)	(3.70)	(14.81)	(14.81)	(1.85)	(100.00)
		(50.00)	(66.67)	(61.54)	(61.54)	(100.00)	(54.00)
	Total	**70**	**3**	**13**	**13**	**1**	**100**
		(70.00)	**(3.00)**	**(13.00)**	**(13.00)**	**(1.00)**	**(100.00)**
		(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.

Source: Calculated from data available from the sample survey.

The employment pattern down to the sub-sector level shows that in the garment and textiles industries, among the workers working round the year, female workers are over-represented. No women in the survey worked in steel and engineering, electronics, or leather and footwear, so comparisons could not be made between male and female employment. In the manufacturing sub-sectors, one third of female workers remain unemployed for 1–4 months; while the proportion of male workers is double (Table 6.15).

Table 6.15: Employment Pattern of Urban Workers by Sex and Manufacturing Sub-sectors

Sub-sector	**Sex**	**Employment pattern**					**Total**
		Work round the year	1 month	2 months	3 months	4 months	
Garments	Male	29 (100.00) (48.33)	–	–	–	–	29 (100.00) (48.33)
	Female	31 (100.00) (51.67)	–	–	–	–	31 (100.00) (51.67)
	Total	**60 (100.00) (100.00)**	**–**	**–**	**–**	**–**	**60 (100.00) (100.00)**
Textile	Male	18 (100.00) (94.74)	–	–	–	–	18 (100.00) (45.00)
	Female	1 (4.55) (5.26)	1 (4.55) (100.00)	11 (4.55) (100.00)	7 (31.82) (100.00)	2 (9.09) (100.00)	22 (100.00) (55.00)
	Total	**19 (47.50) (100.00)**	**1 (2.50) (100.00)**	**11 (27.50) (100.0)**	**7 (17.50) (100.00)**	**2 (5.00) (100.00)**	**40 (100.00) (100.00)**
Steel & Engineering	Male	25 (62.50) (100.00)	–	9 (22.50) (100.00)	4 (10.00) (100.00)	2 (5.00) (100.00)	40 (100.00) (100.00)
	Total	25 (62.50)	–	9 (22.50)	4 (10.00)	2 (5.00)	40 (100.00)

Sub-sector	Sex	Employment pattern					Total
		(100.00)		(100.00)	(100.00)	(100.0)	(100.00)
Electronics	Male	30	–	–	–	–	30
		(100.00)					(100.00)
		(100.00)					(100.00)
	Total	**30**	**–**	**–**	**–**	**–**	**30**
		(100.00)					**(100.00)**
		(100.00)					**(100.00)**
Leather &							
Footwear	Male	6	–	12	12	–	30
		(20.00)		(40.00)	(40.00)		(100.00)
		(100.00)		(100.00)	(100.00)		(100.00)
	Total	**6**	**–**	**12**	**12**	**–**	**30**
		(20.00)		**(40.00)**	**(40.00)**		**(100.00)**
		(100.00)		**(100.00)**	**(100.00)**		**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

The employment situation in the study area will be clear to us if we examine workers' job search while unemployed, and the results. We find that in the rural area 225 workers remain unemployed; the corresponding urban figure is 145. They were asked what they do when there is no job: do they search for a job or not? In reply, 96 percent of rural workers said that they searched and 4 percent said they did not. In the urban area the proportion of job seekers to non-seekers was almost the same: 97 percent against 3 percent (Table 6.16)**.**

Of the rural workers who searched for jobs, only 25 percent found a job and the other 75 percent were unsuccessful. Among the urban workers the proportions of successful and unsuccessful seekers were 7 and 93 percent respectively (Table 6.17)**.** The proportion of successful workers was relatively high among rural workers than urban workers. The successful workers found jobs in the cities. The low proportion of workers who succeeded in finding a job indicates the inability of the urban labour market to absorb additional workers in gainful employment. The saturation of the urban labour market may be due to such factors as the rapid growth of that force, the migration of rural workers to cities, loss of jobs after the closure of manufacturing enterprises and sluggish business growth.

Table 6.16: Workers' Job Search while Unemployed by Area and Sex

Area	Job Search	Sex		Total
		Male	Female	
Rural:	Yes	152	63	215
		(97.44)	(91.30)	(95.56)
	No	4	6	10
		(2.55)	(8.70)	(4.44)
	Total	**156**	**69**	**225**
		(100.00)	**(100.00)**	**(100.00)**
Urban:	Yes	81	60	141
		(97.59)	(96.77)	(97.24)
	No	2	2	4
		(2.41)	(3.23)	(2.76)
	Total	**83**	**62**	**145**
		(100.00)	**(100.00)**	**(100.00)**

Note: Terms in parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

Table 6.17: Results of Job Search by Area and Sex

Area	Results	Sex		Total
		Male	Female	
Rural:	Got job	44	10	54
		(28.95)	(15.87)	(25.12)
	Did not get job	108	53	161
		(71.05)	(84.13)	(74.88)
	Total	**152**	**63**	**215**
		(100.00)	**(100.00)**	**(100.00)**
Urban:	Got job	7	3	10
		(8.64)	(5.00)	(7.09)
	Did not get job	74	57	131
		(91.36)	(95.00)	(92.91)
	Total	**81**	**60**	**141**
		(100.00)	**(100.00)**	**(100.00)**

Note: Terms in parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

6.1.5 Type of employment

Table 6.18 shows that 99 percent of workers are full-time workers and only 1 percent are part-time. Among the full-time workers, agricultural workers are predominant (38 percent) followed by manufacturing workers (31 percent). Part-time workers were found in the manufacturing and service sectors only. Part-time workers in the manufacturing sector accounted for less than 1 percent; their proportion reached 8 percent in the service sector. It is evident from this that even these who work full-time are unable to eke out a plain living. This may be attributed to the low wages and low productivity. Low wages are mostly a reflection of low productivity because employers tend to pay less for low productive workers and vice versa.

Table 6.18: Distribution of Workers by Nature of Employment and Sector

Sector	**Nature of employment**		**Total**
	Full-time	Part-time	
Agriculture	248 (100.00) (38.10)	0 (.00) (.00)	248 (100.00) (37.58)
Manufacturing	199 (99.50) (30.57)	1 (.50) (11.11)	200 (100.00) (30.30)
Transport	60 (100.00) (9.22)	0 (.00) (.00)	60 (100.00) (9.09)
Construction	52 (100.00) (7.99)	0 (.00) (.00)	52 (100.00) (7.88)
Service	92 (92.00) (14.13)	8 (8.00) (88.89)	100 (100.00) (15.15)
Total	**651** **(98.64)** **(100.00)**	**9** **(1.36)** **(100.00)**	**660** **(100.00)** **(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

6.1.6 Status of employment and income

The workers occupied in various sectors were divided into five categories (regular paid employee, self-employed, paid casual worker, day labourer and domestic worker) according to their status of employment. Among all categories of workers, self-employed workers were predominant (29 percent), followed by day labourers (28 percent). Domestic workers constituted 4 percent of the total workers. Day labourers predominated in the agricultural sector (54 percent), while regularly-paid employees constituted the majority in the manufacturing sector (75 percent). In the transport sector all the workers were self-employed; in the construction sector all were day labourers. In the service sector, 48 percent of workers were paid casual workers; domestic workers accounted for 27 percent (Table 6.19).

Table 6.19: Distribution of Workers by Status of Employment and Sector

Status of present occupation	**Sector**					**Total**
	Agriculture	Manufacturing	Transport	Construction	Service	
Regular paid employee	0	149	0	0	6	155
	(.00)	(96.13)	(.00)	(.00)	(3.87)	(100.00)
	(.00)	(74.50)	(.00)	(.00)	(6.00)	(23.48)
Self-employed	115	0	60	0	17	192
	(59.90)	(.00)	(31.25)	(.00)	(8.85)	(100.00)
	(46.37)	(.00)	(100.00)	(.00)	(17.00)	(29.09)
Paid casual worker	0	50	0	0	48	98
	(.00)	(51.02)	(.00)	(.00)	(49.98)	(100.00)
	(.00)	(25.00)	(.00)	(.00)	(48.00)	(14.85)
Day labourer	133	1	0	52	2	188
	(70.74)	(.53)	(.00)	(27.66)	(1.06)	(100.00)
	(53.63)	(.50)	(.00)	(100.00)	(2.00)	(28.48)
Domestic worker	0	0	0	0	27	27
	(.00)	(.00)	(.00)	(.00)	(100.00)	(100.00)
	(.00)	(.00)	(.00)	(.00)	(27.00)	(4.09)
Total	**248**	**200**	**60**	**52**	**100**	**660**
	(37.58)	**(30.30)**	**(9.09)**	**(7.88)**	**(15.15)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

Workers were found to have stayed in their present occupation (main) for periods of time ranging from five years to 40 years and above. Data indicate that 50 percent of had been in their present occupation for 5–20 years (Table 6.20), although their wages were low. This indicates lack of mobility, which may be linked to lack of skill and suitable employment opportunities. There may also be social reasons for not moving into other jobs, such as happiness with the job, family attachment, dislike of the hassles arising from a job change, disruption of the schooling of children, familiarity with the locality and so on.

Table 6.20: Workers' Length of Service in Present Occupation (in Years)

Years	Number	Percent
Up to 5	272	41.20
5 –10	145	21.97
10 – 15	111	16.82
15 – 20	74	11.21
20 – 30	46	6.97
30 – 40	9	1.36
40 +	3	0.45
Total	**660**	**100.00**

Source: Calculated from data available from the sample survey.

Few of the workers were found to have secondary occupations. As indicated earlier, the majority of the workers remain unemployed for a significant portion of the year. The rural economy is predominantly agriculture based and inadequately diversified. Large industries concentrate in urban areas, and small and medium industries are yet to be developed in the rural areas. The transport and communication system is backward and service-related activities are negligible in rural areas. The labour market in the urban area is saturated because of inadequate wage employment, the increasing pressure of migrants from the rural areas, the slow pace of industrialisation and sluggish growth of service sectors. The scope for earning from secondary occupations is very narrow. Data indicate that only 11 percent of the workers had secondary occupations (Table 6.21). Female workers were under-represented in secondary occupations. Lack of secondary occupations tends to increase the opportunity cost of labour time and contributes to the poverty of the workers.

Table 6.21: Distribution of Workers by Secondary Occupation and Sex

Sex	**Secondary occupation**		**Total**
	Yes	No	
Male	55	399	454
	(12.11)	(87.89)	(100.00)
	(73.33)	(68.21)	(68.79)
Female	20	186	206
	(9.71)	(90.29)	(100.00)
	(26.67)	(31.79)	(31.21)
Total	**75**	**585**	**660**
	(11.36)	**(88.64)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

Workers get most of their income from their main occupation. Income in our study constitutes wages plus earnings from other sources (kitchen gardening, petty trading etc.) and refers to the income of the month preceding the date of interview. Agricultural workers' average income was the highest (Tk. 2064.60), followed by service workers (Tk. 2042.65). Transport workers' average income was lowest at Tk. 1887.29 (Table 6.22). The wage rate of transport workers was the highest, as indicated earlier; but even though their wages were relatively high, their income was low compared to other because they had no other sources of income; moreover, their jobs were intermittent in nature. Transport workers were rickshaw pullers, van pullers, push cart pullers and so on; they reported that they did not have their own vehicles, but hired them from the owners on a daily basis. The owners did not provide them with vehicles every day because of the over-supply of pullers: for every vehicle there are as many as 5 men willing to hire it. Vehicles were not always available for hire because of the need for repair, change in owners, or confiscation by police for traffic violations.

The average income of the female workers was lower than their male counterparts' across all sectors under study. As a matter of culture, female workers are discriminated against and paid less than their male counterparts. Household obligations and restricted movement mean their participation in the labour market is limited. Possibly for these reasons the income of females is lower than that of males.

Table 6.22: Average Total Income of Workers from Main Occupation by Sector and Sex

Sector	**Number**		**Average total income (in Taka)**	
	Male	Female	Male	Female
Agriculture	177	71	2064.60	1174.73
Manufacturing	147	53	1947.01	1813.70
Transport	59	1	1887.29	1520.00
Construction	25	27	1953.40	1671.30
Service	46	54	2042.65	1555.74

Source: Calculated from data available from the sample survey.

Income from secondary occupations is meagre. The secondary occupations in our study area were informal in nature, characterised by low pay and bad working conditions. Table 6.23 shows that construction workers' average income from secondary occupations was the highest (Tk. 1186.25) while for transport workers it was the lowest, at Tk. 325.00. The average income of females was lower than for males across all sectors except manufacturing, where average income of female workers was Tk. 900.00 while male workers received Tk. 583.33.

Table 6.23: Average Total Income of Workers from Secondary Occupation by Sector and Sex

Sector	**Number**		**Average total income (in Taka)**	
	Male	Female	Male	Female
Agriculture	33	5	492.12	322.0
Manufacturing	6	1	583.33	900.0
Transport	6	–	325.00	–
Construction	4	4	1186.25	715.0
Service	6	10	352.00	622.0

Source: Calculated from data available from the sample survey.

If we examine the relative share of income from primary and secondary occupations we find that secondary occupation contributes only 2 percent of the average total income of the household. The lion's share accrues from the primary occupation, accounting for 98 percent. Among manufacturing workers, 99 percent of the income originated from the primary occupation with the share of secondary occupation roughly 1 percent (Table 6.24). The contributions of primary and secondary occupations to average total income in the agricultural sector were 98 percent and 2

percent respectively. The implications for policy are that to alleviate the poverty of workers, the rural economy should be diversified so that the agricultural workers can find jobs in the non-farming sector during off seasons. Diversification of rural economy needs increased investment to build infrastructure and industries. Particularly, small and medium industries should be set up in rural areas, on a large scale. Unemployed and under-employed workers will thus get jobs, resulting in increased income and reduced poverty for themselves.

Table 6.24: Relative Share of Main and Secondary Occupations in Average Total Income (in Taka)

Sector	Average total income	Income from main occupation (%)	Income from secondary occupation (%)
Agriculture	2611.48	98.07	1.93
Manufacturing	3511.75	99.42	0.58
Transport	2920.58	99.05	0.95
Construction	3715.87	96.51	3.48
Service	2856.80	97.34	2.66
Total	**3036.57**	**98.34**	**1.66**

Source: Calculated from data available from the sample survey.

6.1.7 Age of starting first job

The socioeconomic background of the workers indicates that most of them come from insolvent families. Their massive illiteracy, as indicated earlier, derives from lack of affordability and opportunity. The sudden death of the sole breadwinner led many workers in our survey to leave school and start work, for survival. The untimely death of a household head would shift responsibility to the shoulders of other male household members. Under these circumstances, some had to start working at a very young age.

The poverty of a household in any case forced some of its members into child labour. Data indicate that 9 percent of workers had started working in their childhood (earlier than 14 years). Besides extreme cases mentioned above, some male members were compelled to start working to supplement the low income of the household head. The proportion of workers who started working at the age of 15–20 years was the highest, accounting for 47 percent (Table 6.25). This indicates that a high proportion of

workers started working at an age when they were supposed to be school or college. This constrained their human capital formation and made them a low productive labour force. Theory suggests that low productivity is an important reason for low wages. Poverty at the household level is to a great extent due to the low wages of household members.

Table 6.25: Age of Workers at which they Started First Job

Age (in years)	Number	Percent
<10	2	0.30
10 –14	58	8.78
15 – 20	309	46.82
21 +	291	44.10
Total	**660**	**100.00**

Source: Calculated from data available from the sample survey.

6.1.8 Occupational mobility

As a part of our occupational mobility analysis, we examined the previous occupations of the workers. This provided us with a rough idea of the types of jobs they held in the past and were currently holding. There were 544 workers who had previous occupations; therefore, in Table 6.26, there are 544 entries instead of the standard 660 sample size. To construct the occupation matrix we merged various occupations into six broad occupational categories. The figures against each occupation may not be similar to those in other tables because of differences in definition. Specific occupations have been generalised to accommodate them in broad categories. Data indicate that workers may switch to occupations which are completely different from their previous jobs. The number of workers in some occupations has increased while in some others it has decreased. The number of day labourers has increased from 125 in the past to 148 at present. This is plausibly because of the rapid growth of population and the resultant increase in the labour force. This in turn indicates an expansion of economic activities demanding low-paid workers. Similarly, the present number of transport workers increased.

The upward trend in the number of workers in the present occupations is noticeable in the case of factory and construction workers. In other occupations such as business and service the trend is downward. Table 6.28 shows that of 125 workers who were

day labourers in the past, 32 are still day labourers while 23 are now in transport, 25 in service , 6 in business, 14 in factory work and 25 in construction. The switch of occupations appears to be consistent with the structural transformation of the economy, which has reduced its dependence on agriculture and increased its manufacturing, transport and services sectors. The increased demand for workers particularly in the manufacturing and transport sectors has encouraged workers to switch.

Table 6.26: Present and Previous Occupation Matrix

	Present occupation						
Previous occupation	Day labourer	Transport	Business	Factory worker	Service	Construct-ion	**Total**
Day labourer	32	23	6	14	25	25	125
	(25.60)	(18.40)	(4.80)	(11.20)	(20.00)	(20.00)	(100.00)
	(21.62)	(32.39)	(33.33)	(10.61)	(28.09)	(29.07)	(22.98)
Transportation	22	8	2	9	9	9	59
	(37.29)	(13.56)	(3.39)	(15.25)	(15.25)	(15.25)	(100.00)
	(14.86)	(11.27)	(11.11)	(6.82)	(10.11)	(10.47)	(10.84)
Business	34	14	0	22	17	18	105
	(32.38)	(13.33)	(.00)	(21.95)	(16.19)	(17.14)	(100.00)
	(22.97)	(19.72)	(.00)	(16.67)	(19.10)	(20.93)	(19.30)
Factory worker	9	8	2	50	11	8	88
	(10.23)	(9.09)	(2.27)	(56.82)	(12.50)	(9.09)	(100.00)
	(6.08)	(11.27)	(11.11)	(37.88)	(12.36)	(9.30)	(16.18)
Service	30	14	7	23	23	19	116
	(25.86)	(12.07)	(6.03)	(19.83)	(19.83)	(16.38)	(100.00)
	(20.27)	(19.72)	(38.89)	(17.42)	(25.84)	(22.09)	(21.32)
Construction	21	4	1	14	4	7	51
	(40.38)	(7.69)	(1.29)	(26.92)	(7.69)	(13.46)	(100.00)
	(14.19)	(5.63)	(5.56)	(10.61)	(4.49)	(8.14)	(9.38)
Total	**148**	**71**	**18**	**132**	**89**	**86**	**544**
	(27.20)	**(13.05)**	**(3.31)**	**(24.27)**	**(16.37)**	**(15.80)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

The distribution of workers by present and previous occupations shows the direction toward which they are moving. The present proportion of day labourers, factory workers, construction workers and transport workers has increased, while there has

been a decline in the proportion of business and service workers compared to the past (Table 6.27). The agricultural sector is the last resort for those who have no alternative options for employment. Workers there are usually unskilled and inexperienced. The manufacturing sector in Bangladesh has flourished remarkably following the rapid development of garment industries, and transport and communication have also grown with the increase in economic activity. It is likely that workers would approach these sectors for employment. The decline in the business service sectors may be due to mismatches in skill, or because they offer low level of wages or bad working conditions.

Table 6.27: Percentage Distribution of Workers by Present and Previous Occupations

Occupation	Present occupation	Previous occupation
Day labourer	13.18	22.94
Farmer	6.82	–
Fishing	3.64	–
Factory worker	30.30	16.15
Business	3.18	19.27
Construction	13.64	9.54
Transportation	13.94	10.82
Service	15.15	21.28
Unemployed/Infant/disabled etc.	.15	–
Total	**100.00**	**100.00**

Source: Calculated from data available from the sample survey.

The 544 workers occupied at present were all employed previously. They were asked their reasons for leaving their previous job, and they mentioned many: low income, hard work, long hours, heavy workload, late night work, distance of workplace from home, occupational injury, lack of occupational safety, inadequate work, physical inability, conflict with the employer, closure of business, better job offers, childcare problems, sexual harassment, bleak career prospects, maltreatment, job insecurity, sickness of family members, unhealthy and dangerous working conditions, termination. After leaving they had to search for new jobs; it took considerable time to find something suitable. The waiting time for the present job spanned less than 3 months to more than 2 years. The highest number of workers had to wait 7–12 months to get jobs, accounting for 62 percent. The proportion of workers waiting 1–2

years for work was 19 percent; 7 percent took more than 2 years. The remaining 12 percent found work within 3 to 6 months.

Workers who had had similar jobs previously took relatively less time to be reemployed. Among them manufacturing workers were predominant. About a quarter of manufacturing workers were reemployed in less than 3 months. The majority (65 percent) were reemployed within 3–6 months. The other 10 percent took more than 6 months to be reemployed. This implies that employers prefer experienced workers because they are more productive than inexperienced workers. Moreover, these types of workers are skilled. Experience coupled with skill constitutes demand even when the labour market is stringent. The implication for policy is that to promote employment, skill development of workers is a must.

The problem or reemployment was most acute for those who had had dissimilar jobs previously. About 56 percent of these workers had to wait for more than 2 years to find a suitable job. The proportion of workers waiting for 1–2 years to get a job was 35 percent. It is interesting to note that none found work within 6 months of leaving their last job. The other 9 percent workers were reemployed in 7–12 months.

An investigation into the reasons for leaving a job provided interesting results. Female workers leaving for child care constituted the majority (55 percent); the remaining 45 percent of women left jobs because of the distance of the work place from home, the heavy workload, bad working conditions, lack of occupational safety, job insecurity, maltreatment, low wages or sexual harassment. Data indicate that 57 percent of workers (both males and females) deserted a previous job because of low wages. The proportion of workers leaving a previous job because of bad working conditions, inadequate work, closure of the business, prospects of a better job, conflict with the employer or job insecurity accounted for about one third of all workers. Only 10 percent left because of termination. After desertion they found jobs on their own initiative, with their own efforts. There was no institutional support like vocational guidance, labour market information or job counselling to help them. The implication for policy is that the waiting time to find a new job could be narrowed down with adequate institutional support for job seekers.

In rural Bangladesh there is a tendency among workers to attract children to their parents' occupations. This is not just a traditional practice; there are some strong justifications for this practice. To examine the vertical mobility of the workers, we collected information about their fathers' occupations. We have classified the workers into eight broad groups. The figures for specific occupations in Table 6.28 may not be similar to those in other tables because of definitional differences. Data indicate that 35 percent of the day labourers' present occupations were the same as their fathers'. For farmers the proportion was as high as 51 percent. In the business, construction, transport and service occupations, the proportion ranged between 4 and 15 percent (Table 6.30). It is observed that the similarity of workers' present occupations to that of their fathers' are most pronounced in agriculture-related occupations.

Workers find it expedient to groom their children in their occupation. To train them in a family occupation is inexpensive, while the opportunity cost of sending their children to school is inexorably high for poor workers. Given their lack of affordability, they tend to build up their children at least cost or no cost. The most cost-effective way is to deliver them the skills of their own occupations.

In order to learn their fathers' skills, children work side by side with their fathers and learn the skills practically, learning by doing. This informal training, educating the children about the family trade, is time saving: even while acquiring skills, the children can generate income at an early stage and supplement household income. This is beneficial to these poverty-stricken households, and explains why we find a significant portion of workers inheriting their fathers' occupations.

Table 6.28: Inter-generational Mobility across Occupations

Workers' occupation	**Workers' fathers' occupation**		**Total**
	Worker's occupation same as father's	Worker's occupation different from father's	
Day labourer	31	57	88
	(35.23)	(64.77)	(100.00)
	(30.39)	(10.22)	(13.33)
Farmer	23	22	45
	(51.11)	(48.89)	(100.00)
	(22.55)	(3.94)	(6.82)

Fishing	5	19	24
	(20.83)	(79.17)	(100.00)
	(4.90)	(3.41)	(3.64)
Factory worker	16	184	200
	(8.00)	(92.00)	(100.00)
	(15.69)	(32.97)	(30.30)
Business	2	19	21
	(9.52)	(90.48)	(100.00)
	(1.96)	(3.41)	(3.18)
Construction	4	86	90
	(4.44)	(95.56)	(100.00)
	(3.92)	(15.41)	(13.64)
Transportation	6	86	92
	(6.52)	(93.48)	(100.00)
	(5.88)	(15.41)	(13.94)
Service	15	85	100
	(15.00)	(85.00)	(100.00)
	(14.71)	(15.23)	(15.15)
Total	**102**	**558**	**660**
	(15.45)	**(84.50)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

6.1.9 Constraints to employment

Women in Bangladeshi society are not free to move at their own will. There are religious as well as cultural barriers against their free movement. As a result, female workers face obstacles from inside and outside the home, at the time of job search and while on a job. We enquired into the pre-employment obstacles encountered by the female workers under study. There were 206 female workers in our sample.

At the household level, investment on education and training for girls is relatively low compared to boys. The idea is that in future they will take care of children and perform household activities at home. This attitude limits their human capital formation and later participation in the labour market, resulting in low level of female employment.

Married women in particular are responsible for household activities including child care. In our study we considered the sharing of household activities by the respondents. As a matter of culture, child caring responsibility is mainly borne by women. Three quarters of child caring activities were borne by the women in our survey. As women increase their investment in human capital and enter the workforce, the opportunity cost of child care rises (Becker, 1964). About 90 percent of the cooking task is performed by the women (Table 6.29).

Household activities in general and child caring activities in particular inhibit women's search for jobs. After taking care of the children, they are left with little time to find work that conforming to their skill and experience. If they find such a job, in most cases they are compelled to work few hours or in extreme cases to quit. Of our female respondents, 78 percent reported that child care was a constraint upon getting and sustaining a job. Urban women constituted the majority of these, accounting for 66 percent (Table 6.30).

Table 6.29: Household Activities Performed by Respondents

Household activity	**Sex**		**Total**
	Male	Female	
Shopping	93	0	93
	(100.00)	(.00)	(100.00)
	(20.48)	(.00)	(14.09)
Cooking	7	81	88
	(7.95)	(92.05)	(100.00)
	(1.54)	(39.32)	(13.33)
Cleaning/washing	65	15	80
	(81.25)	(18.75)	(100.00)
	(14.32)	(7.28)	(12.12)
Child care	27	69	96
	(28.13)	(71.88)	(100.00)
	(5.95)	(33.50)	(14.55)
Taking children to school	40	2	42
	(95.24)	(4.76)	(100.00)
	(8.81)	(.97)	(6.35)
Teaching children at home	11	5	16
	(68.75)	(31.25)	(100.00)
	(2.42)	(2.43)	(2.42)
Cattle rearing	53	5	58
	(91.38)	(8.62)	(100.00)
	(11.67)	(2.43)	(8.79)
Poultry rearing	24	1	25
	(96.00)	(4.00)	(100.00)
	(5.29)	(.49)	(3.79)
Serving disabled members of the family	17	10	27
	(62.96)	(37.04)	(100.00)
	(3.74)	(4.85)	(4.09)
Guest entertainment	12	0	12
	(100.00)	(.00)	(100.00)
	(2.64)	(.00)	(1.82)
None	34	0	34
	(100.00)	(.00)	(100.00)
	(7.49)	(.00)	(5.15)

Household activity	Sex		Total
	Male	Female	
Carrying water from outside	18	0	18
	(100.00)	(.00)	(100.00)
	(3.96)	(.00)	(2.73)
Housekeeping	44	18	62
	(70.97)	(29.03)	(100.00)
	(9.69)	(8.74)	(9.39)
Preparatory works for cooking	9	0	9
	(100.00)	(.00)	(100.00)
	(1.98)	(.00)	(1.36)
Total	**454**	**206**	**660**
	(68.79)	**(31.21)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

Table 6.30: Opinions of Female Respondents Regarding Child Care as a Constraint upon Getting and Sustaining a Job

	Yes	No	Total
Male	54	17	71
	(76.05)	(23.95)	(100.00)
	(33.54)	(37.78)	(34.47)
Female	107	28	135
	(79.25)	(20.75)	(100.00)
	(66.46)	(62.22)	(65.53)
Total	**161**	**45**	**206**
	(78.15)	**(21.85)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

If women were successful in finding a job, there were still impediments from both the family and the society towards accepting it. About 28 percent of the female workers reported that they faced obstacles from within the family at the time of accepting the present job. The restrictions imposed by the family fell into five categories: i) parental disapproval, ii) returning home before evening, iii) no

conversation with male workers, iv) wearing cloak outside the home, and v) family members' disagreement.

The restriction 'wearing cloak outside the home' accounted for 35 percent, followed by 'returning home before evening' (23 percent). The restrictions, 'parents disagreement' and 'family members' disagreement' were 16 percent and 14 percent respectively (Table 6.31). It appears that the restrictions are both religious and cultural. It is possible that female workers are not aware of the religious element (Islam and Hindu) commanding the above mentioned restrictions but become victims of the restrictions as a matter of practice. With that in view, we asked female workers if they were aware of any religious restriction towards employment-related activities such as accepting a job, working side by side with male workers or working outside the home and at night.

Table 6.31: Types of Restrictions from within the Family when Accepting Present Job

Type of restrictions	Number	Percent
Parents' disagreement	9	15.80
Returning home before evening	13	22.95
No conversation with male workers	13	12.35
Wearing cloak outside the home	13	35.12
Family members' disagreement	9	13.78
Total	**57**	**100.00**

Source: Calculated from data available from the sample survey.

All reported that 'accepting a job' is not against religion. About 38 percent thought that 'working side by side with male workers' was not desirable from a religious point of view, but the majority (62 percent) differed. Half thought that 'working outside the home' was not permissible on religious grounds; the same proportion disagreed. The majority (60 percent) considered 'working at night' a violation of religious rites and harmful to women's dignity. The other 40 percent did not think it a violation of religious rites, but were of the opinion that working at night was not safe (Table 6.32).

Table 6.32: Opinions of Female Workers Regarding Religious Restrictions

Restrictions towards	Yes	No	Total
Accepting a job	–	206	206
		(100.00)	(100.00)
Working side by side with males	78	128	206
	(37.86)	(62.14)	(100.00)
Working outside home	103	103	206
	(50.00)	(50.00)	(100.00)
Working at night	124	82	206
	(60.19)	(39.81)	(100.00)

Note: Terms in the parentheses indicate percentage.
Source: Calculated from data available from the sample survey.

Such findings imply that restrictions are seen as more cultural than religious. The attitude of family members may be attributable to a lack of education, leading to ignorance about fundamental rights and inability to understand the benefits of freedom of movement. We looked for any causal relationship between education and restrictions at the household level, in particular examining the role of female education in shaping the mindset of those household members imposing restrictions. The results are revealing. It was found that as the level of education of the female household members increases the proportion of households imposing restrictions diminishes. The proportion of restriction-imposing households with females educated up to class I–V was 45.61 percent; of those educated to HSC or the equivalent the proportion fell to 5 percent (Table 6.33).

Table 6.33: Highest Level of Education of Female Household Members and the Proportion of Households Imposing Restrictions

Highest level of education	Number of households	Percentage
Class (I–V)	26	45.61
Class (VI–VIII)	18	31.58
Class (IX–X)	10	17.55
HSC or equivalent	3	5.26
Total	57	100.00

Source: Calculated from data available from the sample survey.

For female workers restrictions are everywhere. They face constraints not only from within the family but from society as well. Particularly in rural Bangladesh, women

usually do not move freely outside the home. Any adverse remark about a woman arising from her movements may jeopardise her matrimonial relation and even her career. Women must have a care to society's reaction about their movements outside the home, whether it is for personal or official reasons. The outlook of society is yet to be broadened to accept free movement of women. Under current circumstances it is unlikely that women may work outside the home without any obstacle. Our working women were not an exception in this regard. About one third reported that they faced problems while moving to work: 48 percent reported facing criticism, 26 percent irritation, 16 percent teasing and 10 percent intimidation (Table 6.34)**.**

Table 6.34: Types of Obstacles Faced by Female Workers from Society

Obstacle	Number	Percent
Irritation	16	25.81
Teasing	10	16.13
Intimidation	6	9.68
Criticism	30	48.39
Total	**62**	**100.00**

Source: Calculated from data available from the sample survey.

6.2 Working conditions

6.2.1 Methods of recruitment

There are standard procedures of recruiting workers or employees for a particular job. Usually these procedures are followed in the formal sector, which is governed by rules and regulations. In the informal sector such as agriculture, hiring workers depends on the will of the employers, who rarely adhere to the lawful procedures of recruitment. In this sector there is no institutional mechanism to determine terms and condition of employment. While examining recruitment methods, we excluded the agricultural sector for this reason.

In the manufacturing sector, only 19 percent of workers were issued appointment letter and the other 81 percent were recruited verbally (Table 6.35). All transport and service workers were recruited verbally. In the service sector one third of workers were recruited through formal appointment letter while two thirds were appointed verbally.

Table 6.35 Percentage Distribution of Workers by Method of Recruitment and Sector

Sector	**Methods of recruitment**			**Total**
	Through formal appointment letter	Verbally (without any written document)	Other	
Manufacturing	19.00	81.00	–	100.00
Transport	–	100.00	–	100.00
Construction	–	100.00	–	100.00
Service	33.33	65.43	1.23	100.00
Total	**18.95**	**80.76**	**.29**	**100.00**

Source: Calculated from data available from the sample survey.

Even so, instances of hiring workers without appointment letter are plenty at national level. The government of Bangladesh inspects the recruitment methods of industries at a regular interval. Towards that end, 1077 garment factories were inspected in 2007. It was reported that 34 percent of the factories did not issue any appointment letter for their workers (Table 6.36). The non-issuance of appointment letters is ill perceived and a gross violation of core labour standards and conventions. Employers take advantage of workers in terms of low wages, termination leave, holidays, benefits etc., and workers lose legitimate rights and privileges. Instances of violation of labour laws across various sectors and industries are substantial. There are efforts to check the trend, but given weak enforcement mechanisms, lack of a sound monitoring system and inadequate penal provisions, the practice continues unabated.

Table 6.36: Garment Factories and the Issuance of Appointment Letter: 2007

Month	**No. of factories inspected**	**Appointment letter**	
		Issued	Not issued
January	–	–	–
February	58	34	24
March	121	61	60
April	142	88	54
May	122	81	41
June	107	82	25
July	85	47	38
August	102	70	32
September	108	71	37
October	54	42	12

November	87	58	29
December	81	63	18
Total	1067	697	370
	(100.0)	**(65.32)**	**(34.68)**

Source: Directorate of Labour, Ministry of Labour and Employment, Government of Bangladesh, Dhaka.

Because of the informal nature of recruitment, workers are unable to take shelter of law in cases of unlawful termination. In the garment industry workers are employed on a temporary basis without any legal documents. Without such documents they are unable to take shelter under law even if they want to. Data indicate that only 1 percent of workers are able to invoke the law in cases of unlawful termination or dismissal (Table 6.37). Knowing this, workers embrace such jobs anyway because they have suffered from prolonged unemployment or poverty to such an extent that they accept jobs whether they are secured or not. Employment security exists only where there is protection against unfair and arbitrary dismissal, and where workers can obtain redress if they are subject to unfair dismissal.

The Termination of Employment Convention 1982 (No. 158) provides that employment shall not be terminated unless there is a valid reason for doing so; and strict employment protection legislation covers prior notice of dismissal, severance pay and the definition of unfair dismissal. Secured employment is that which is full-time, regularly remunerated and associated with rights and benefits of the workers (Bonnet et al., 2003). Insecurity of employment is pronounced in the garment industry because of the seasonality of demand for its products and the informal nature of recruitment. The informal nature of employment empowers owners to hire and fire workers as and when required.

Table 6.37: Percentage Distribution of Workers Entitled to Take Shelter of Law in Case of Termination or Dismissal by Sector

Sector	Right to take shelter of law		Total
	Yes	No	
Manufacturing	1.6	98.35	100.00
Transport	–	100.00	100.00
Construction	–	100.00	100.00
Service	–	100.00	100.00
Total	**1.22**	**98.78**	**100.00**

Source: Calculated from data available from the sample survey.

6.2.2 Occupational safety and health

A work lacks decency if core labour standards are not followed: for example, if the work is damaging to workers' health and safety. Occupational safety and health constitutes an important component of working conditions. The relevant convention in this regard is the Occupational Safety and Health Convention 1981 (No. 155). It calls for a national policy to 'prevent accidents and injury to health arising out of, linked with or occurring in the course of work, by minimising, so far as is reasonably practicable, the cause of hazards inherent in the working environment'. The convention provides guidelines for the safety and health of workers while at work. The guidelines do more than address mechanisms to protect workers against occupational hazards, disease and injury; they also cover the scourges of stress and overwork. A workplace conforming to the provisions of the convention is termed a decent workplace.

Various studies have found workers to work in hazardous and dangerous conditions, particularly in developing countries where they are usually found to work without necessary protective equipment, thereby exposing them to injuries and accidents. To explore the condition of work in our study area, we enquired into the safety measures adopted by the employers. We considered whether workers were provided with necessary protective equipment such as masks, safety helmets, vests, shoes, eye protector and the like. We also investigated if the work places were equipped with adequate fire extinguishers and fire exits. The highest number of workers (82 percent) reported that there were no safety arrangements in their workplaces. As a

result, workers frequently succumbed to serious injuries, and there had even been fatal accidents.

Death or serious injury from factory fires is a common occupational hazard in Bangladesh. All the workers in electronics or leather and footwear factories reported that there were no safety arrangements in their factories. The proportions were almost as high in textile (98 percent) and garment factories (90 percent; see Table 6.38). If we examine availability of safety arrangements in the factories under study, we find that most of them are not adequately equipped with protective equipments. The garments factories provide fire extinguishers and safety exits, textiles factories safety exits, steel & engineering factories safety foot wears and safety eye protectors (Table 6.39).

Table 6.38: Safety Arrangements in the Manufacturing Sub-sector

Sub-sector	**Availability of safety arrangements**		**Total**
	Yes	**No**	
Garments	6	54	60
	(10.00)	(90.00)	(100.00)
	(16.67)	(32.93)	(30.00)
Textiles	1	39	40
	(2.50)	(97.50)	(100.00)
	(2.78)	(23.78)	(20.00)
Steel & Engineering	29	11	40
	(72.50)	(27.5)	(100.00)
	(80.56)	(6.71)	(20.00)
Electronics	0	30	30
	(.00)	(100.00)	(100.00)
	(.00)	(18.29)	(15.00)
Leather & foot wear	0	30	30
	(.00)	(100.00)	(100.00)
	(.00)	(18.29)	(15.00)
Total	**36**	**164**	**200**
	(18.00)	**(82.00)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data available from the sample survey.

The workers were of the opinion that their health as well as their lives were at risk due to the inadequacy of safety arrangements and lack of protective equipment in their workplaces. The ILO estimates that globally over 2 million workers die each year from work-related injuries and diseases (Anker, 2003). The aggregate cost of occupational injuries and diseases across the world is estimated at between 1 and 6 percent of GDP, with a distribution of costs between society, enterprises and workers leaning heavily on the workers (Dorman, 2000). In our study area, most of the accidents in work places were found to occur from workers' ignorance about the use of machines and equipment. They were not trained to use even basic protective equipment like fire extinguishers. There is no arrangement to train workers in fire safety in the work place; nor they are advised how to take precautionary measures against possible dangers.

In the textiles factories, workers suffer from suffocation, dust, exposure to obnoxious chemicals, dirty drains, and contaminated water. Service sector workers (cleaners, porters, waiters etc.) fall sick after working in polluted environments or under the scorching heat of the sun. Construction and transportation workers are constantly at risk, and there are no measures to ensure their safety. Any accident or injury is their responsibility. Asked about the impact of work on their health, 64 percent of the workers replied that their work was harmful to health as well as to life. All of the workers in the transport sector held this belief; the proportion of workers expressing the same opinion in the garments factories was 60 percent. The proportions in the construction and service sectors were 84 and 55 percent respectively (Table 6.40). A sector-wise display of the impact of work on health and life is shown in Figure 6.1.

The manufacturing establishments under study have not been built to appropriate plans or designs. Some are located in buildings which were not intended for manufacturing purposes. There are technical faults in the layout of machinery and placement of workers. Such unplanned construction affects both working conditions and the quality of output. Safety measures have not been undertaken as per labour standards and legislations. The outcomes are accidents leading to serious injuries and even death. Globally, every year about 250 million workers suffer accidents and 300,000 die in the course of their work (ILO, 1999).

Recent studies have shown that workers suffer from health problems such as urinary tract infections, blurred vision, respiratory problems, headaches, backaches, waist pain, arm and leg pain, fever, colds and coughs, skin diseases, visual disorders, hearing problems and more, arising from poor working conditions. These miseries are compounded by grievances regarding irregularity of payment, denial of leave for health reasons or family contingencies, maltreatment and abuse. Female workers experience sporadic instances of sexual harassment. Moreover, workloads are heavy and stressful. Workers are under constant supervision and pressure. All these factors constitute poor working conditions part of life for the workers. The poor working conditions in the manufacturing enterprises under study may be attributed to employers' negligence, lack of awareness on the part of the workers, non-compliance with labour laws or the indifference of trade unions about labour welfare.

Table 6.39: Availability of Protective Equipment in the Manufacturing Sub-sector

Protective equipments	**Sub-sector**				
	Garments	Textiles	Steel & Engineering.	Electronics	Leather & Footwear
Fire Extinguisher	√	X	X	X	X
Safe exit in case of fire	√	√	X	X	X
Safety foot wears	X	X	√	X	X
Safety eye protector	X	X	√	X	X
Safety vests	X	X	X	X	X
Safety helmet	X	X	X	X	X
Masks	X	X	X	√	√

Source: Calculated from data available from the sample survey.

6.2.3 Occupational injuries and remedies

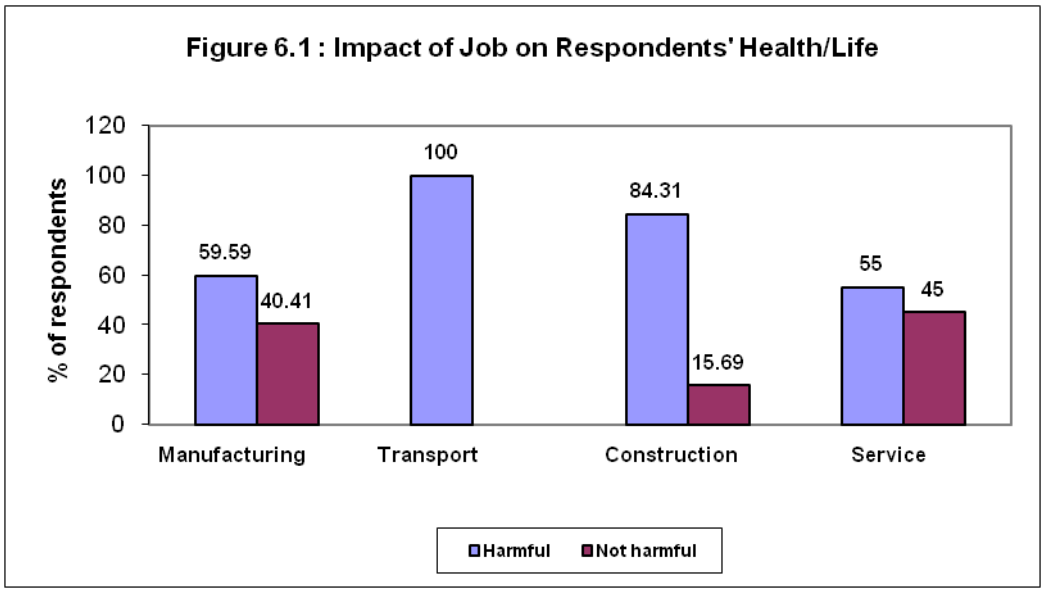
As the terms and conditions of employment have not been documented in black and white, employers are not obliged to take responsibility if there is any injury or accident suffered by workers. The workers reported that before recruitment, the

employers furnish a verbal undertaking from the workers that any injury or accident it will be their own responsibility. Any such agreement between an employer and a worker is a gross violation of relevant convention and legislations. The Employment Injury Benefit Convention 1964 (No. 121) establishes the principles of employer responsibility for insuring employees against occupational injury. Some employers have been found to take responsibility not as a matter of legal obligation but on humanitarian grounds, but apart from a few exceptions, the workers alone are responsible for any injury or accident that befalls them. Roughly about a quarter of the workers (22 percent) reported that employers shared the responsibility of any injury or accident in the workplaces (Table 6.41**)**.

Table 6.40: Percentage Distribution of Workers Reporting Impact of Work on Health and or Life by Sector

Sector	**Impact**		**Total**
	Harmful	Not Harmful	
Manufacturing	59.659	40.14	100.00
Transport	100.00	-	100.00
Construction	84.31	15.69	100.00
Service	55.00	45.00	100.00
Total	**63.99**	**37.01**	**100.00**

Source: Calculated from data available from the sample survey.



Source: Drawn from data obtained from the sample survey.

Table 6.41: Employers Sharing Responsibility for Injury or Accident

Sector	Responsibility		Total
	Share	Do not share	
Manufacturing	32.00	68.00	100.00
Transport	–	100.00	100.00
Construction	1.92	98.08	100.00
Service	15.31	84.69	100.00
Total	**22.22**	**77.78**	**100.00**

Source: Calculated from data available from the sample survey.

The proportion of workers reporting that employers shared responsibility is relatively higher in the manufacturing sector than in the other sectors under study. The employers' responsibility was manifested in the provision of facilities in the form of treatment, medicine, paid leave, leave without pay and the like. Treatment – among such facilities provided by the employers - constituted the highest (40 percent), followed by medicine at 36 percent. The proportion of workers enjoying paid leave and leave without pay turned out to be 7.50 and 3.80 respectively (Table 6.42). Transport workers did not report on this issue, and has been omitted from the analysis. It should be mentioned that employees pay for the cost of treatment from their own pocket and later are reimbursed. Factories do not have their own in-house medical or health care services for the workers.

Table 6.42 Facilities Provided for Injury in Workplaces

Sector	Means of taking responsibility					Total
	Medicine	Treatment	Paid leave	Leave without pay	Partial treatment	
Manufacturing	29.70	45.30	4.70	4.70	15.60	100.00
Construction	–	100.00	–	–	–	100.00
Service	66.70	13.30	20.00	–	–	100.00
Total	**36.30**	**40.00**	**7.50**	**3.80**	**12.50**	**100.00**

Source: Calculated from data available from the sample survey.

6.2.4 Hours of work

In our study, the majority of the workers (65 percent) were found to work excessive hours: that is, more than 8 hours a day. The issue of hours of work was incorporated into the preamble of the ILO Constitution and was addressed by the first ILO Convention, adopted in 1919: the Hours of Work (Industry) Convention, 1919 (No. 1). Excessive hours are detrimental to physical and mental health and impede balance between work and family life. Excessive hours indicate low wages, and short hours imply inadequate employment opportunities. The workers under study experienced both low wages and inadequate employment opportunities.

In our study garments industry workers were found to work as long as 15 hours a day on average, including overtime. In other manufacturing sub-sectors the figure was about 10 hours a day on average. Other studies have found female working longer hours. Paul-Majumder and Begum (1997) found women garment workers working for 12 hours with a lunch break of only 45 minutes, although the Factory Act of 1965 states that no worker should be compelled to work for 6 hours at a stretch without an hour's break or two half-hour breaks. Of the total women workers, only 12 percent worked the normal 8 hours a day; about 52 percent worked 4 hours of overtime and the other 36 percent worked overnight preceding the day of interview. Long hours of work in the garment industry result from time-bound overseas demand. Production targets must be achieved within the time limit set by the overseas buyers, and overtime must be worked if production is to meet deadlines. The situation in other manufacturing sub-sectors is different.

Bescond et al. (2003), using national labour force survey data, estimate the proportion of workers working excessive hours (weekly 49 or more hours) for 43 countries divided into three groups: high rate countries (where more than 40 percent of the workers work excessive hours), intermediate rate countries, and low rate countries (where less than 20 percent of workers work 49 or more hours per week). Of the 12 high rate countries, 11 are developing countries and only one is industrialised. The 21 low-rate countries comprise 15 industrialised countries, 5 transition economy countries and one developing country. The analysis reveals that people in developing countries work longer hours than those in transition economy

or industrialised countries. This pattern may be an indication of low wages and low labour productivity in the developing countries.

In our study we explored the reasons for working long hours. We found that of the workers working excessive hours, 53 percent preferred working more for more money, needed to support them and their families. In the face of increased costs of living, their regular income was not enough to meet the growing demands of the family, and they preferred working extra hours to taking leisure. Only 10 percent of workers preferred to work fewer hours and earn less money. Among those preferring to work less, the percentage of unmarried workers was predominant. The remaining 37 percent were found to be satisfied with their regular income and were unwilling to work more because of health concerns. These findings suggest that most workers work excessive hours for economic reasons.

6.2.5 Leave and holidays

The Factory Act 1965 provides for a weekly holiday on Friday. The Act also provides that no worker will be allowed to work more than 10 days consecutively without a holiday. In garment factories, 35 percent of workers were found to work all 30 days in the month preceding the day of interview. These workers, however, reported that they were paid for working on the holidays. They were granted paid leave for religious festivals twice a year, a total period of 6 days. There was no other leave. If workers asked for leave for personal or family reasons, in most cases it was granted, but without pay. The proportion of workers enjoying paid leave turned out to be 23 percent in our study. The workers avoided asking for leave even if it was necessary because employers did not like it. If the workers asked for frequent and long leave, there was a chance of losing their job, an indication of the insecurity of employment.

The workers deliberately worked on holidays for additional earnings, which supplemented their income. Most workers have dependants including children, aged parents, sick household members, unemployed brothers, sisters and relatives. To work on holidays they forewent leisure, rest and recreation. Excessive and long hours of work resulted in fatigue and illness. For some workers the hardship was so severe that they worked additional hours even if they were sick, and this created various

health hazards for them. Some workers were found to work because of refusal of their application for leave. Some female garment workers sometimes fall sick on the shop floor as a result of overwork and mental pressure. The workers were rarely granted medical or casual leave although legislation provides for it. The workers were not granted maternity leave, a gross violation of the Maternity Benefit Act of 1950.

6.3 Conclusion

The labour market for the working poor is characterised by low levels of wages, intermittent employment and lack of mobility, inadequacy of jobs, seasonal migration and poor working conditions. In our study, the wage level is found to be substantially low in all categories, whether agricultural, manufacturing, transport, construction or service. In terms of both average daily wages and average monthly wages, the remuneration of agricultural, construction and service workers is found to be relatively low compared with manufacturing and transport workers. The wage level for both male and female workers in the garment industry is lower than that in the textiles industry. Official sources of data indicate that the average monthly wage of skilled workers in the garment industry is 1.5 to 2 times lower than that of similar workers in textiles and other industries. Moreover, the wage level in Bangladesh's garment industry is one of the lowest, even by South Asian standards. If we examine wage levels by status of employment, we find that the remuneration of self-employed workers is highest while that of domestic workers is the lowest, in terms of both average daily wages and average monthly wages.

With inadequate employment opportunities, the workers were found to work roughly 3 weeks a month on average. In this context, we examined the relationship between the volume of work and the amount of wages of the workers. Data indicate that the transport workers worked the least but earned the most, in terms of both daily and hourly wages. Agricultural workers worked more but earned less than transport workers. Manufacturing workers working the longest period daily earned marginally more than agricultural workers but substantially less than transport workers in terms of daily average wage. In terms of average hourly wage also, manufacturing workers' earnings were just fifty percent of transport workers' earnings.

The average monthly wage of agricultural worker was found to be marginally higher than for service workers but substantially lower than for manufacturing workers. Agricultural workers worked more but earned less than transport workers in terms of average monthly wages. If we examine the level of wages by status of employment we find that the average monthly wages are highest for the self-employed and lowest for domestic workers. Data indicate that the average monthly wages of the regular paid employees and paid casual workers were almost same. In terms of either average hourly or daily or monthly wages, the level of wages of the workers was low. The workers' major source of income was their primary occupation, and only one tenth of the workers had secondary occupations. Data indicate that 98 percent of the average total income of the household originates from primary occupations.

In our study we found co-existence of overtime along with unemployment. Among the five sectors under study, only manufacturing has been found to provide overtime facilities for its workers. The return from overtime constituted a significant portion of their regular income. In the manufacturing sector, the overtime rate was found to be almost same as the regular wage rate against working for 4.21 hours per day on average. Overtime work done by garment workers was found to be 5.60 hours/day on average, yielding an average wage of Tk. 132.84 per day. Along with examining wages of the workers we explored whether wages were paid timely or not. Data indicate that timely payment of wages is more pronounced in the informal sector than the formal sector. Payment of wages was delayed more in the manufacturing sector than in other sectors under study. The delay of payment sometimes extended up to two weeks.

The agricultural workers in our study area were found to remain unemployed for a significant portion of the year. The majority of agricultural workers (27.42 percent) remain unemployed for a period of three months; only 9 percent remained employed throughout the year. Among those remaining unemployed for a period of three months a year, the proportion of female workers was relatively high compared with male workers. As opposed to the rural area, 65 percent of urban workers remained employed throughout the year. The urban workers remaining unemployed for a period of three months figure out to be 19.42 percent. As in the rural area, the proportion of female workers remaining unemployed for a period of three months

was higher than male workers. During the lean season in rural areas, employment dropped by 50 percent while wage declined by about 20 percent.

In order to overcome the employment crisis in the lean period agricultural workers migrated to urban areas in search of jobs. Of those searching for jobs outside their locality, a quarter was successful in finding employment. The necessary and sufficient condition for their migration was a subsistence wage covering maintenance plus a surplus to send back home. Usually they found employed in the service, transport and construction fields.

Side by side with examining migration from rural to urban areas, we explored the mobility of workers across occupations and generations. Given the structural transformation of the economy, workers had changed their occupations over the years. Compared to previous times, the numbers of day labourers, transport workers, factory workers and construction workers had increased. In other occupations such as business and service, the trend was downward.

At micro level, the majority of the female workers were found to have left their previous occupation to look after children. Most male workers who had left a previous job were dissatisfied with the low wages. In their transition from previous to present jobs, they remained jobless for a time from less than three months to more than two years. Majority of the workers (65 percent) the workers have been found to stay in their present occupations (main) from up to five years to 40 years and above. Data indicate that 50 percent of the workers had been in their present occupations for 5–20 years.

About one tenth of the workers had been working since childhood. They started at an early age in order to supplement the household income. Data on vertical mobility of the workers indicates that 51 percent of the farmers inherited their fathers' occupations; this proportion was 35 percent for day labourers.

For female workers, child care and household activities appeared to be the main obstacles to employment. Otherwise, they were found to face obstacles from within the family and society in searching for and holding jobs. About 28 percent of female workers reported that they faced opposition within the family while at work. The obstacles created by the family were found to originate from ignorance: as the level

of education of the female household members increased, the proportion of households imposing restrictions diminished. Besides family-level constraints, women faced obstacles from society. About one third of the female workers reported that they encountered criticism, irritation, teasing and intimidation.

Poor workers are those who earn below the poverty line income and work in poor conditions. Their employment is characterised by informal recruitment, employment insecurity, rigid terms and conditions of employment, stress, lack of occupational health and safety, hazardous working environments and long hours of work. About one fifth of non-farm workers reported that they were not recruited through an appointment letter. The majority of the workers (99 percent) reported an inability to invoke the law in cases of unlawful dismissal or termination. Occupational safety and health in the enterprises under study was miserable. The majority of the workers (82 percent) reported that there were no arrangements in their workplaces to ensure their health and safety. They were not provided with necessary protective equipment, and nor were the factories adequately protected. Workers frequently succumbed to serious injuries and even death in their workplaces.

The majority of the workers (64 percent) considered their jobs harmful to their health as well as life and were found to suffer from a number of health-related problems. Except for a very few, employers took no responsibility for the health of their workers. About a quarter of the workers reported that their employers shared the responsibility of any injury in the workplace, usually in the form of assistance with treatment, medicine, or leave with or without pay. In our investigation we did not find any factories to provide in-house medical or health care services.

The majority of the workers (65 percent) were found to work longer than eight hours a day. Excessive hours of work are harmful to both physical and mental health and impede the balance between work and family life. Garment workers worked as long as twelve or fifteen hours a day. On being asked, they said that they worked long hours to face unforseen contingencies and supplement low household incomes. The majority of the workers (53 percent) were found to work excessive hours for economic reasons. About a quarter worked every day in a month without a weekly holiday. There was no leave for personal and family grounds – if however, there was any such leave, it was without pay. With no leave provision, some workers continued

to work even if they were sick; this deepened sickness further, leading to disability and even death.

The implications for policy of the above findings are enormous. To protect workers during slack seasons there should be enough safety net programs targeted at jobless workers, with particular emphasis on disadvantaged women. Both male and female workers should be trained to increase their employability in the formal sector and provided micro credit to initiate self-employment activities for income generation. Educational policies should be designed to enlighten people about the benefits of female education and employment. At macro level, more investment should be channelled to build up infrastructure in the rural areas. This will help diversifying the rural economy and create more avenues for employment and income. Conventions related to occupational safety and health, employment security, and other workers' issues should be endorsed and strictly implemented. The need of the hour is to review existing labour laws covering the needs of workers and enforce relevant legislation protecting workers' rights and privileges.

CHAPTER 7: SEASONAL MIGRATION WITH GIFT-GIVING AND GIFT-EXCHANGES: LESSONS FROM A FIELD STUDY OF RURAL–URBAN MIGRATION IN BANGLADESH

7.0 Introduction

Our work sets out to make a rather elementary point in the context of rural–urban migration in developing nations: rural employment opportunities vary directly with seasonality in agriculture. During peak seasons cropping and harvesting activities keep labour force mostly employed. In lean seasons unemployment and underemployment take severe forms causing great hardships in rural labour markets. Since the opportunity cost of some rural workers is close to zero in lean seasons, it is likely that temporary migrants will undercut wages to *snatch* urban jobs. We call a wage cut below the legal minimum as gift-giving by a rural worker[15]. Gift-giving and gift-exchanges can perpetuate both rural and urban poverty among unskilled and semi-skilled workers who are christened as the working poor.

This simple fable has several interesting and important twists that drive the current research. First and foremost, the evolving job search process of rural workers for urban jobs is of great significance since the labour market matching mechanism for

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[15] Our intuition of gift-giving and exchanges in the context of developing economies is the polar opposite of the traditional (partial) gift-exchange hypothesis advanced by Akerlof (1982; 1984) in which some employers willingly pay workers in excess of the market-clearing wage. In return these workers expect their employees to devote larger efforts than if wages were at market-clearing rates. An important corollary of partial gift-exchanges is a robust justification of the efficiency wage hypothesis of Yellen (1984) in terms of an explicit sociological model of norms of fairness and reciprocity. In contrast, in our model, workers choose to accept wages below the legal minimum as a gift-giving exercise mainly to establish a long-term and cooperative relationship with their employers. In an important paper Carmichael and MacLeod (1997) note that gift-giving at the beginning of a long-term relationship can serve to support future cooperation. Once a relationship is formed between employers and their employees, our work suggests, employers willingly offer longer tenures as gifts to employees in order to induce them to reciprocate with future wage-cuts. If such gift-exchanges exist as an equilibrium phenomenon, it can create and drive working poverty in both the urban and rural labour markets in developing nations.

temporary migrants is increasingly characterised by gift-giving and group-bargaining. Secondly, the culture of gift-giving has quickly spread to rural labour markets as well. It is thus important to understand the effects of gift-giving on the probability of finding a job and also on the decision to temporarily migrate from rural to urban areas. Finally, these temporary migrants form long-term and reciprocal relationships and strong emotional ties with their urban employers and, like migratory birds, unfailingly return to their urban bases years after years during lean seasons in agriculture. The seasonal migration of workers thus provides us a great opportunity to better understand the role of reciprocity for the poorest workers living and working in the poorest parts of our world.

In our model the labour matching process is characterised by the following: in the lean season unemployed workers in a specific village, or group of neighbouring villages, interact with each other and form small groups – based on their ages, skills, religions, ethnicities and family ties. These informal groups decide whether they would be willing to migrate to the urban areas. Once the decision is made the group will contact employment agents on their mobile phones for a meeting (akin to Strategy S1 of Fields, 1979). The employment agent is the classic third party that acts as a conduit between urban employers and rural migrants. A typical employment agent (agent hereafter) has a prior agreement with urban employers about the wage rate, which remains unknown to all workers, and also the size of recruitment. The agent meets a group to ascertain their abilities and also to negotiate wages and working hours.

The negotiated wage lies between the legal minimum (possibly offered by the urban employer) and the subsistence wage in the urban sector. The difference between the actual wage from the legal minimum is the wage discount that workers collectively negotiate with the agent. It is almost a rule that workers never get to know their actual employers even after their migration. We posit that the wage discount is a one-sided gift from workers to the agent for securing an urban job and consider economic ramifications of wage discounts as gifts for seasonal migration[16]. After a series of

[16] Note, at the very outset, that the notion of gift-giving in our model is completely different to the standard intuition of gift-giving in labour economics, which is explained in Section 2.1.

such meetings with several employment agents, a group of rural workers migrates to the urban sector – the initial cost of migration is usually borne by the agent but gradually recovered from their future wages. Seasonal migration thus continues with unfailing regularity from rural to urban labour markets.

The first contribution of this chapter is to develop an interactive model with two (finite) groups of workers and an employment agent to formalise the model of one-sided gift-giving and test its predictions using micro-data collected from sample surveys in Bangladesh. The second contribution is to empirically assess the role of gift-giving in the decision to migrate from rural to urban labour markets. Thirdly, the chapter develops a new model of gift-exchanges and offers a new test based on the observable variables of the labour market in developing nations to identify if temporary migrants and their employers/agents form any long-term relationship involving gift-exchanges. Finally, the chapter makes an important contribution to the field of rural-urban the migration by endogenising the relocation cost of the standard migration theory in order to explain how the equilibrium relocation cost can propel seasonal migration.

The structure of this chapter is as follows: Section 7.2 positions this research within the existing literature. Section 7.3 develops a model of competitive wage discounts to identify how rural workers can grab urban jobs by one-sided gift-giving. In Section 7.3 we also examine the long-term reciprocal relationship between an agent and migrant workers. Section 7.4 describes the context of research, data-sets, and empirical strategy. Section 7.5 provides the results while Section 7.6 concludes.

7.1. Related literature

The original migration theory is closely rooted in the theory of general equilibrium (GE), which is an impressive artefact of the economic theory. The proof of the existence of GE and the interrelationships between Pareto ranking of equilibria and the core opened up a new way for reconstructing economic models in the 1950s and the 1960s. The original migration models of the 1970s are mostly a modified two-sectoral GE model in which rural–urban migration, by responding to the expected rural–urban wage differential, plays an equilibrating role. Roughly at the same time, dissatisfaction with GE grew apace for a set of related reasons: first, since the GE

could not handle strategic interactions well since agents are only allowed to interact through the price system. In its extreme form the models of the Aumann–Hildebrand school posits a continuum of atomistic agents, none of which can influence the equilibrium prices and allocation of resources and final goods. Secondly, GE was not able to integrate intricate institutional details, which typically characterise modern labour markets in advanced nations. Thirdly, the existence of asymmetric information poses a serious problem for GE, since information asymmetry is a hallmark of modern labour markets. Admittedly, the initial Arrow–Debreu model is capable of handling uncertainty as long as there is no information asymmetry. Finally, it is also important to note that economists increasingly realised in the 1970s that labour is a very special type of input that responds to incentives and reacts to unproductive constraints.

In recognising the above shortcomings of GE in the 1970s, the modern analysis of labour markets in advanced nations unleashed a new strand of research in terms of the theory of contracts embedded in the general economics of information. Contracts usually represent the constraints coming from the intricate institutional details of the labour market[17]. These models also increasingly relied on a system of behavioural norms to explain outcomes of a modern labour market in advanced societies. That a worker can influence and even control one's own labour productivity has turned the interest of economic theorists to a careful examination of incentives, contracts and the internal worker–firm relationship (see pioneering work by Hart and Holmstrom, 1987; Milgrom and Roberts, 1992; Lazear, 1998). In a parallel development, impressive economic models were crafted to explain the evolving complexity of rural–urban migration. In order to set the scene and compare and contrast our results, we focus upon the most relevant models of gift-exchanges and migration.

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[17] The relevant question for labour economists became how employers can incentivise their employees to provide efforts above the basic minimum level. This question became a source of a series of excellent contributions on how to craft explicit and implicit contracts so that the workers' interests are aligned with their employers' objectives (see Gibbons, 1998; MacLeod, 2007; Prendergast, 1999).

7.1.1 Gift-exchange models: our contribution

The precursor to the gift-exchange models of economics comes from the fields of sociology and anthropology (Mauss, 1990). Their basic intuition turns on the simple, yet powerful, principle of reciprocity that posits gifts received bring with them the obligation of returning gifts. Etymologically, the word 'gift' seems to have been derived from a German word that means a 'noose', which indicates a reciprocal foundation to gift-giving[18]. An important branch of the literature on labour markets has highlighted how workers' behaviour is influenced by their social interaction with their employers, which is the foundation-stone of the gift-exchange model in economics. The basic idea is that workers possess information about their true effort levels, which employers can't directly observe.

Workers can thus choose their effort levels while employers can use gifts as a rewarding mechanism to incentivise their workers to commit to higher efforts within a firm (see Akerlof, 1982), which can have far-reaching macroeconomic and microeconomic consequences like downward wage rigidity and involuntary unemployment (see Akerlof, 1984). An excellent review has been provided in Fehr and Gächter (1998). The empirical confirmation of the gift-exchange model seeks to establish whether there is sufficient statistical support for the positive reciprocity in labour markets[19]. One of the major hurdles in identifying positive reciprocity by

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[18] By reciprocity economists imply a basic human behavioural trait when people respond to each other's kind or unkind acts even when there is no direct benefit in terms of one's reputation. Outstanding theoretical models of reciprocity have been developed by Rabin (1993), Charness and Rabin (2002), Dufwenberg and Kirchsteiger (2004), Falk and Fischbacher (2006) and Cox et al. (2007).

[19] The traditional gift-exchange model turns on the pivotal assumption of a *positive* relationship between wages and worker effort levels. Workers respond to high wage levels (gifts from employers) by increasing their efforts above the basic minimum (workers' gifts), which is called positive reciprocity. The ''fair wage-effort'' hypothesis of Akerlof (1982) and Akerlof and Yellen (1988, 1990) rationalises higher than market-clearing wages by using a gift-exchange model, where ''on the worker's side, the 'gift' given is work in excess of the minimum work standard; and on the firm's side the 'gift' given is wages in excess of what these women could receive if they left their current jobs'' (Akerlof (1982, p. 544).

using observational data is that the relevant variables that determine the response to the gift, such as effort costs and alternative wages, are unobservable. The lack of reliable data has led many researchers to use laboratory experiments to evaluate the reciprocity since the laboratory allows an extensive control over the economic environment to unravel the effects of exogenous changes in gifts on the responses of agents.

Important laboratory-based experiments undertaken by Fehr, Kirchsteiger and Reidl (1993); Fehr and Gcähter (2000); Hannan, Kagel and Moser (2002) and Charness (2004) found robust support for the principal of reciprocity as an economic phenomenon. The corollary is that gift-exchanges can be an effective mechanism for improving labour productivity within firms in advanced nations. The major concern with laboratory experiments is the lack of generalisability. The laboratory creates an artificial environment that, in turn, conditions participants' behaviour. In other words, the emotion of gift-exchanges can barely be captured by the bloodless laboratory setup. Thus, the recent research on gift-exchanges has turned to field studies by exploring the responses of participants in their natural settings20.

Our work will have an important innovation for the existing literature on gift exchanges for improving our collective understanding of reciprocity in the real world and especially in the context of labour markets of developing economies: first, our work collects primary and observable data from the field to develop and conduct new tests to measure the reaction of agents/employers to monetary gifts (wage-cut) from their migrant workers as a short-term and one-sided gift-giving. Secondly, we then examine the consequences of these wage-cuts on the 'culture of gift-giving' in rural labour markets, which in turn propel the decision to migrate from rural to urban

[20] Recent field experiments on gift-giving have failed to produce unequivocal results on the importance of reciprocity in the real economy. While Falk (2007) found that gift-giving significantly raised charitable donations, other work suggests it has insignificant effects within the labour market. In particular, Gneezy and List (2006) and the follow-up work by Kube, Maréchal and Puppe (2006) found that the gift had no significant effect on productivity at any point during the work day. These results raise doubts as to the importance of gift exchange within the labour market.

areas. Finally, we explore reciprocity as long-term gift-exchanges between agents/employers and workers to better understand an unseen bond that evolves between employers and workers, which drives many seasonal migrants to return back to the same employer years after years with an unfailing regularity.

7.1.2. Migration models: our contribution

In the early 1950s development economists examined the twin problem of population growth and economic development in what they chose to call the less developed countries (LDCs). It was thus natural for them to advocate industrialisation that would not only increase national incomes, but also relieve the rural overpopulation (see Lewis, 1954). However, during the 1960s this view came to be somewhat discredited when it became apparent that poverty and inequality had persisted despite significant accumulation of industrial progress and overall growth in national incomes of LDCs. This conundrum has propelled the emergence of the new orthodoxy in the 1970s in which rural–urban migration in the LDCs came to be viewed as 'a symptom of and a contributing factor to underdevelopment'. The new orthodoxy[21] is due mainly to Todaro (1969) and Harris–Todaro (1970), usually called the Harris–Todaro model (HT), who advanced an important framework for analysing migration from rural to urban sectors.

The HT model argued that individuals choose to migrate to urban sectors with an explicit goal of obtaining employment in the formal sector. The analytical burden of the HT model was to explain why large numbers of rural workers chose to migrate to cities despite vast urban pools of unemployed and underemployed[22]. The HT framework accomplished the task by explicitly modelling the present value of expected earnings

[21] There may exist high unemployment in the urban sector that creates uncertainty of finding work in the formal sector for a migrant. Despite high unemployment, rational migration continues if the expected income in the urban sector is higher than that of rural sector.

[22] In Brueckner and Zenou (1999), the urban land market is brought into the HT framework. As a result, the interactions between rural-urban migration and urban land rent are explicitly considered. They argue that increased urban land rent can act as a dampener for migration since it reduces the incentive of a rural agent to migrate to the city; this provides an important explanation of the reversed pattern of rural-urban migration in developed nations, called suburbanisation in the U.S.

rather than current wage rates[23]. In their decision to migrate, treating rural–urban migration primarily as an economic phenomenon, the HT framework argued that potential migrants balance the probability of unemployment against the real income differentials between the urban formal sector and the rural area[24]. It was further postulated that any informal sector employment is a transitional phase during which migrants are actively searching for a formal sector job[25].

The next important milestone in the literature is the adoption of the job search framework in the context of rural–urban migration, which is built on a sequential search technology with an 'optimal stopping rule' such that an agent migrates only when the offer wage exceeds one's reservation wage. In the quantity adjustment framework, Fields (1975; 1989) offered important extensions of HT model by developing 'a more generalised formulation of the job-search process'[26]. In an important development Vishwanath (1991) developed a search theoretic model of migration in which migration decision of an individual came to be viewed as spatial relocation, which forms an integral part of finding jobs through a continuous lifetime program of search. In this framework, it is demonstrated that migration can occur even when the mean urban wage is less than the rural income. Notably migration

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[23] The HT model suggests unemployment rates that are significantly higher than expected. In terms of the analytical foundation, the model does not endogenise its driving force, the rural-urban wage gap, nor the urban wage rate. The model has been modified in a number of ways to introduce many interesting aspects like risk aversion, priority hiring, informal sector, travel costs.

[24] The HT model also established that, in certain parametric ranges, an increase in urban employment may actually result in higher levels of urban unemployment and even reduced national product, which is popularly known as the Todaro Paradox.

[25] The HT model has been put to the empirical test by many studies that confirm that the relative wages and the perceived probability of finding a job are important determinants of migration. The main conclusion of HT model has had a lasting influence on policy formulation in LDCs.

[26] Fields (1989) developed a multisector labour model including on-the-job search with many others realistic labour market features. A significant contribution of this framework is the distinction between the *ex ante* allocation of the labour force among search strategies and the *ex post* allocation of the labour among labour market outcomes.

decision is examined, emphasising the proper formation of future expectations, incorporating into the model realistic and important factor such as urban wage dispersion and continuing and endogenous information flows[27].

In this model, a rural (potential) migrant has three options: stay at home fore ever (rural location), engage in rural-based search for a city job, finally move to the city and engage in urban-based search in the city s/he can expect to further engage in employee or on-the-job search[28]. The model argued that migration is rational even when the mean of the prevailing wages is less than the rural wage, which is caused by the expected intertemporel trade-off before migration. A lower current income from migration is preferable with the expectation of better-paid jobs in future. It is not merely the mean wage offer, but the entire distribution of prevailing offers that can induce the migration decision. A critical finding of the model is the role of exogenous relocation cost as a determinant of migration since relocation costs deter migration: among those who face the same urban wage distribution those with a higher reservation wage suffer a higher percentage decrease in the migration rate with an increase in relocation costs[29].

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[27] In an important work Bencivenga and Smith (1997) consider the interaction between migration and unemployment, in which urban economic development goes *pari-passu* with rural-urban migration and is associated with swelling urban unemployment. According to their novel results, adverse selection in the urban labour market keeps the unemployment pools away from the formal urban market so that employers hire only a tiny proportion of workers from the unemployment pools. This adverse selection becomes particularly acute during urban economic stagnation.

[28] Various search strategies are characterised by their respective rates of information flow, viewed as a random process, and search costs. The expected-income maximising individual takes an optimal decision in an environment characterised by urban wage dispersion.

[29] For a person engaged in rural-based search, the migration rate bears a negative relationship with rural wage, discount rate, urban layoff rate and urban search cost. Migration increases in rural search cost, urban rate of finding jobs and the mean urban wage. By the same token, migration rate increases in rural-urban information flow, if the wage distribution has an increasing hazard property.

The field of migration is well-ploughed and witnessed many excellent models over time. Our primary contribution to the literature on migration is to endogenise the relocation cost for seasonal migrants by letting migrants to optimally choose their desired gift-giving as wage-cuts. In this work we develop a basic model to explain an equilibrium relocation cost, which derives from the equilibrium gift-giving, and thereby influences the seasonal migration decision in the short-run.

7.2 Our prototype model of migration: basic setup of match-making with full information

There are three main agents in our model. The first two are employers and workers and the third one is an employment agent who acts as an intermediary between employers and workers. In our model, employers have limited roles while their employment agents take the centre stage of our analysis. Workers are located in a rural area while employers are based in an urban sector and an employment agent has access to both the rural and urban sectors of the economy. If a worker from the rural sector with a reservation wage W_R is matched with an employer from the urban sector, we assume the surplus generated in the production taking place in the urban sector is M. Under full assumption, one can assume that the surplus is equally shared between the worker and the employer without resorting to an explicit modelling of the bargaining process. Thus, the share of the surplus to a worker, or employer, is $(W-W_R)/2$ where W is the productivity/output of the worker in the urban sector.

An employment agent, on behalf of the employer, undertakes a recruitment effort 'A' to find employers and workers and match them. Thus, the agent acts as a match maker. It is expected that the recruitment activity A is an increasing function of M. Thus we have:

$$A=f(M) \text{ with } f'(M)>0 \text{ and } f''(M)>0 \qquad (1)$$

If the agent charges a price from the worker for covering the cost A, then the net return to the worker is

$$R=(M/2) - A \qquad (2)$$

If information is complete then the agent receives A, worker receives [(M/2)-A] and employer receives M/2. The twist in the model arises due to an asymmetry of information and wide-spread seasonal unemployment the rural sector of developing economies, which we model in the next section. The gist of the matter is that rural

workers don't know the value of W and (M/2). Most often than not, seasonal migrants do not even know their actual employers as their first and last contact person is the employment agent who recruits them on behalf of the employer. Moreover, during lean seasons, seasonal migrants have W_R close to zero, which employment agents like to exploit. The next sub-section models the consequences of the informational asymmetry and also the leverage that an agent has over potential migrants.

7.2.1 Migration and gift giving: a simple model

In the lean season unemployed workers in a specific village, or group of neighbouring villages, interact with each other and form small groups. In this work we don't explain the formation of groups. For simplification of our calculations, we assume there are two groups in a neighbourhood. Our results will hold as long as there are a finite number of such groups. Each group decides whether they would be willing to migrate to the urban sector. Once the decision is made the group will contact employment agents for a meeting, which is similar to Strategy S1 of Fields (1979). The employment agent is a medium between urban employers and their potential rural workers. A typical agent has a prior agreement with urban employers about the wage rate, which remains unknown to all workers, and also the size of recruitment. An agent and the group of workers negotiate for a wage. The difference between the actual wages from the legal minimum is the wage discount that workers collectively negotiate with the agent, which we call gifts from workers to agents/workers.

We label the minimum legislated wage as the posted wage W^D. Due to prevailing lower wages in the rural sector and seasonal unemployment, a group i of potential migrant has an incentive to undercut the wage rate by Δw_i. It is important to highlight that the early work by Leibenstein (1957) and Mazumdar (1959) on the theory of wages in low income countries chose to ignore such wage discounts mainly because of what subsequently came to be called the nutrition-based efficiency wage models. According to this strand of efficiency wage models, there is a floor below which the wage rate will not fall because workers will then consume less than the required minimum calories, which will adversely impinge on their productivity. For wages below this floor, the cost of production will rise as workers become less

productive. Mokyr (1991) poignantly summarised this view as 'cheap labor is dear labor' at a wage below the threshold.

However, the nutrition-based efficiency wage model has been challenged by subsequent findings: Mokyr (1985), Subramanium and Deaton (1994) argued that the calorie equivalent of the wage is too high to be an efficiency wage. Important empirical findings also noted that the distribution of real wages in the Indian subcontinent is not compatible with the nutrition-based efficiency wage model (Bardhan, 1984 and Rozenzweig, 1988). In the context of labour markets India Anand (1997) found that the nutrition-based efficiency model does not apply. There is another important factor that one should bear in mind in this context that in the Indian subcontinent workers ritually receive meals from their employers, which possibly enables them to cut nominal wages below the legal minimum (see Bardhan and Rudra, 1983). Wage discounts can thus make economic sense as low wages do not necessarily make labour dearer. For the ith group of potential migrants, we define the demand for their labour D_i in the urban sector as

$$D_i=N_iX \qquad (3)$$

N_i is the number of urban employers who buy labour hours from the ith group of workers and X is the demand for labour from each employer. Let us call Δw_i as the wage cut/discount given by group i from the legal minimum. The ith group can only access the urban labour market through the intermediation of the agent. Thus, the above demand materialises if the agent and group i come to an agreement. If they agree, the gross revenue H_i to group i is as follows:

$$H_i= N_iX(W^D-\Delta w_i) \qquad (4)$$

We posit the simple linear functional forms for N_i and X as increasing functions of wage discounts Δw_i, which are postulated as the following[30]:

$$N_i=a -\alpha (W^D-\Delta w_i) \qquad (5)$$

[30] Effectively, what we propose is that wage discounts increase the bargaining power of an employment agent to increase the size of recruitment in his negotiation with the actual employer.

$$X=\beta_1 - \beta_2 (W^D-\Delta w_i) \quad (6)$$

Equations (5) and (6) posit that a typical migrant group can boost the demand for their labour by undercutting the wage rate below the legal minimum wage mainly to set a foot on the urban labour market. If we call the discounted wage by group i as t_i ($=W^D-\Delta w_i$) then the gross return from the urban sector for a migrant group i is given as:

$$H_i=a\,\beta_1 t_i - a\,\beta_2 t_i^2 - \alpha\,\beta_1 t_i^2 + \alpha\,\beta_2\, t_i^3 \quad (7)$$

We then introduce a reputational cost C_i for (potential) migrant group i for undercutting the wage rate below the minimum:

$$C_i= C_O+(t_j-t_i)t_i \quad (8)$$

Note that t_j is the wage rate that group j of potential migrants accepts. Thus, if $t_i<t_j$, then there is a reputational advantage for group i for having a reputation for being a "hard-nosed bargainer". If the inequality gets reversed, group i has a reputational cost. C_O is the reputation cost if $t_i=t_j$. We express the net return function of the i_{th} group as h_i after paying the fee 'A' to the agent:

$$h_i= a\,\beta_1 t_i - a\,\beta_1 t_i^2 - \alpha\,\beta_1 t_i^2 + \alpha\,\beta_2\, t_i^3 -(t_j-t_i)t_i - A \quad (9)$$

Assuming a symmetric Nash equilibrium, the first and second order conditions give the symmetric Nash equilibrium wage t* as the following[31]:

$$t^* = \left(\frac{(1+m_2))}{2m_1}\right) - \frac{SQRT\{(1+m_2)^2 - 4m_1 m_0\ \}}{2m_1} \quad (10a)$$

Where

$$m_0=a\beta_1=,\ m_1=3\alpha\beta_2,\ m_2=2(a\beta_1+\alpha\beta_1-1) \quad (10b)$$

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[31] The first order condition to maximise (9) w.r.t 't' gives the implicit reaction function group i as: $t_j=m_0+t_i(m_1t_i-m_2)$. Assuming a symmetric equilibrium and substituting $t_i=t_j=t$ into (9) we get (10a) as a possible (symmetric) equilibrium from the quadratic equation. The second order condition rules out the other quadratic root as a possible equilibrium.

In the proposed Nash equilibrium, with S* given as the size of each group, a potential migrant k agrees to migrate to the urban sector if:

$$W_R^k + (A/S^*) + (W^D - t^*) < U(t^*, FW) \qquad (11)$$

Where W_R^k is the reservation wage of migrant k and U is the utility from the discounted wage of migrant k in the urban sector and we express future wages FW. The left-hand-side of (11) gives the cost of relocation to the urban sector and the right-hand-side labels one's expected benefit from migration. Further details of (11) will be considered in the empirical section 4.1[32]. Note that the relocation cost is endogenous in our model since it is determined by the optimal choice of t*.

7.2.2 Bilateral gift exchanges in the urban labour market for seasonal migrants: the basic intuition

In the existing literature on labour economics the presence of long-term employment relationships is an important factor in the determination of reciprocity and gift exchange (see Gächter and Falk, 2002). Following this important line of research, we seek to test whether the length of tenure/employment relationship between the agents/employers and their workers induces gift-exchanges between them. Workers in our field study have differing lengths of employment relationships, or what we call tenure in terms of years working for the current agent/employer. In our work, bilateral gift-exchanges take place in the following fashion: what we posit is that the agent/employer offers a gift of tenure to an employee, which is a job security and certainty for a seasonal migrant to return to the urban base. In exchange for the job security, the worker offers a gift of further wage discounts below the legal minimum. We use the micro data to estimate the effect of the tenure on the wage discounts of the workers, controlling for other worker-specific characteristics. Our results would suggest that the principle of reciprocity works in the urban labour market for

[32] It is expected that the initial wage discount enters on the left hand side of equation (11) as a relocation cost and future discounts enter the right hand side of (11) as one of the determining factors of future benefits from relocation. If workers can correctly forecast future wage discounts, then both initial and future discounts should have negative impacts on the probability of migration of a worker from the rural to the urban sectors.

seasonal migrants if workers respond to the gift of increasing tenure from agents/employers by increasing their future wage discounts. Further particulars will be provided in the following section on the empirical strategy.

7.3 Our empirical strategy

The empirical strategy addresses two related questions and is undertaken in two steps.

Step 1:

We will ascertain if gift-giving plays any role in the decision to migrate for rural workers. Secondly, we will estimate whether there is any evidence of long-term gift exchanges taking place between workers and their agents/employers. In order to determine the role of gift-giving on migration we apply the standard probit analysis. From the micro data we are able to dichotomise rural workers into two groups. The first group consists of rural workers who have become seasonal migrants and the second group is composed of members who chose not to become seasonal migrants. On the basis of the sample survey we apply the probit analysis to explain the determinants of the migration decision: each worker k has a binary choice variable Z_k, Z_k=1 if the worker chooses to move to city, otherwise Z_k=0.

For assessing determinants of migration we choose a vector X of explanatory variables along with the data on initial gift-giving, labelled as OLDGIFTk, which is the first wage discount that a worker gives to an agent/employer. The explanatory variables include various socio-economic and demographic characteristics of workers and also future wage discounts what we call $NEWGIFTS_k$. What we propose is that forward-looking workers should take into account future wage discounts since their utility from relocation to the urban sector will be predicted on $NEWGIFTS_k$ as well. In other words, we examine the impacts of X and $OLDGIFT_k$ on the probability of migration. This is what we call the short-run model of gift-giving.

Step 2:

For the long-term relationship for each worker from rural as well as urban sectors, we have collected information on the length of tenure of each worker k ($TENURE_k$) and k's old and current gifts that we respectively call $OLDGIFT_k$ and $NEWGIFT_k$.

At the time of migration the 'current gifts' are still in the womb of the future, which is why we call them $NEWGIFT_k$. However forward-looking workers have an incentive to anticipate them as a building block of long-term relationships. It is also likely workers' expectations about $NEWGIFT_k$ are consistently falsified. This is however an empirical matter and we will turn to the question of expectation fulfilment, or otherwise, in Section 7.

We measure $NEWGIFT_k$ by realised future wage discounts as the difference between the current minimum legal wage and the current (actual) wage.

Our central concern in this context is to test reciprocity by detecting whether $NEWGIFT_k$ is significantly affected by the length of tenure $TENURE_k$ for each worker k. In other words, workers with longer tenure react more to the gift than do individuals with shorter tenure by cutting current wages. Since both $TENURE_k$ and $NEWGIFT_k$ are endogenous we apply 2SLS to estimate the relevant parameters. On the basis of the above we adopt the following strategies to unravel the role of gift-giving on seasonal migration and also to detect any evidence of long-term gift exchanges.

7.3.1 Gift-giving in the short- term

In our model the decision to migrate depends on the relocation cost of migration, namely t* determined by the equilibrium, reservation wage W_R^k, and migration fee 'A' and also on the benefit from the relocation. The utility from relocation is U_k (t*, FW) where FW labels the future wage of a worker, which depends on future wage discounts, or NEWGIFT. Note that the cost of relocation to worker k is given by $[(A/S^*)+ (W^D-t^*)+W_R^k]$, where W_R^k is the reservation wage of the kth worker and S* is the equilibrium group size. The kth worker migrates if

$$U_k(t^*, FW)-[(A/S^*)+ (W^D-t^*)+W_R^k]>0 \qquad (12a)$$

In our empirical analysis we posit worker k migrates if $U_k>U^*$, where U* is the critical or threshold level of utility from relocation. Each worker k has a binary choice variable Z_k: $Z_k=1$ if the worker chose to be a seasonal migrant to the urban sector, otherwise $Z_k=0$. We then have the realised state

$$Z_k = \begin{cases} 1 & if \quad U_k > Threshold = U^* \\ 0 & if \quad U_k \leq Threshold = U^* \end{cases} \qquad (12b)$$

We posit that the decision of the kth (rural) worker to migrate depends on an *unobservable* endogenous utility index (U_k), which is a latent variable that depends on a vector of explanatory variables X of socio-economic characteristics of the worker (including NEWGIFT) and one's willingness to give initial gifts (OLDGIFT) in such a way that the larger the value of U_k, the greater the probability of the worker to have U_k in excess of a critical value U*. The critical value U* determines whether a worker migrates, or otherwise, if U_k>U*. We express the utility index U_k as a function of the explanatory variables X and gifts:

$$U_k = X_k'\beta_k + e_k \qquad k=1,2,3\ldots K \qquad (12c)$$

where X_k is the vector of explanatory variables, β the vector of unknown coefficients and e_k is the unknown N(0,1) error term. This is the specification for a probit model, and the model parameters are estimated using maximum likelihood. We re-write (12c) ignoring the error term as:

$$U_k = \sum_1^n \beta_i X_i + \beta_0 \, OLDGIFT_k \qquad (12c')$$

Then the probability that the k_{th} worker decides to migrate, expressed as Pr_k (Z_k=1) is equivalent to U_k exceeds the critical utility U*, expressed as Pr_i (U_k>U*). The above probability is expressed as a simple probit model:

$$Pr_k (Z_k=1) = Pr_k (U_k^* < U_k) = \Omega(\sum_1^n \beta_i X_i + \beta_0 \, OLDGIFT_k) \qquad (12d)$$

Ω is the standardised normal CDF and we obtain an index of utility U_k by deriving estimates of β_is and expressing U_k as:

$$U_k = \Omega^{-1}(\sum_1^n \beta_i X_i + \beta_0 \, OLDGIFT_k) \qquad (12d')$$

In other words, the following equation (12e) is a specification for a probit model, and the model parameters can be estimated using maximum likelihood.

$$Pr_k(Z_k=1|\ X)=Pr_k\ (U^*<U_k)=\ \Omega(\sum_{1}^{n}\beta_i X_i\ +\ \beta_0\ OLDGIFT_k) \qquad (12e)$$

7.3.2 Partial gift exchanges in the long term

One of the main characteristics of labour markets is the evolving relationship between workers and their managers and employees. The work of Gächter and Falk (2001) with experimental evidence highlighted how reciprocity can differ between long-term and short-term relationships in labour markets. In order to understand how reciprocal behaviour can evolve in the long-run between workers and their agents/employers, we adopt the following empirical strategy: first, in the long-run, we posit that employers/agents offer gifts of tenure to workers. We thus have $TENURE_k$ as a choice variable of an agent/employer who offers it to a worker as a gift. In return, a worker offers a further wage discount as a gift, called $NEWGIFT_k$. It is important to note that both $TENURE_k$ and $NEWGIFT_k$ are endogenous variables and will depend on a set of explanatory variables. We attempt to establish that $TENURE_k$ and $NEWGIFT_k$ influence each other, which is taken as a measure of long-term reciprocity in our model of wage discounts.

7.3.3 Context: seasonality in employment

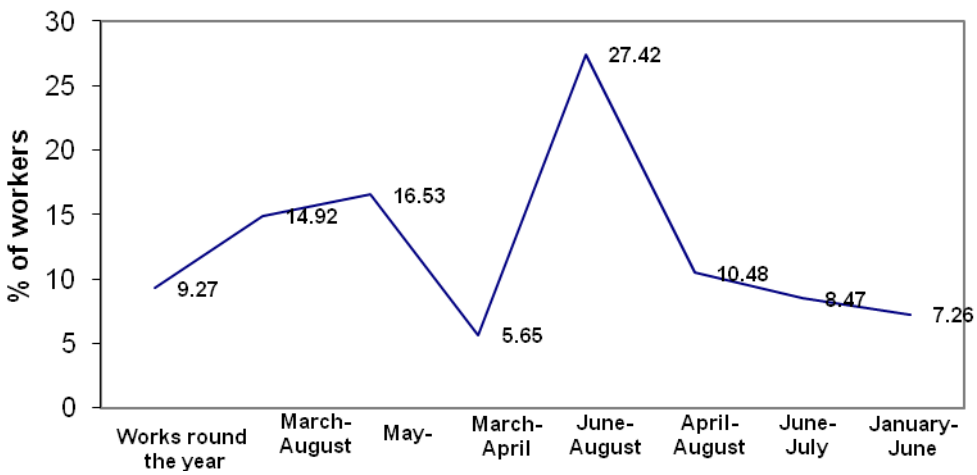
In the rural area employment varies directly with seasonality in agriculture. During peak seasons i.e., cropping and harvesting period labour force mostly remain employed. But, in lean seasons the extent of unemployment and underemployment becomes severe in rural areas. A study by Rahman (2005) shows that during this period, employment opportunities drop by 50.0 percent on average. The wage rate too drops by 20.0 percent on average. In that study agricultural workers were found worst sufferers. For example, in 2005, the daily real wage rate for male agricultural workers in the study area was only 46 Taka compared to 64 Taka in the rest of the economy (Khandker, 2009).

Data indicate that only 9 percent of the agricultural workers work round the year. Interestingly, the proportion of female workers who work round the year is also 9

percent. The rest 91 percent of the agricultural workers remain unemployed for a particular period extending from 2–6 months a year. Workers remaining jobless for a period of 3 months are the highest (27.0 percent) followed by those remaining unemployed for four months (17.0 percent). Among the workers remaining unemployed for three months a year, the proportions of male and female workers are 30.0 and 21.0 percent respectively. Only 9.0 percent of the workers remain jobless for a period of two months only which is the lowest (Table 7.1).

As indicated above majority of the agricultural workers remain unemployed for a period of three months extending from Jun–August each year. This period is the rainy season in Bangladesh. During this season, most of the land in rural areas remains under water. Economic activities in rural areas become stagnant due to lack of non-farm activities. The workers in fact become confined to their homes and survive out of their past savings or borrowing from friends and relatives. The harvesting of paddy starts right from the month of November and the agriculture related activities continue till the end of February next year. So, we see that the joblessness curve sharply slopes downward and reaches the lowest level during January and onwards (Figure 7.1).

Figure 7.1 : Employment Pattern of the Workers: Rural Area



Source: Drawn from data obtained from the sample survey.

The pattern of employment shows that majority of the workers remain unemployed during the lean period which consists of the rainy season and the pre-harvesting period. To overcome the crisis some workers migrate to the urban areas in search of jobs. These seasonal migrants do not take into account the wage differentials between rural and urban areas. They take into consideration the probability of getting a job in the urban areas. They do not calculate the rural urban wage differential because of their opportunity cost of labour which is equivalent to zero. The necessary as well as sufficient condition for their migration to urban areas is: $0 < w =$ subsistence wage. The subsistence wage must be equivalent to his living cost in the urban areas plus a surplus for transfer to their families. If this condition is fulfilled they decide to migrate from rural to urban areas. There is a pejorative name for this type of workers in the urban sector. They are known as *mofiz* (seasonal migrants). The term itself can have an abusive element and as such seasonal workers do not like it. The term *mofiz* refers to cheap labourers whose status in the society is the lowest and with whom the rest of the society does not form any ties like matrimonial relationships. They are usually less educated and mostly unskilled.

Their job search process for temporary jobs is interesting. Being jobless in the locality they form groups with like minded workers who would be willing to migrate to the urban areas. They contact employment agents in the urban areas well ahead they leave for the urban sector. The so called agents make arrangements with the potential employers to recruit them. The two parties, an agent and workers, sit together and fix the terms and conditions of employment, and after necessary formalities are finalised the agents give them green signals to migrate. Interestingly, the wage setting process is bilateral not tripartite – employers are not a party to it. This phenomenon may be an interesting area for future research. The outcome of the process is the inflow of workers from rural to urban areas. Although it is a two party game, interestingly the three parties gain out of the process. The employers get workers at a low cost because they offer wage discounts below the minimum wage. Secondly, the agents gain out of commission from both the employers and the workers. Thirdly, the workers gain because they get wages over their opportunity cost which is close to zero in lean seasons. It is thus a positive sum game for all the parties.

In the urban area, 65.0 percent of the workers work round the year. Among them male workers constitute 72 percent while female workers account for 28 percent. The urban workers have been found to remain jobless for a period of 1– 4 months. The workers remaining unemployed for the lowest period (one month) account for 1.0 percent only while those remaining jobless for the longest period (4 months) turn out to be 3.0 percent. Workers remaining unemployed for three months turn out to be the highest (19.42 percent) followed by those left unemployed for two months accounting for 11.65 percent (Table 7.1)**.**

Table 7.1: Employment Pattern of Workers by Sex and Area

Area	**Employment pattern**	**Sex**		**Total**
		Male	Female	
Rural:				
	Works round the year	21	2	23
		(11.86)	(2.82)	(9.27)
	Jan – Jun	17	1	18
		(9.60)	(1.40)	(7.30)
	March – April	12	2	14
		(6.78)	(2.82)	(5.65)
	March – August	23	14	37
		(12.00)	(19.72)	(14.92)
	May – August	26	15	41
		(14.69)	(21.13)	(16.53)
	June – August	53	15	68
		(29.94)	(21.13)	(27.42)
	April – August	15	11	26
		(8.47)	(15.50)	(10.48)
	June – July	10	11	21
		(5.60)	(15.50)	(8.50)
	Total	**177**	**71**	**248**
		(100.00)	**(100.00)**	**(100.00)**
Urban:				
	Work round the year	194	73	267
		(70.04)	(54.07)	(64.81)
	1 month	1	3	4
		(.36)	(2.22)	(.97)
	2 months	29	19	48
		(10.47)	(14.07)	(11.65)
	3 months	44	36	80
		(15.88)	(26.67)	(19.42)
	4 months	9	4	13
		(3.25)	(2.96)	(3.16)
	Total	**277**	**135**	**412**
		(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.

Source: Collected from the survey by authors

In order to examine employment pattern of the rural workforce at occupational level we have decomposed them into six broad occupational groups i.e., day labourers, marginal farmers, rickshaw pullers, fishermen, business and stone pickers. As indicated by data, the number of workers remaining unemployed for 3 months (June–August) is the highest. Among this type of workers, the stone pickers constitute the majority (41.18 percent) followed by rickshaw pullers i.e., 34.38 percent (Table 7.2). About one fifth of them are marginal farmers. The stone pickers are unskilled day labourers and mostly illiterate. There is no employment opportunity for them in the locality. As they are less mobile due to lack of skill the precedence of unemployment among them is discernible. This is equally true for labourers and marginal farmers as well.

In rural areas of Bangladesh alternative job opportunities are limited because, most of the manufacturing establishments are located in the urban areas. As indicated above, in the urban area majority of the workers work round the year because, urban economic activities are less likely to be affected by seasonality. The manufacturing, service and transport workers mostly work round the year. These types of workers work full-time and a on a regular basis. Only construction works are subject to seasonality and as such they remain unemployed for a particular period of time of the year. That is why the proportion of workers working round the year in the urban area is relatively high compared to that of in the rural area. Workers remaining jobless for 2–3 months refer particularly to construction and a few manufacturing workers. During the rainy season there is little construction work and therefore, they have to sit idle in that period. There are some manufacturing workers such as footwear workers who do not have any work after festivals (Eid for Muslims and Durga Puja for Hindus). Therefore, after festivals are over, they remain unemployed for one or two months a year. Workers remaining jobless for four months constitute only 3 percent – these types of workers are illiterate and unskilled. They are unable to furnish jobs other than the ones they usually do.

Table 7.1 shows that in urban area 65 percent of the workers work round the year while this figure is only 9 percent in the rural area. This indicates inadequacy of jobs and the acuteness of un- and underemployment in rural area compared to the urban

area. In the urban area, among the workers working round the year, the proportion of male workers is higher than that of female workers. On the contrary, 35 percent of the workers remain unemployed for a period of 1–4 months a year on average. Interestingly, among the workers remaining unemployed for the period mentioned above, the proportion of male workers (57 percent) is also higher than that of female workers accounting for 43 percent. Across all the sectors (i.e. manufacturing, transport, construction and service), the proportion of female workers remaining unemployed for a period of 1–4 months is relatively high in service sector compared to other sectors under study (Table 7.2).

Table 7.2:Employment Pattern of Rural Workers by Occupation

Extent of Joblessness	Occupation						Total
	Day labourer	Marginal farmer	Rickshaw puller	Fisherman	Business	Stone picker	
Works round the year	–	–	7	–	16	–	23
			(30.43)		(69.57)		(100.00)
			(21.88)		(76.19)		(9.3)
Jan – Jun	–	–	1	17	–	–	18
			(5.56)	(94.44)			(100.0)
			(3.13)	(70.83)			(7.3)
March – August	26	4	2	2	–	3	37
	(70.27)	(10.81)	(5.41)	(5.41)		(8.11)	(100.00)
	(29.55)	(8.89)	(6.25)	(8.33)		(7.89)	(14.92)
May – August	24	14	2	–	–	1	41
	(58.54)	(34.15)	(4.88)			(2.44)	(100.00)
	(27.27)	(31.11)	(6.25)			(2.63)	(16.53)
March – April	7	3	2	1	–	1	14
	(50.00)	(21.43)	(14.29)	(7.14)		(7.14)	(100.00)
	(7.95)	(6.67)	(6.25)	(4.17)		(2.63)	(5.65)
June – August	12	15	11	1	1	28	68
	(17.65)	(22.06)	(16.18)	(1.47)	(1.47)	(41.18)	(100.00)
	(13.64)	(33.33)	(34.38)	(4.17)	(4.76)	(73.68)	(27.42)
April – August	13	8	1	–	–	4	26
	(50.00)	(30.77)	(3.85)			(15.38)	(100.00)
	(14.77)	(17.78)	(3.13)			(10.53)	(10.48)
June – July	6	1	6	3	4	1	21
	(28.57)	(4.76)	(28.57)	(14.29)	(19.05)	(4.76)	(100.00)
	(6.82)	(2.22)	(18.75)	(12.50)	(19.05)	(2.63)	(8.47)
Total	88	45	32	24	21	38	248
	(35.48)	(18.15)	(12.90)	(9.68)	(8.47)	(15.32)	(100.00)
	(100.00	(100.00)	(100.00)	(100.00)	(100.00)	(100.00	(100.00)

Note: First and second rows indicate row and column percentages. **Source:** Collected from the survey by authors.

7.3.4 Data source

See sub-section 1.2.1 of chapter 1.

Variables of interest and summary statistics as deduced from the survey are provided in Tables 7.3 and 7.4 respectively.

Table 7.3: Variables of Interest

Variable Name	Survey Question / Description
AGE	Age in years
GENDER	Male =1, Female=0
EDUMMY	Never Attended School=0, Attended School=1
EDUCATION	We apply the following index: Education=Literacy + Highest Level of Educational Attainment + Literacy*Highest Level of Educational Attainment
HLEA (Highest Level of Educational Attainment)	Highest level of educational attainment: 0=Never Attended School, 1=Year1– Year IV, 2=Year V– Year VIII, 3= Year IX– Year X, 4= SSC, 5= HSC, 6= Graduate, 7=Honours Graduate, 8=Masters
Literacy	The following index is used to capture literacy: 1=Thump impression only, 2=Just sign, 3=Can't read, 4=Can't write, 5= Can read, 6=Can write
Marital happiness	We apply the following index of conjugal happiness: 1= Happily married, 2= Seeking partners for happiness, 3= Widowed, 4= Divorced or separated, 5 = Multiple partners
Marriage dummy	1= Currently married, 0= Otherwise,
Newgift	Current wage discount from the legal minimum
Oldgift	Initial wage discount from the legal minimum when started working with the current agent/employer
Tenure	Continuous employment in years with the current employer/agent

Table 7.4: Summary Statistics

Total number of households	660
Male–female ratio	1.00
Respondents Married	75.0%
Respondents widowed	5.0%
Respondents never attending schools	59.0%
Household members never attending schools	50.0%
Respondents unable to sign	35.0%
Respondents without any training	96.0%
Average number of children/woman	1.25
Average household size	4.52
Dependency ratio	0.59
Main occupation (rural)	Cultivation
Main occupation (urban)	Wage Labourer
Households with one member unemployed (rural)	91.0%
Households with two members unemployed (rural)	9.0%
Households with one member unemployed (urban)	50.0%
Households with two members unemployed (urban)	6.0%
Average monthly household income (with widows)	TK. 2773.00*
Average monthly household income (without widows)	TK. 3015.00
Landless households	35.0%
Households with kutcha** houses	45.0%
Tube well as source of drinking water	71.0%
Firewood as source of fuel for cooking	46.0%
Expenditure on food	79.0%
Expenditure on education	4.25%
Female workers' wage as proportion of male workers' wage (rural)	43.0%
Female workers' wage as proportion of male workers' wage (urban)	50.0%
Average working hours/day (rural)	10.0
Average working hours/day (urban)	12.0

NOTE: *TK. (TAKA) : Bangladesh currency. **Kutcha houses: houses made of bamboo and straws with earthen floor.

7.4 Empirical results

7.4.1 Empirical results: economics of gifts and migration

To assess what factors determine whether or not a rural worker becomes a seasonal migrant, we obtained data on 660 individuals from our sample survey. For each worker we have collected information on education, age, gender, marital status and two gifts – one the old gift as a one-way gift-giving and the second one is a two-way gift exchange, or new gift[33]. The dependent variable Z is binary. It takes a value of 1 for migrants and 0 for non-migrants. The functional specification is given as (13a) ignoring the subscript k:

$$Z = \alpha + \beta_0\ OLDGIFT + \beta_1\ AGE + \beta_2\ GENDER + \beta_3\ HLEA + \beta_4\ MARITAL\ HAPPINESS + \beta_5\ NEW\ GIFT + \beta_6\ AGE*GENDER + \beta_7\ EDUCATION*GENDER + \beta_8\ EDUMMY + \beta_9\ MARITAL\ HAPPINESS*GENDER + \beta_{10}\ EDUCATION + \beta_{11}\ MARRIAGE\ DUMMY + \beta_{12}\ AGE*AGE + \beta_{13}\ GENDER*MARRIAGE\ DUMMY + \beta_{14}\ LITERACY + U \quad \ldots(13a)$$

The result shown in (Table 7.5) reveals an interesting picture: as anticipated, OLDGIFT has a negative and statistically significant effect on the probability of migration since it lowers the expected utility from relocation and also increases the cost of relocation. On other hand, NEWGIFT has a positive and statistically

[33] It is important to note the sequential decision here: 'old gifts' are given by workers at the time of first employment with an employer/agent while ''new gifts'' are exchanged at a later date. It is questionable if future ''new gifts'' are of any relevance in the prior decision to migrate. What is important is that workers are forward-looking since they seek to form an opinion about the agent/employer at the time of migration in order to anticipate their future wage cuts (new gifts). In other words, initial gift-giving is a short-term investment for a long-term relationship and future wages (new gifts) and tenures are two important elements of the long-term relationships for workers; so it is likely workers will form expectations about future wages and future gift exchanges which will shape their current decision. More often than not, such expectations are likely to be unmet. It is well-recognised in the empirical literature that migrants' expectations are usually falsified: as examples, in pursuit of upward job mobility, they often end up sacrificing their own health and that of their children (Garnier et al., 2003). In many cases, the hard work and antisocial hours worked by adult migrants divert their attention from their children, particularly their children's educational performance (Batbaatar et al., 2005; Liang and Chen, 2007). .

significant effect on migration, which implies some sort of irrationality. The source of this irrationality will be explained in the re-formulation of the regression model (13b). AGE has a positive effect on migration, which is statistically significant. MARRIAGE DUMMY has a positive and statistically significant effect on the seasonal migration. The role of other variables in the seasonal migration is rather limited.

Table 7.5: Gift-Giving and Probability of Migration: Short-term Gift Giving

Dependent Variable: Probability of Migration (Z)
Method: ML - Binary Probit (Quadratic hill climbing)
Sample: 660
Included observations: 659
Convergence achieved after 6 iterations
Covariance matrix computed using second derivatives

	Coefficient	Std. Error	z-Statistic	Prob.
CONSTANT	-4.327582	1.107724	-3.906733*	0.0001
GENDER *AGE	0.004234	0.013333	0.317520	0.7508
AGE	0.093325	0.036292	2.571485*	0.0101
AGE*AGE	-0.000991	0.000446	-2.224026*	0.0261
HLEA	-0.202985	0.446779	-0.454330	0.6496
EDUMMY	0.466395	0.249523	1.869146	0.0616
GENDER	0.467465	0.762887	0.612758	0.5400
EDUCATION	-0.072719	0.097468	-0.746079	0.4556
GENDER*EDUCATION	-0.013609	0.037415	-0.363721	0.7161
LITERACY	0.097089	0.127380	0.762201	0.4459
MARITAL HAPPINESS	-0.175228	0.204306	-0.857674	0.3911
MARRIAGE DUMMY	1.274193	0.515707	2.470770*	0.0135
GENDER *MARITAL HAPPINESS	-0.126954	0.461649	-0.275002	0.7833
NEWGIFT	0.023527	0.004535	5.187945*	0.0000
OLDGIFT	-0.011692	0.005367	-2.178417*	0.0294

McFadden R-squared	0.256924	Mean dependent var	0.374810
S.D. dependent var	0.484442	S.E. of regression	0.413675
Akaike info criterion	1.028563	Sum squared resid	110.2058
Schwarz criterion	1.130780	Log likelihood	-323.9115

Hannan-Quinn criter.	1.068185	Restr. log likelihood	-435.9063
LR statistic	223.9896	Avg. log likelihood	-0.491520
Prob(LR statistic)	0.000000		
Obs with Dep=0	412	Total obs	659
Obs with Dep=1	247		

* denotes significance at 1% level.

In order to understand the role of future gifts we interact the gift variables (old as well as new) with the gender dummy to have an alternative formulation of the model as:

$$Z = \alpha + \beta_0\ OLDGIFT + \beta_1\ AGE + \beta_2\ GENDER + \beta_3\ HLEA + \beta_4\ MARITAL\ HAPPINESS + \beta_5\ NEW\ GIFT + \beta_6\ AGE*GENDER + \beta_7\ EDUCATION*GENDER + \beta_8\ EDUMMY + \beta_9\ MARITAL\ HAPPINESS*GENDER + \beta_{10}\ EDUCATION + \beta_{11}\ MARRIAGE\ DUMMY + \beta_{12}\ AGE*AGE + \beta_{13}\ GENDER*MARRIAGE\ DUMMY + \beta_{14}\ LITERACY + \beta_{15}\ GENDER*OLDGIFT + \beta_{16}\ GENDER*NEWGIFT + U \quad \ldots(13b)$$

The results, given in Table 7.6, are interesting: first all other variables retain their previous effects and statistical significance except the OLDGIFT variable. The variable OLDGIFT still has a negative impact on migration, however it is no longer statistically significant. The interaction of OLDGIFT with the GENDER dummy also has a negative effect on migration. The variable NEWGIFT has a positive impact on migration and is still statistically significant. The interaction of NEWGIFT with the GENDER dummy reveals a very interesting dichotomy: for males, the future gifts have a negative effect on their migration decision, though statistically insignificant, which shows males can either better anticipate, or bargain, their future wage discounts and accordingly choose their employers optimally. On the contrary, female workers somehow misjudge their future wages as they seem to form harmful long-term relationships with their agents/employers. The study underscores an adverse selection problem: males flock to more generous agents/employers while females choose the wrong ones. We will re-visit the topic when we consider the long-term relationships between workers and agents in the next sub-section.

Table 7.6: Gift-Giving and Migration: An Alternative Formulation

Dependent Variable: PROBABILITY OF MIGRATION (Z)

Method: ML – Binary Probit (Quadratic hill climbing)

Sample: 660

Included observations: 659

Convergence achieved after 6 iterations

Covariance matrix computed using second derivatives

	Coefficient	Std. Error	z-Statistic	Prob.
CONSTANT	-5.506613	1.260508	-4.368565*	0.0000
AGE*AGE	-0.001108	0.000451	-2.456060*	0.0140
AGE*GENDER	0.013526	0.014015	0.965052*	0.3345
AGE	0.095789	0.036530	2.622187*	0.0087
HLEA	-0.186650	0.451481	-0.413418	0.6793
EDUMMY	0.505697	0.252017	2.006595	0.0448
GENDER	1.784367	1.000869	1.782818	0.0746
GENDER*NEWGIFT	-0.016961	0.011449	-1.481378	0.1385
GENDER*OLDGIFT	-0.018352	0.010897	-1.684139	0.0922
EDUCATION	-0.075080	0.098366	-0.763270	0.4453
GENDER*EDUCATION	-0.017958	0.037568	-0.478024	0.6326
LITERACY	0.102115	0.128407	0.795246	0.4265
MARITAL HAPPINESS	-0.245515	0.216890	-1.131977	0.2576
MARITAL DUMMY	1.186623	0.532168	2.229788*	0.0258
GENDER*MARITAL HAPPINESS	-0.091037	0.475980	-0.191262	0.8483
NEWGIFT	0.039361	0.010617	3.707254*	0.0002
OLDGIFT	-0.002215	0.007820	-0.283202	0.7770

McFadden R-squared	0.264786	Mean dependent var	0.374810
S.D. dependent var	0.484442	S.E. of regression	0.412421
Akaike info criterion	1.024231	Sum squared resid	109.1983
Schwarz criterion	1.140077	Log likelihood	-320.4842
Hannan-Quinn criter.	1.069137	Restr. log likelihood	-435.9063
LR statistic	230.8441	Avg. log likelihood	-0.486319
Prob(LR statistic)	0.000000		

Obs with Dep=0	412	Total obs	659
Obs with Dep=1	247		

* denotes significance at 1% level.

7.4.2 Empirical results: gift exchanges and long-term relationship

In the long run, employers offer gifts of long-term employment, or tenure, to workers. For migrants, the gift of tenure is offered by an agent. Thus TENURE is the choice variable of an agent/employer who offers it to a worker as a gift. In return, a worker offers a further wage discount as a gift, called NEWGIFT, from the legal minimum wage. It is important to note that both TENURE and NEWGIFT are endogenous variables and will depend on some of the explanatory variables AGE, GENDER, EDUCATION, MARITAL STATUS. We apply the standard 2 Stage Least Square to establish that gift exchanges between seasonal migrants and agents/employers, which can further depress wages both in urban and rural sectors as shown in Tables 7.7 and 7.8 respectively.

Table 7.7: Long-term Relationships with Gift Exchanges: 2SLS Estimate of TENURE as Gifts from Agents/Employers

Dependent Variable: TENURE

Method: Two-Stage Least Squares

Sample: 660

Included observations: 659

Instrument list: GENDER*AGE, AGE*AGE, AGE, EDUMMY GENDER, GENDER* LITERACY, GENDER*OLDGIFT, EDUCATION, GENDER*EDUCATION

NEWGIFT, OLDGIFT, Z , GENDER*Z, MARITAL HAPPINESS, GENDER*MARITAL HAPPINESS, MARRIAGE DUMMY

	Coefficient	Std. Error	t-Statistic	Prob.
CONSTANT	-9.787971	1.191115	-8.217486*	0.0000
AGE	0.729699	0.013176	55.38141*	0.0000
EDUMMY	-0.336838	0.456427	-0.737988	0.4608
GENDER	0.627579	1.042932	0.601745	0.5476
GENDER*LITERACY	0.718936	0.363852	1.975903	0.0486
GENDER*OLDGIFT	0.016183	0.020078	0.806008	0.4205
EDUCATION	0.252382	0.096607	2.612453*	0.0092
GENDER*EDUCATION	-0.327689	0.098316	-3.333039*	0.0009
LITERACY	-0.451206	0.314616	-1.434148	0.1520
NEWGIFT	0.056629	0.010570	5.357539*	0.0000
OLDGIFT	-0.226676	0.015780	-14.36479*	0.0000
Z	0.058746	0.517873	0.113436	0.9097
GENDER*Z	-0.473237	0.614318	-0.770346	0.4414

R-squared	0.868942	Mean dependent var	12.84522
Adjusted R-squared	0.866507	S.D. dependent var	9.354079
S.E. of regression	3.417666	Sum squared resid	7545.565
F-statistic	356.9261	Durbin-Watson stat	1.897393
Prob(F-statistic)	0.000000	Second-Stage SSR	7545.565

*denotes significance at 1% level.

Table 7.8: Long-term Relationship with Gift Exchanges: 2SLS Estimate of NEWGIFT from Workers

Dependent Variable: NEWGIFT

Method: Two-Stage Least Squares

Sample: 660

Included observations: 659

Instrument list: AGE, GENDER, GENDER*OLDGIFT, MARITAL HAPPINESS, MARRIAGE DUMMY, GENDER*MARITAL HAPPINESS, OLDGIFT, Z, GENDER*Z

EDUMMY, GENDER*LITERACY, GENDER*TENURE, EDUCATION, GENDER*EDUCATION, LITERACY

	Coefficient	Std. Error	t-Statistic	Prob.
CONSTANT	64.48695	4.372374	14.74872	0.0000
AGE	-0.322326	0.159811	-2.016921	0.0441
GENDER	-25.48714	3.944626	-6.461231	0.0000
GENDER*OLDGIFT	0.257052	0.072323	3.554242	0.0004
MARITAL HAPPINESS	-0.301153	1.077817	-0.279410	0.7800
MARRIAGE DUMMY	-4.008783	2.764735	-1.449970	0.1476
GENDER*MARITAL HAPPINESS	1.845797	2.210133	0.835152	0.4039
OLDGIFT	0.244638	0.072219	3.387449	0.0007
TENURE	0.493632	0.206973	2.385002	0.0174
Z	5.933873	2.014345	2.945808	0.0033
GENDER*Z	1.061018	2.340514	0.453327	0.6505

R-squared	0.388991	Mean dependent var	54.60941
Adjusted R-squared	0.379562	S.D. dependent var	15.82224
S.E. of regression	12.46285	Sum squared resid	100649.1
F-statistic	39.59969	Durbin-Watson stat	1.325601
Prob(F-statistic)	0.000000	Second-Stage SSR	103218.6

Note that gift-exchanges in the long-run are established by the positive effect of the NEWGIFT on the TENURE. So is the effect of TENURE on NEWGIFT. Both these effects are positive, economically and statistically significant. Thus, workers and employers form long-term relationships, which induce them to race to the bottom in terms of wages. The continuing decline in wages as the length of tenure increases can

seriously impoverish the working poor both in the rural and urban sectors of developing nations.

7.5 Conclusion

Our empirical results strongly support the theoretical finding that gift-giving and gift exchanges can have substantial impacts on seasonal migration and working poverty both in urban and rural labour markets. As argued by Akerlof (1982; 1984), in labour markets of advanced nations employers willingly pay workers in excess of the market-clearing wage. In return these employers expect their employees to devote larger efforts than if wages were at market-clearing rates. Partial gift-exchanges can thus explain the efficiency wage hypothesis of Yellen (1984) and also resulting underemployment equilibrium. In contrast, in our model, workers choose to accept wages below the legal minimum as gifts to employers in order to establish a long-term and cooperative relationship with their employers. Once a relationship is formed between employers and their employees, our work suggests, employers willingly offer longer tenures as gifts to workers in order to induce them to reciprocate with future wage-cuts.

If such gift-exchanges exist as an equilibrium phenomenon, it can create and drive working poverty both in the urban and rural labour markets in developing nations. Thus, workers' race to the bottom in terms of wages to secure seasonal jobs can create and perpetuate urban as well as rural working poverty. Our results from the field study confirm our hypothesis that such gift-exchanges can have deleterious effects on the welfare of employed workers. Our results further suggest that some workers are not fully rational to comprehend the long-term adverse effects of gift exchanges on their welfare. We hence conclude that our field study points to the possibility that social norms of fairness and reciprocity can breed serious social evils like working poverty.

CHAPTER 8: INFORMAL SECTOR, WORKING POVERTY AND WAGE DISCRIMINATION: SOME THEORETICAL AND EMPIRICAL CONJECTURES

8.0 Introduction

Since the new millennium most of the economies in the Indian subcontinent have registered significant growth. It is widely held that nearly five decades of socialist economic controls, accompanying red tapes and rampant corruption since 1947 stifled entrepreneurial drive in India. The effects were felt in the entire region. By the mid 1990s concerted efforts at market reforms and an advent of the era of globalisation stoked unprecedented entrepreneurial motivation in the Indian economy[34]. Continued economic expansion in India, and also in China, has spillover effects on the neighbouring nations like Bangladesh. It is also important to note that Bangladesh, being an integral part of former British India and also due to their shared cultures, languages, geographical characteristics and religions, mirrors the economy of neighbouring Indian states of Tripura and West Bengal. In other words, there is a strong association between developmental experiences in Bagladesh and some of the Indian states at least in the new millennium. The continued economic expansion in the region, in turn, led to a marked decline in poverty and sustained increases economic opulence of the people living in South Asia.

In the business world we now hear about the unshackling of the 'caged tiger', among other things, about the prospect of the Indian economy as a future powerhouse of the globe. Such developments have and will have serious economic consequences for neighbouring economies, especially for the friendly ones like Bangladesh. An

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[34] Surprisingly, studies in India have noted that an overwhelming majority of people oppose reform. The reason behind this opposition is that the masses do not get any direct and tangible benefits from economic reforms that are mainly concentrated in taxation, finance and international trade. It is the desire of the common people to have institutional reforms in police, judiciary and bureaucracy, which seems to be a far cry in the current political milieu.

important common institution is the informal sector. Let us have a quick glance at the experience of the Indian informal sector:

8.1 Informal sector in India and Bangladesh

8. 1.1 Informal sector: Indian experience

Under the rummage of a 'hype and oversimplification' of the Indian miracle, a strong view has gathered momentum that the economic reforms and their corporate beneficiaries have contributed precious little to the magnificent performance of the informal sector in India (see Bardhan, 2010)[35]. Several important observations are in order: from India's national household data, we now know that the decline in poverty was inadequate in 1993–2005, when India experienced extensive opening up of its economy. Secondly, social indicators like child health were and are dangerously alarming[36]. Thirdly, the growth rate in agriculture that absorbs most of the working poor of India has steadily declined since the new millennium, which is largely caused by continuing decline in public investment in farm infrastructure. Finally, economic reforms have failed to address the problems associated with the quality of governance, which has created huge barriers for the provision of merit goods, local public goods and social services.

There is no gainsaying to the fact that the services sector in India is the main driver of economic growth in India. Yet the informal sector is the most dominant form of economic organisation in the services sector as two-thirds of the services are in the informal sector. There are three important observations in order: first, economic

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[35] Bardhan (2010) admits that economic reforms have made the Indian corporate sector more vibrant and competitive, yet the bulk of the Indian economy remains rather disconnected from the corporate sector. As an example, nearly 95% of the Indian labour force is absorbed by the non-corporate sector. The much-celebrated info-tech sector accounts for about 1% of the labour force. Financial and business services and telecommunications, where the economic reforms are mostly visible, account for less than 25% of the output of the Indian services sector.

[36] There is a growing criticism that national and state governments have failed to provide for social service delivery, education, health, child nutrition, drinking water, irrigation water etc. for the poor of Indian society.

reforms have barely touched upon the horizon of the informal sector of India. Secondly, 93 percent of the Indian workforce belongs to the informal labour market with virtual absence of labour unions and accompanying safety nets. Thirdly, as a consequence, the continuing prosperity in the Indian economy has created significant inequality, both vertical and horizontal, in India – the informal sector being on the wrong side of the economic and social divide of India. With declining public goods in infrastructure, power and roads, and inadequate provisions of merit goods – along with a declining agrarian sector – the informal sector will continue facing an uphill battle in providing escape routes for the Indian poor.

In development economics the informal sector has always played an important role in the context of labour market segmentation and interlinkages. First and foremost, it has been widely held that the informal sector is the employer of the last resort, in other words, the labour supply to the informal sector is a residual and consists of all those workers who cannot find employment in the formal sector. The labour supply to the formal sector is propelled by the dynamics of rural–urban migration driven by the rural–urban wage gap, given the probability of finding a job in the formal sector as articulated in Harris–Todaro model (Todaro, 1969 and Harris and Todaro, 1970). The excess supply of labour is traditionally absorbed by the informal sector. The rational for excess supply is predicated on the above-equilibrium wage rate in the formal sector, due to various distortions like the minimum wage and the ability of modern-sector firms to pay higher wages and to screen workers for higher quality. Secondly, the above nature of labour market segmentation is believed to create a strong interlinkage between formal and informal sectors: fluctuations in demand for labour in the formal sector directly influence the supply of labour and thereby impact on equilibrium wage rates and employment in the informal sector (see Fields, 1975; Perkins et al., 2001; and Mazumdar, 1976). Thirdly, an alternative linkage mechanism is developed by Marjit and Maiti (2006), as well as by Marjit, Kar and Sarkar (2004), who emphasise the linkage through the capital market and posit that surplus capital is shifted to the informal sector. Their models' predictions reverse the intuitions traditionally held by the models highlighting labour market

segmentation37. Thirdly, economists have long stressed that feedbacks between formal and informal sectors pivot on forward and backward linkages and their interrelationships are far too complex for dualistic generalisations (see Maloney, 1999; Tokman, 1978 and Harris, 1990).

8.1.2 Informal sector: experience of Bangladesh

Informal sector is the largest contributor to GDP and employment generation. However, the informal sector is characterised by low productivity and low wages, poor working conditions and long working hours. Although their earnings remain low and a large number are classified as poor, without the informal sector, their earnings would be negligible, and as a result the intensity of their poverty would have been even more severe. Like other developing countries, informal sector in Bangladesh is a larger source of employment for women than for men. The majority of women who enter the informal sector do so as a result of a lack of employment opportunities in the formal sector; moreover, they often lack the education and skills required for employment in the formal sector. There are many other factors that push women into employment in the informal sector and engagement in other marginal activities: sex-based discrimination in the labour market; cultural factors in some countries restricting women's mobility; women's responsibility towards their children and family which results in a preference for home-based work.

Informal employment cuts across all employment status categories: employers, employees, own account workers, unpaid family workers and members of producers' cooperatives (Hussmanns, 2004). Employment status is critical in understanding the link between informality and poverty. These studies found that informal agricultural

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[37] As an example, development economists have passionately debated the consequences of trade liberalisation for the informal sector. In the labour market segmentation model, trade liberalisation results in a decline in the demand for labour in the formal sector that increases the supply of labour in the informal sector that, in turn, lowers the wage rate and immiserises the informal sector. On the contrary, the capital market interlinkage model predicts that trade liberalisation will move capital from the formal sector to the informal sector, which will result in an increase in demand for labour in the informal sector, which will in turn increase employment and wages in the informal sector.

workers have the highest risk of poverty while informal employers are the least susceptible to poverty among non-agricultural workers. These results suggest that the link between informal employment and poverty is discernible only when informal workers are classified by employment status. The employers, who are the most visible among workers in the informal sector, are at the tip and the home workers are at the bottom of the pyramid (Chen, 2004). The employers at the top of the iceberg also have the highest earnings. On the other hand, the home workers at the base of the pyramid have the lowest average wages.

Women tend to be employed in different types of activities, associated with different levels of earning, than men – with the result that they tend to earn less even within specific segments of the informal economy. In the segmented informal economy, men tend to be over-represented in the top segment and women tend to be over-represented in the bottom segment resulting in significant gender gap in earnings with women earning less on average than men (Maligalig, Dalisay and Barcenas, 2008). As a result of this large earning gap in Bangladesh, a far higher proportion (64%) of female own account workers than male own account workers (4%) are concentrated in the lowest income group (Dasgupta and Barbattini, 2003). This study also found that women in Bangladesh were far more likely than men to belong to the top income group – representing 93 per cent of this group.

8.2 A simple model of gift exchange and kinship-based employment

In the new millennium, as per the national sample survey, there are 44.35 million enterprises and 79.71 million workers employed thereof in the non-agricultural informal sector of the Indian economy. Among these 25.01 million enterprises employing 39.74 million workers were in rural areas whereas 19.34 million enterprises with 39.97 million workers in the urban area. The central concern of our work is to examine the wage formation in the urban informal sector that employs roughly 40 million workers in India.

8.2.1 Background: Indian context

In India the National Account Statistics (NAS) does not recognise the word informal sector as the official position is to dichotomise production activities into organised and unorganised sectors. The informal sector belongs to the unorganised sector that

comprises of those enterprises whose activities or collection of data is not regulated under any legal provision or do not maintain any regular accounts. In India production units in informal sector are not constituted as separate legal entities, unlike corporations[38]. As per the survey of the National Sample Survey Organisation (NSSO) in 1999–2000, the total workforce of India was 397 million and 28 million workers were employed in the organised sector and remaining in the unorganised sector. Over the last decade, the employment in the organised sector has been almost stagnant or slightly declined.

A typical household, or household member, owns an informal sector's production unit for which there are legal requirements to maintain any formal accounts and there is no clear demarcation of the production activities of the enterprise from the other activities of their owners. These units operate at a low level of organisation and on a small scale. Labour relations, where they exist, are based mostly on casual employment, kinship or personal or social relations rather than contractual arrangements with formal guarantees. Entrepreneurs have little access to formal credit facilities and insurance mechanisms as they raise the finance at their own risk and are personally liable, without limit, for any debts or obligations incurred in the production process. Expenditure for production is often indistinguishable from household expenditure. Thus, for accounting purpose, the informal sector is regarded as a group of production units, which form part of the household sector as household enterprises, or equivalently, unincorporated enterprises owned by households.

8.2.2 Importance of informal sector in Bangladesh

Bangladesh economy being dualistic in nature consists of formal and informal sectors. The contribution of the informal sector to the economy, particularly in terms of employment generation and GDP is very large. Studies have indicated that around 80 per cent of the labour force in Bangladesh works in the informal sector and its

[38] In the unorganised sector, in addition to the unincorporated proprieties, business enterprises of cooperative societies, trust, private and limited companies are grouped. The informal sector is thus considered a component of the unorganised sector in India.

contribution to GDP is around 64 percent (Raihan, 2003). In Bangladesh, major informal economic activities belong to agricultural sector. In addition, a large number of small and medium enterprises (SMEs) and services fall into the category of informal sector. The informal sector is not homogenous, but covers a wide range of activities. Activities in the informal sector include: non-farm activities (poultry, fisheries, livestock); industrial activities (manufacturing, processing, repairing); trading; services; construction and transport. Manufacturing sector accounts for a relatively small share. During the early 1990s, manufacturing accounted for 10 per cent of total urban informal sector employment in Bangladesh and 26 per cent in India (ESCAP, 2006)).

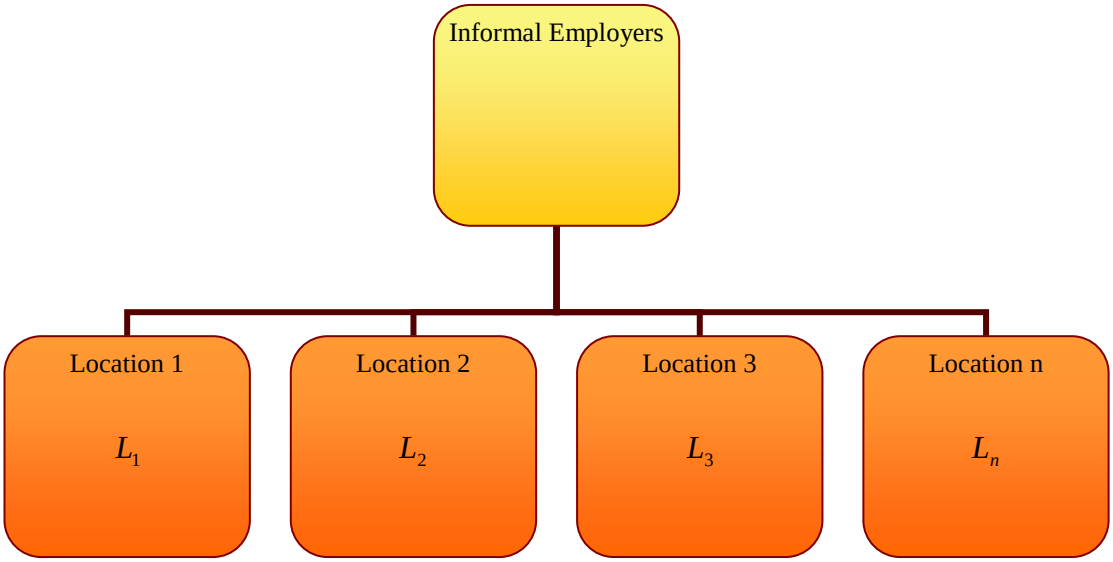
According to the BBS (1996), majority of the informal sector workers were employed in agriculture, forest and fisheries (71percent) followed by sales services (11percent). In the total workforce of the country, self-employed workers accounted for 32 percent, while the share of unpaid family workers and day-labourers was 37 percent and 18 percent respectively (BBS, 2005). These three categories of workers together account for 87 percent of the total labour force in Bangladesh. Most of these workers belong to the informal sector, which shows that this sector is the largest source of employment in Bangladesh. With increasing rural-to-urban migration and the inability of agriculture and the formal sector to absorb the growing labour force, the share of the informal sector in employment has been on the increase. Apart from generating employment, it offers opportunities for the poor, most of its enterprises perform well, it has a substantial capacity to generate surplus and it can play an important role in industrial transition (Amin, 1987).

8.3. Informal sector employers and the wage setting: the theoretical foundation

8.3.1.1 Locational choice:

Employers choose between different locations (see Figure 8.1).

Figure 8.1: Working Locations



There are n locations in the informal sector and we label L_i as the Labour supply at location i, i $\forall$ 1, 2, 3 …. n. There are n informal sector employers and informal sector employer i invests one's capital K_i at location i, i $\forall$ 1, 2, 3… n. It is important to note that capital mobility is very low from one location to another due to strict territorial control by political powerbrokers and their collaborators. Once the capital is invested in a region, it is virtually impossible for employers to switch locations. Alternatively, one may like to assume that the capital mobility is possible but at a high cost. So, employment L_i plays a critical role in determining the output at location i due to stickiness in capital mobility. We thus have an informal sector production unit at location i with employment L_i and capital K_i, which jointly produce output Y_i by the following technology:

$$Y_i = f(K_i, L_i) \tag{1a}$$

We express the profits of employer i as:

$$\pi_i = P.Y_i - W_i.L_i \tag{1b}$$

Where W_i is the wage rate at Location i. Each employer attempt to maximise the intertemporal profits from location i:

$$Max \int_{t=t_o}^{\infty} u(\pi_i) \exp\left[-e(t-t_o)\right] dt = 1 \qquad (1c)$$

Where: $u(\pi_i)$: Utility from profits for employer

e : Discount rate

t : Time

u′ > 0 , u″ < 0 and u″<0 implies risk aversion.

8.3.1.2 Dynamics of labour flows

We assume that workers are driven by wage differentials across locations and tend to sluggishly move from a location with a lower to a location with a higher wage rates. The dynamics of the labour flow is postulated to be a simple function:

$$\frac{\dot{L}_i}{L_i} = f_o\left(\frac{W_i}{W^*}\right) \qquad (1d)$$

Where: $f_o' > 0$.

W^*: The average wage rate in n locations= $\frac{\Sigma W_i}{n}$

$\dot{L}_i$: Labour- flow into region/ location i.

8.3.2 Uncertainty in labour movement

We argue that wage dispersion is an important causal factor in the mobility of workers, but there are other factors that play their roles in shaping labour mobility across locations. The fundamental assumption in our work is that labour flows are intrinsically uncertain due to various sociological factors that impact on the employment of a worker - e.g., group loyalty due to kinship-based employment relationships and the custom of gift-exchanges. The labour flow is assumed to follow a geometric Brownian motion as given in (1e):

$$dL_i = dt\left[L_i f_o\left(\frac{W_i}{W^*}\right)\right] + L_i\left[f_1\left(\frac{W_i}{W^*}\right)\right]^{-\frac{1}{2}}\sigma.dz \qquad (1e)$$

Where z is a Wiener process and the function f_o gives the mobility of workers when wages are not equalised, while f_1 measures the mobility of workers in the subsequent period. The variable σ measures the importance of uncertainty in labour flows on the profit calculus of an employer. Note that

$\left[L_i . f_1\left(\frac{W_i}{W^*}\right)\right]^{-\frac{1}{2}}\sigma.dz$: Randomness/ uncertainty in the labour flow

Since z is a Weiner process with

$$dz = \varepsilon(dt)^{1/2} \qquad (1f)$$

ε is a normally distributed random variable with mean zero and variance 1.

8. 3.3 Optimisation problem of the representative informal employer

A typical employer i intends to maximise the value of the firm $V(L_i)$ which is the aggregate profits of the employer during the planning horizon from date $t=t_0$ to $t=\infty$. Given the market price P, W_i attracts/dispels workers over time which in turn propels the output Y_i over time. The profit dynamics is thus dependent on output dynamics and, hence, on labour dynamics. The optimisation problem is expressed as:

$$Max.V(L_i) = \sup E\left\{\int_{t_o}^{\infty} u(\pi_i)\exp.[-e(t-t_o)dt]\right\} = 1 \qquad (1g)$$

Subject to:

$$dL_i = dt\left[L_i f_o\left(\frac{W_i}{W^*}\right)\right] + L_i\left[f_1\left(\frac{W_i}{W^*}\right)\right]^{-\frac{1}{2}}\sigma.dz \qquad (1e)$$

$$\pi_i = P.Y_i - W_i.L_i \qquad (1b)$$

In other words, though an employer has an incentive to reduce the wage to the reservation wage of a worker, yet the possibility of outflow of workers – over and above inflows – will force the employer to be forward-looking in his wage offers. As a result, offered wages can deviate upward from the reservation wages of workers. In the following we examine the optimal wage offers in the informal sector.

8.4 Labour supply function and solution

8.4.1 The closed form solution

Simplify:

$$f_o\left(\frac{W_i}{W^*}\right) = -h_1 + h_1\left(\frac{W_i}{W^*}\right)^u \qquad \text{(1h)}$$

We assume $f_o(1) = 0$ that poses the condition that workers search only for higher wages. Once wages are equalised across locations, there is no further flow of workers. We also impose the following condition on the flow of workers:

$$f_1 = f_o + \Delta \qquad \text{(1i)}$$

Note that Δ is the drift over time in the mobility of workers that is retained over time to highlight how the employer always faces an uncertainty in the mobility of workers. Also note the sensitivity of mobility with respect to changes in W_i is given by:

$$\left[\frac{1}{W_i/W^*}\right] * \left[\frac{\sigma f_o}{\sigma\left(W_i/W^*\right)}\right] = (1/W_i)\left(W_i/W^*\right)^{-u} uh_1 \qquad \text{(1j)}$$

Note that uh_2 labels the level of information friction and the mobility friction and Δ is the pure uncertainty that each employer faces regarding labour inflow/ outflow over time.

8.4.2 Characterising the mobility of labour in the informal sector

We take a simple example for the mobility of labour in the informal sector as the following:

$$f_o\left(\frac{W_i}{W^*}\right) = M * \left(\frac{W_i}{W^*}\right)^H \qquad (1k)$$

Where $M^* > 0, H > 0$

The basis of the equation (1k) is a sequential model of search behaviour.

From ***Ito's Lemma*** we derive the **Bellman** equation as:

$$eV(L_i) = \sup\left\{u(\pi_i) + [L_i \cdot V'(L_i)]f_o + \frac{f_1}{2}(L_i)^2\sigma^2 V''(L_i)\right\} \qquad (1l)$$

The necessary condition for maximising the utility is given by:

$$u'(\pi_i)\cdot \pi_i'(W_i) + \left[L_i.V'(L_i) + \frac{1}{2}(L_i)^2.\sigma^2.V''(L_i)\right]\frac{\partial f_o}{\partial w_i} = 0 \qquad (1m)$$

Assume: A symmetric equilibrium

$$\frac{W_i}{W^*} = 1 \qquad (1n)$$

Hence (1m) reduce to:

$$\frac{\partial \pi_i}{\partial W_i} \quad \frac{W_i}{\pi_i} = uh_1\left[L_i \cdot V'(L_i) + \frac{1}{2}(L_i)^2.\sigma^2.V''(L_i)\right] \qquad (1o)$$

Equation (1p) gives the elasticity of the profits of the informal employer with respect to changes in wage rate W_i, note that if labour is not mobile then

$$uh_2 = 0 \qquad (1p)$$

$$\frac{\partial \pi_i}{\partial W_i} = 0 \qquad (1q)$$

$$MR_i - MC_i = 0 \qquad (1r)$$

$$W_i\left(\frac{1+H}{H}\right) = MR_i \qquad (1s)$$

Equations (1q) and (1s) are the standard conditions for profit-maximisation.

8.4.3 Mobility of workers in the absence of uncertainty

Assume $\sigma^2 = 0$ to represent that there is no uncertainty:

$$W_i\left(\frac{1+H}{H}\right) + uh_1 VL_i = MR_i \qquad (2a)$$

When workers are known to move across regions, the informal sector employer does not maximise instant term profits. The employer offers a higher wage to retain and expand work force. The employer does not fully exploit current workers and sacrifice current profits to retain and expand on future workforce as long as

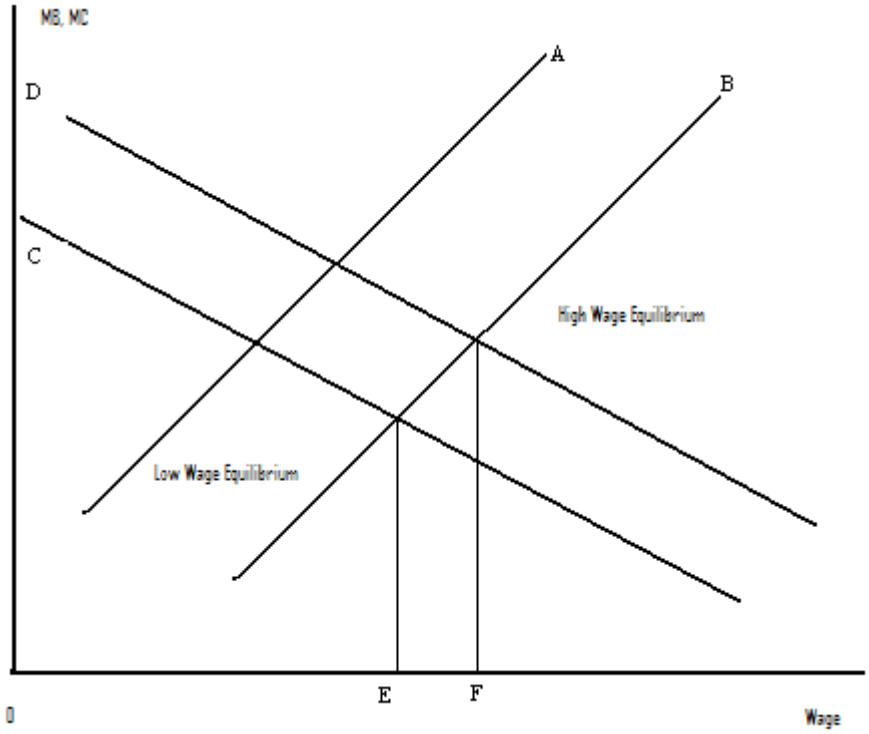
$$V'(L_i) > 0 \qquad (2b)$$

8.4.4 Mobility and strong uncertainty about mobility: Basic solution

Note that if $\sigma^2>0$ and σ^2 is above a critical value then equation **(2a)** will be re-modeled to give:

$$W_i\left(\frac{1+H}{H}\right) - uh_1 VL_i = MR_i - D\left(\sigma^2\right) \qquad (2c)$$

Figure 8.2: Informal Sector Equilibrium in Location I



In the above diagram, $A: W_i\left(\frac{1+H}{H}\right), D: MR_i - D(\sigma^2)$, $B: W_i\left(\frac{1+H}{H}\right) - uh_1 VL_i$, $E: W_i^{**}$, $C: MR_i$, $F: W_i^{*}$.

It is feasible to obtain W_i^{*}, and W_i^{**} and one can show how the value of σ^2 determines $\left(W_i^{*} - W_i^{**}\right)$. The intersection of relevant cost and benefit functions determine the high wage and low wage equilibria.

The Bellman equation is (2d):

$$eV(L_i) = \sup\left[u(\pi_i) + \left(L_i \cdot V'(L_i) f_o\right) + \frac{f_1}{2}(L_i)^2.\sigma^2.V''(L_i)\right] \qquad (2d)$$

Assume:

$$V(L_i) = m_o + m_1 \log L_i \qquad (2e)$$

$$V'(L_i) = \frac{m_1}{L_i}, \; V''(L_i) = (-m_1/L_i^2) \qquad (2f)$$

The first order condition is given by modified equation (1m) as:

$$\frac{\partial \pi_i}{\partial W_i} \quad \frac{W_i}{\pi_i} = uh_1\left[L_i \cdot V'(L_i) + \frac{1}{2}(L_i)^2.\sigma^2.V''(L_i)\right] *[(\chi)^{u-1}] \qquad (1m')$$

Where χ is the equilibrium price ratio:

$$\chi=(W_i/W^*) \qquad (1m'')$$

Substitute (2f) into (2d) to yield

$$e[m_o + m_1 \log L_i] = \log(PY_i - W_i) + \log L_i - [1-(\sigma^2/2) + \chi^u - \chi^u \Delta] \qquad ..(2g)$$

$$m_o + m_1 \log L_i = \frac{1}{e}[\log(PY_i - W_i)] - \left[[1-(\sigma^2/2) + \chi^u - \chi^u\Delta] - \frac{1}{e}\log L_i\right] \qquad ..(2h)$$

$$m_o = \frac{1}{e}\log[PY_i - W_i] - [[1-(\sigma^2/2) + \chi^u - \chi^u\Delta]] \qquad (2i)$$

$$m_1 = \frac{1}{e} > 0 \qquad (2j)$$

Substitute (2i) and (2j) into $V(L_i)$ of (2f) to have the optimal wage offer, W_i^O, as

$$W_i^O=[\{e|\tau|\}/\{h_1u(\sigma^2-2)/2\}]+W^L \qquad (2k)$$

Where W^L is the minimum/reservation wage of a worker, |τ| as the absolute value of the elasticity of profits with respect to change in wage offer, which is given as

$$\tau=\frac{\partial \pi_i}{\partial W_i}\frac{W_i}{\pi_i} \qquad (2l)$$

Note that the optimal wage offer of an employer can be above W^L, or even below W^L, depending on the value of σ^2. The wage offer will exceed the reservation wage as long as $\sigma^2>2$ since $(h_1u)>0$. The optimal wage offer is positively related to the rate of discount e. The optimal wage offer is also positively related to the elasticity of

profits τ. The optimal wage offer is inversely related to the value of (hu) given the value of σ^2. Variations in σ^2, (h_1u) and τ and their anticipated values will give rise to spatial distribution of wages and consequent discrimination of workers in the informal sector. The following section attempts to determine the causes behind the spatial wage distribution and sources of wage discrimination in the informal sector.

8.5. Spatial distribution of wages and discrimination in the informal sector: Empirical strategy

It is important to realise at the outset that wage discrimination is a difficult notion. The notion that labour market discrimination contributes significantly to the racial, gender and other forms of wage gaps has had to overcome some resistance from economists in the early days when economists, having read Gary Becker by letters, converged on the view that most markets are competitive and that competition undermines discrimination. But Becker (1971) himself accepted in spirit that discrimination – even by otherwise profit-maximising employers – was part of the explanation for the large racial wage gap in the American South. Subsequent theoretical work on the economics of discrimination has suggested a number of mechanisms whereby discrimination could persist in equilibrium (see Cutler and Glaeser, 1997). In our model discrimination arises in the informal sector from gift-exchanges as highlighted in Chapter 7. In this Chapter the theoretical section explains the optimal wage offer that can engender a spatial distribution of wages, which can in turn explain the theoretical foundation of wage discrimination in the informal sector. Accepting that discrimination happens, a logical next step is to ask what determines the observed discrimination: this is the question we take up in this section.

Our study shares some apparent resemblances with the early American models of racial discrimination as practised in the South of the US. The substantial wage gap between whites and blacks that existed in the South of the United States of America before the modern Civil Rights Movement is well known and even better

researched[39]. This gap reflected the combined effects of racial differences in premarket characteristics affecting labour productivity– such as education – and differential treatment in the labour market. That unequal treatment in the market may have played a substantial role is suggested by the fact that a quite large residual white-black gap (0.36 log points) remains even after controlling for schooling, age, marital status, and farm industry with a log earnings regression. John Donohue and James Heckman (1991) obtain a similar residual wage gap for the South in the early 1960s and show that it converged rapidly toward the smaller non-South gap after 1965.

Perhaps less widely recognised than the size of the overall racial wage gap is the extensive geographic, or spatial, variation in the gap within the South. The pattern of the gap in mean log weekly earnings between white and black men across the South in 1939 is quite substantial: the South at the seventy-fifth percentile had a racial pay gap some 0.31 log points greater than the gap at the twenty-fifth percentile (see Sundstrom, 1997). Racial inequality in schooling played a major role in the spatial pattern of the wage gap, just as it did in the aggregate. The determinants of the spatial discrimination are various and interesting:

1) Wage discrimination in the South was largely due to entry barriers in the labour market placed before black workers. In other words, wage discrimination was caused by a racial division of labour limiting the kinds of jobs open to black workers.

2) These entry barriers were artificially created and steadfastly enforced both by white workers, who resisted competition for preferred jobs and forms of interracial contact, and by white employers' and customers' views regarding the suitability or acceptability of African-Americans for various types of work.

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[39] As an example, from the data on southern male wage earners with fewer than 12 years of schooling, the median average weekly earning in 1939 was $9.62 for blacks, compared with $17.50 for whites (see Sundstrom, 1997).

3) Blacks were commonly excluded from supervisory jobs – especially in cases that might involve supervision of whites, which would violate accepted norms of the racial profiling.

4) Jobs involving substantial interaction with white customers were 'no-go' zones for African-Americans.

5) In industries with clearly etched job ladders, black workers were blocked from advancing a certain level, or restricted to separate dead-ends of occupational clusters.

6) White dominated unions further blocked black entry into the union movement that could have redressed the problem of racial discrimination.

7) These forms of racial discrimination in the American South successfully created the reservation of high-end jobs only for white workers.

8.5.1 Main sources of wage discrimination in the informal sector

Our main contention is that the inferior occupational status of informal sector workers cannot be fully explained by their deficits in the quantity and quality of schooling. It is also important to realise that we are interested in understanding the spatial variation of wages in the informal sector without a comparison with the formal sector. As a result, in the informal sector many skills are learned on the job and required little formal education; thus access to higher pay is mostly determined by ***job assignments*** and skills acquired once employed. Consigned to lower-skilled jobs, some workers end up with lower average wages than what others earn while they usually started their careers with the same basic qualifications. Informal labour markets may often have provided 'equal pay for equal work,' but this is not inconsistent with pay discrimination arising from *unequal* job assignments. Thus our first investigation will be to understand the factors that contribute to the unequal job assignments.

Secondly, labour mobility and competition among employers place limits on discrimination in wages or job assignments. If workers face unequal job assignments, the low mobility of workers can perpetuate such discrimination. Since there is a significant dose of kinship in the employment of workers in the informal sector,

relative immobility of a worker is also a major source of wage discrimination. It is also important for us to determine the factors that cause such immobility. In other words, job mobility constrained by the social norms like kinships has led to informal jobs subject to a crowding effect.

Throughout the new millennium, but especially after the 2005, the average wage of an informal sector worker was substantially below that of formal workers. Part of this difference has been attributed to differences in skills, arising at least in part from socioeconomic differences in the quantity and quality of schooling. In this sense 'premarket' discrimination helped produce earnings differences between informal workers and their counterparts in the formal world. The mounting evidence points to an important role for labour market discrimination in producing the earnings gap between formal and informal sectors. Our focus is completely different as we entertain a simple goal to understand labour market discrimination in the informal sector without any consideration of the formal sector mainly for avoiding any selection bias. To the best of our understanding, our study of labour market discrimination in the informal sector will be one of the very first studies that will examine the prevalence and causes of wage discrimination in the informal sector.

8.5.2 Research methodology: Determinants of spatial wage discrimination

We estimate a new form of wage equations for men and women, in urban and rural areas, in the capital city of Dhaka of Bangladesh. Since labour market participation is not likely to be random, concerns arise over possible sample selection biases in the estimation of the wage function. However, since we are only concerned with the informal segment of the labour market, the potential source of the problem of sample selection – due to the selection of those employed workers with lower skills with relatively larger wage offers – is absent in our case. This is so since most of these informal workers have extremely low opportunity costs due to the seasonality of agriculture. As a result, there is no need to account for the sample selection problem by estimating the much celebrated Heckman selection model with maximum likelihood techniques (see Heckman, 1979). We propose a simplistic wage function of an informal worker as a modified Mincerian form:

$$W_i^j = \beta R_i^j + e_{ij} \qquad (3a)$$

Where W_i^j is the observed wage for individual i employed by employer from location j, R_i^j is a vector of observed individual characteristics of worker i employed at location j, β is a vector of coefficients and e_{ij} is a stochastic error term that is normally distributed $N(0, \sigma^2))$.

Next, we proceed to capture wage discrimination by a representative employer located at a region j. Our technique is similar to the methods originally developed by Oaxaca (1973) and Blinder (1973) and subsequently refined by Newmark (1988) and Oaxaca and Ransom (1994) for measuring gender discrimination. Let us call the average wage offer by employer j as AWj, then the observed wage differential Wdfij at location j for worker i is defined as

$$Wdf_{ij} = (W_{ij} / AW_j) - 1 \qquad (3b)$$

In the absence of discrimination, the wage differential will reflect quality differences of workers. In the existing literature wage discrimination is the residual between observed wage discrimination and a measure of explained differential due to quality differences. Thus, wage discrimination is traditionally measured as a difference between one's wage and what a similarly qualified worker can earn from the market. Since the market forces play a relatively less significant role due to the kinship determining the employment relations, we devise a new method to capture discrimination. The rationale for our method is that informal sector workers require low skills for carrying out their duties and their skill differences (like schooling) are less important in determining the tripartite wage negotiation as highlighted in Chapter 7. We propose the average wage rate AW_j is a norm in location j, which determines if an informal worker is discriminated or otherwise. The relevant reference group for worker i is the group of workers employed by his employer and not the market. This is so since the theoretical model explains the existence of wide spatial wage discrimination as an equilibrium phenomenon due to uncertain movements of workers from one segment to another. On the basis of this we arrive at the simple form of wage discrimination in ***Definition 1***.

DEFINITION 1: Worker i in location j is discriminated if Wd_{fij}<0. Otherwise, there is no evidence of discrimination against worker i.

In the previous step we have obtained wage discrimination Wdf_{ij} of each worker from location j. For each worker Wdf_{ij}, which is an indication of unobserved effort by the worker to avoid discrimination and Wdf_{ij} is either positive or negative. If Wdf_{ij} is positive, we posit, the worker has applied more efforts – and also possibly due to accumulated characteristics – the worker is successful in fighting discrimination. We call the positive value of Wdf_{ij} as the 'success' of the worker. By the same token, a negative value indicates a failure of the worker against discrimination. We call the non-positive value of Wdf_{ij} as the 'failure'. On the basis of the generated data on Wdf_{ij} each worker can be dichotomised into either a success or failure, and we then apply the standard logistic equation to understand the probability success of a worker i by using a set of socio-economic indicators called regressors R consisting of several worker characteristics and will be explained in the next section.

We posit that Wdf_{ij} is either positive with a probability ω and ω is thus the probability of success that means $Wdf_{ij}>0$. Note (1- ω) is the probability of failure, or ($Wdf_{ij}\leq 0$). Labelling R as the vector of predictors the logit equation is written as:

$$Logit[\omega(R)] = Ln\left(\frac{\omega(R)}{1-\omega(R)}\right) = \alpha_0 + \sum_{1}^{n} \alpha_r R_r \qquad (3c)$$

Where R is a vector of regressors with R_r as the rth component of vector R, r=1,2, ..n as discussed below. The goal of logistic regression is to correctly predict the category of outcome (success or failure) for individual worker using the most parsimonious model. To accomplish this goal, a model is created that includes relevant predictor variables from a worker's socioeconomic characteristics that are useful in predicting the response variable. In other words, our goal is discover relationship between the success of a worker and its socioeconomic characteristics.

8.5.3 Data

The relevant dataset is derived from the primary survey as described in Chapter 1. In order to obtain the spatial distribution of wages, we divide the field of study into thirteen (13) neighbourhoods, or regional locations. Each location is controlled by a small group of oligarchy, both in urban and rural areas, who enjoy significant political and economic decision-making power within a regional location. Within

each location j employer has the monopsonistic power to set the wage rate and employment conditions. In principle, workers can vote with their feet. However, due tho the role of kinship in determining employment relations, we expect little mobility among workers, which in turn allows their employers to practise significant wage discrimination. In what follows we provide some of the basic statistics of the 13 regional locations.

8.5.3.1 Descriptive statistics of the regional locations

Table 1 summarises the descriptive statistics of the 13 regional locations surveyed .

Table 8.1: Descriptive Statistics

H_j	N_j	AW_j	SDW_j	AA_j	AE_j	AM_j	AY_j	U/R
1	51	86	25.21	37	4.7	2	14.2	U
2	50	82	36.28	39	3.38	2	15.8	U
3	50	72	29	40.78	3.48	2	16.5	U
4	48	74	27.14	42	4.22	2.04	19.3	U
5	50	74	20.96	37	3.66	2	14.8	U
6	49	68	7.26	26	2.54	2	4.5	U
7	51	76	7.6	35	2.96	2	12.7	R
8	49	84	18.46	48.24	2	1	4.6	R
9	50	94	20.17	25	2	1	5.4	R
10	50	115	20.88	38	4.7	1.96	15.9	R
11	50	75	19.83	39	4	2	15.2	R
12	50	93	43.5	36	4.46	2	13.4	R
	51	63	27.4	40	4.72	3	14.8	R

Note: H_j: Location j, N_j: Number of Workers Surveyed in Location j, AWj: Average Wage of Surveyed Workers in Location j, SDW_j: Standard Deviation of Wages of Surveyed Workers in Location j, AA_j: Average Age of Surveyed Workers in Location j, AE_j: Average Education of Surveyed Workers in Location j, AM_j: Average Marital Happiness of Surveyed Workers in Location j, AY_j: Average Years of Service for Surveyed Workers in Location j, U: Urban location, R: Rural Location

Source: Created by the author from the survey data.

8.5.3.2 Regressors and relevant variables

Note that the vector of regressors R is composed of the following variables:

Table 8.2: Variables of Interest

Variable Name	**Survey Question / Description**
AGE	Age in years
GENDER	Male =1, Female=0
EDUMMY	Never Attended School=0, Attended School=1
EDUCATION	We apply the following index: Education=Literacy + Highest Level of Educational Attainment + Literacy*Highest Level of Educational Attainment
HLEA (Highest Level of Educational Attainment)	Highest level of educational attainment: 0=Never Attended School, 1=Year1– Year IV, 2=Year V– Year VIII, 3= Year IX– Year X, 4= SSC, 5= HSC, 6= Graduate, 7=Honours Graduate, 8=Masters
LITERACY	The following index is used to capture literacy: 1=Thump impression only, 2=Just sign, 3=Can't read, 4=Can't write, 5= Can read, 6=Can write
MARITAL HAPPINESS	We apply the following index of conjugal happiness: 1= Happily married, 2= Seeking partners for happiness, 3= Widowed, 4= Divorced or separated, 5 = Multiple partners
MARRIAGE DUMMY	1= Currently married, 0= Otherwise,
UR	1=For Urban Sector, 0=Otherwise
SDW_j	Standard deviation/wage variability of wage in Location j

8.5.4 Findings

In Table 8.3 we present the regression results of equation (3c) using EViews. Each slope coefficient in (3c) is a partial slope coefficient and measures the change in the estimated logit for a unit change in value of each of three regressors. Thus, the AGE coefficient α1 being positive implies, with other variables being unchanged, that if AGE increases by a unit, on average the estimated logit increases. This suggests that there is a positive relationship between the logit and the AGE and it is economically significant but insignificant statistically. There is thus some evidence that the age of

a worker is a factor to avoid wage discrimination. The GENDER variable has a strong positive influence on the Logit and statistically significant ($\alpha 2>0$). In other words, there is a strong evidence to suggest the prevalence of gender discrimination in the informal sector. Both in the job assignments and mobility of workers, AGE and GENDER play a role.

The EDUCATION variable has a negative impact on the Logit and is also statistically significant ($\alpha 3<0$). The premarket characteristic of a worker like education plays a detrimental role in the informal sector. Workers with larger stocks of human capital and schooling would have a lower chance to have an excess wage above the corresponding mean wage of one's location. This finding is in consonance with our surmise that wage discrimination in the informal sector is mainly driven by social norms and not by market forces. In other words, in low-skill jobs EDUCATION plays a negative role in the earning function. The reason is two-fold: first and foremost, the more educated workers are given inferior job assignments as their larger stocks of human capital give an adverse signal to a potential employer about their work ethics and habits. There is always a probing question about more qualified workers in the informal sector: why is s/he here in hell? Ideally, a strong feeling exists in the informal sector, educated workers should be absorbed by the formal sector and the informal sector is for those who are not employable in the formal sector. It is also likely that more educated workers are somewhat demoralised and therefore fail to bargain effectively for better job assignments. Secondly, because of the same entrenched feelings against more educated workers or for behavioural reasons, more qualified workers find it difficult to vote with their feet. These two factors can lead to a strong discrimination of educated workers in the informal sector.

The level of MARITAL HAPPINESS of a worker has an economically and statistically significant influence on the probability of avoiding discrimination at work ($\alpha_4>0$). The more (less) satisfied a worker maritally is, the lower (higher) will be the probability that s/he will be able to cross the average wage of the location. One plausible way to explain the impact of conjugal happiness on wage discrimination can be constructed in terms of search costs. In other words, we find evidence that workers with lower (higher) levels of marital satisfaction will have lower (higher) search costs and hence greater (lower) incentives to search for both

better-paying jobs and better job assignments. The variability of wages within a location (SDW) has a negative impact on the ability of a worker to cross the average wage of the location – significant statistically as well as economically ($\alpha_5<0$). The effect is economically meaningful if the local wage variability can act as deterrence for job search. The local wage variability can act as a wage ladder that workers perceive as more tractable to climb than the wage ladder at unknown locations. In other words, a known devil is better than the unknown ones. It is also important to realise that the *costly* efforts to climb the local wage ladder, say by exchanging favours and adopting corrupt practices, can be counterproductive in obtaining jobs outside one's location. Finally, there is no conclusive evidence that the informal sector is better organised in the urban sector than in its rural counterpart ($\alpha_6>0$). The urban informal sector seems to exploit its workers a little more – but the effect is not statistically significant.

Table 8.3: Logit Estimation

Dependent Variable: Logit Dummy
Method: ML – Binary Logit (Quadratic hill climbing)
Date: 08/20/10 Time: 10:23
Sample: 1 660
Included observations: 660
Convergence achieved after 3 iterations
Covariance matrix computed using second derivatives

	Coefficient	Std. Error	z-Statistic	Prob.
CONSTANT	-2.009432	0.432745	-4.643460	0.0000
AGE (α_1)	0.015457	0.008929	1.731152	0.0834
GENDER(α_2)	2.036216	0.224679	9.062769	0.0000
EDUCATION (α_3)	-0.106984	0.046810	-2.285512	0.0223
MARITAL HAPPINESS (α_4)	0.434167	0.137661	3.153895	0.0016
SDW(α_5)	-0.021319	0.009979	-2.136277	0.0327
UR α_6)	0.205730	0.196126	1.048971	0.2942

McFadden R-squared	0.132688	Mean dependent var	0.510606
S.D. dependent var	0.500267	S.E. of regression	0.454313
Akaike info criterion	1.223172	Sum squared resid	134.7792

Schwarz criterion	1.270817	Log likelihood	-396.6468
Hannan-Quinn criter.	1.241640	Restr. log likelihood	-457.3286
LR statistic	121.3636	Avg. log likelihood	-0.600980
Prob(LR statistic)	0.000000		
Obs with Dep=0	323	Total obs	660
Obs with Dep=1	337		

8. 6 Conclusion

The spatial wage variability in the informal sector is shown to be positively dependent on the *inertia* of the workers in the informal sector to vote with their feet in search of better-paying jobs. The spatial wage distribution is shown to shrink if workers are '*footloose*'. So the key issue for us is wage discrimination due to the latent search behaviour of workers in the informal sector. In other words, what are the determinants of the search behaviour of workers in the informal sector? This is a seemingly innocuous question that can hide the roots of working poverty in the informal sector. From our basic formulation of the labour market in the informal sector as a complex mechanism of kinship-based exchanges, it is expected that there will be a significant spatial distribution of wages in the informal sector. Due to the latent behavioural model, workers will face serious wage discrimination in the informal sector, which can perpetuate the working poverty.

In order to test the merits of the predictions of the theoretical model, we define wage discrimination in terms of a simplistic (spatial) wage distribution function. From the primary survey we obtained data to establish that the informal sector exhibits a significant dose of spatial wage discrimination. We then chose a set of premarket characteristics of workers and spatial variables, like schooling, age, marital status, education, gender, rural-urban cleavage and intra-regional wage inequality, to explain discrimination in wages in the informal sector. Our findings are enormously interesting: first, some of the premarket characteristics tend to give rise to wage discrimination in the usual manner as researchers have underscored in the formal sector. Secondly, quite paradoxically, other premarket characteristics impinge on the wage discrimination in the informal sector that is completely unknown in the context of the labour market in the formal sector. However, these paradoxical effects do have

a theoretical salience due to the special characteristics of the labour market in the informal sector of developing nations.

CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS

9. 0 Introduction

Bangladesh is an overpopulated country with about one third of its population living below the poverty line. It is commonly believed that the people who are unemployed should be poor. Undoubtedly they are poor. Apart from this category of poor, there are poor among those who are employed. Structural change and growing polarisation in the labour market across the international arena have created a risk for those who are employed. The risk factor in the labour market has given birth to the phenomenon of the working poor. They are those who work but live in poverty. The working poor constitute a vast majority of the total poor population in Bangladesh. Considering vastness of the working poor, the need to address their poverty is enormous particularly for Bangladesh.

The main objective of the research was to identify and analyse the nature and causes of poverty of the poor workers in Bangladesh. The term working poverty is a combination of both individual and household characteristics. Hence, this issue was addressed at two separate but complementary levels – individual worker and household to which the individual worker belongs. The research critically examined major household and labour market problems that inhibit worker's ability to earn an income above the poverty threshold: low earnings, low productivity, periodic unemployment and part-time/casual work, working conditions, gender, widowhood, disability, illiteracy, dependency burden, household size, income etc. Apart, non-labour market factors such as: family culture, tradition, social value, religious norms etc. were also examined to explain the phenomenon of working poverty. The research is based on primary data obtained from a sample survey conducted in Bangladesh during in 2008 –09.

9.1 Summary of major findings

Findings of our study indicate that about half of the respondents are relatively young. The proportion of male and female members in the households has been found to be the same. The average size of the household in the study area lies below the national

average. Data indicate that majority of the respondents are married and the rest are single. The age structure of the household members shows that about one third of them are children. The high proportion of children indicates the dependency burden of the households which in turn affects the wellbeing of the household in terms of reduced labour force participation of the household members particularly mothers and hence income. Data indicate that the households with infants have lower income than those without infants.

The respondents (workers) are mostly illiterate and untrained. Respondents never attending schools constitute the majority. Data show that only a quarter of the respondents got the chance to study up to primary level. Roughly, one fifth of the respondents have attained high school level education. It is interesting to note that among those who never attended schools the proportion of males is relatively high compared to that of females. Except this level, everywhere the females are underrepresented compared to the males. Among the respondents never attending schools the proportion of those found capable of reading and writing is negligible. The respondents having skill development training is also not remarkable.

We have found discernible impact of female education on household size. Data indicate that as the level of female education increases, average number of children per woman decreases. The correlation between female education and the number of children per woman has been found highly negative. Data also reveal that educated married females have fewer children on average compared to educated married males. At almost at all levels of education; the household size for educated females is smaller than educated males.

The status of household determines and shapes poverty of the household. Data reveal that average monthly income of the female-headed households is lower than that of male-headed household. Apart from its deleterious impact, interestingly it has been found to have positive impact on the household size. The household size of the female-headed households has been found smaller than that of male-headed households. Like household status, structure of household is a key to determining poverty of the household. The monthly average income of the single parent household has been found to be lower than that of double parent household.

Average size of the children per wage earner women has been found smaller than that of non-wage earner women. In the rural area (agricultural sector), one third of the households have one family member unemployed although the number of households having two members unemployed is quite negligible. In the urban area, households having one as well as two of the members unemployed have been found to be the highest in the manufacturing sector. The consumption patterns of the households reveal that protein rich foods such as: eggs, milk, meat etc. were virtually beyond their reach. The consumption bundle of the respondents includes rice, wheat, lentil, vegetables, potatoes etc.

Widowed households have a high risk of experiencing poverty than the households without widows. Our study results show that average household income of the households without widows is higher than that of the households with widows. Data indicate that monthly per capita income is marginally higher for households without widows than having widows. Like widowhood, disability of household members is also a factor determining poverty of the household. Data reveal that per capita income of the household members belonging to households having able persons is higher than that of those having disabled persons.

The respondents live in conditions characterised by poor living arrangements, inadequate civic facilities and backward communication. The proportion of households living in thatched houses (earthen floor, straw/bamboo wall and bamboo roof) is almost same in both rural and urban areas. Majority of the respondents live in their own houses and those living in rented houses account for one third of the total respondents. Majority of the respondents' source of lighting is electricity. Data indicate that majority of the respondents use tube-well as source of drinking water. Most of the respondents use firewood as fuel for cooking while the least commonly used fuel is electricity.

We have tried to explore if there is any link between living condition and economic wellbeing of the households. The study results show that the households living in pucca (concrete structure) and semi-pucca houses are economically better off than those living in other types of houses such as: thatched and earthen houses. The households using electricity as source of lighting have been found economically better off compared to those who use other sources such as kerosene. The households

using tap water have been found better off than the households using tube-well water.

Regarding ownership of asset, our study findings reveal that about one fifth of the households do not have any type of land either homestead or cultivable. The proportion is higher than that of the national level. Besides land, we also examined the ownership of other assets such as: sewing machine, rickshaw, rickshaw van, cattle, agricultural equipment etc. by the households. Data indicate that only one fourth of the total households own assets as mentioned above. Ownership of land and other assets has been found to be unevenly distributed between males and females. The average land ownership of male-headed household has been found higher than that of female-headed households. Data show that among the households owning assets other than land, male-headed households constitute the majority.

Discrimination at work as demonstrated by gender wage gap is widespread throughout the world including Bangladesh. Research has provided compelling evidences that women workers in Bangladesh are paid less than their male counterparts for equal worth jobs. Our study results show that with the same level of age, education, experience and workload female workers are paid less than male workers. Moreover, they are paid less even though they work proportionately more than their male counterparts. Research findings suggest that in practically all countries, the total amount of work done by women exceeds that of men. So far as productivity is concerned both the male and female workers were equally productive because they were supposed to accomplish a given task within a particular period of time. The reason for gender wage gap may be that the employers did not recognise the female workers to be equally productive like male workers.

The workers have been found to work at a very low level of wages in all sectors under study. The daily average wages has been found to be the highest for transport workers and the lowest for construction workers. If we examine relative condition of the workers in terms of monthly wages we find that the average monthly wages is the highest for manufacturing workers followed by transport workers. The average monthly wages of the agricultural workers is marginally higher than service workers but substantially lower than that of manufacturing and transport workers. The reason

might be that agricultural workers were more productive than service workers but less productive than manufacturing and transport workers.

We have also tried to examine the relationship between the volume of work and the amount of wages of the workers. Data indicate that the transport workers work shortest but get the highest in terms of both daily and hourly wages. The agricultural workers work longer but earn less than the transport workers. The manufacturing workers work longest daily but earn marginally higher than agricultural workers and substantially lower than transport workers in terms of daily average wages.

There is little provision for overtime hours for the workers under study. Except manufacturing sector, there are virtually no overtime facilities as such. Among those who have overtime provision, half of them belong to garments industry and one third to steel & engineering industry. The overtime wage rate has been found to be proportionately more than the regular wage rate. Majority of the manufacturing workers receive festival bonus along with their salary. Only one third of the workers get compensation for occupational injury covering cost of treatment, medicine and conveyance but this facility is limited to manufacturing sector only. They do not have any fringe benefits, medical allowance, paid leave, contributory provident fund, pension benefit etc.

In the rural area employment varies directly with seasonality in agriculture. During peak seasons i.e., cropping ad harvesting period, labour force mostly remain employed. During lean season, the workers remain redundant for months together. Data indicate that majority of the agricultural workers remain redundant for a particular period extending from two to six months a year while this figure is substantially low in urban areas. In the rural area, majority of the workers remain jobless during June–August months of the year which is the rainy season in Bangladesh. Therefore, during this period, a significant portion of the jobless workers migrate to the urban areas for jobs.

Because of joblessness the rural workers tend to migrate to the cities for jobs at a wage much lower than the prevailing wage rate. The wage cut as such has been treated as gift-giving by the workers. On the contrary, the employers offer longer tenures as gift to workers so that they are willing to work at lower wages further in

future. Our study reveals that the non-market practice of the workers and employers have important bearings on poverty of the workers. The statistical significance of 'old gift' parameter suggests that gift-giving and gift-exchange have enormous impact on seasonal migration and poverty of the workers in both rural and urban Bangladesh.

The workers mostly depend on their main occupations for their livelihood and the lion's share of their income originate from this occupation. Data indicate that only one tenth percent of the workers have secondary occupation which contributes marginally to supplement income of the household. While tracking their job history, we came to find that about one tenth of the workers started working since their childhood. About fifty percent of the workers started working at their early age. This implies that most of the workers picked up jobs at an age they were supposed to study at schools or colleges. This constrained their human capital formation and made them low productive labour force. This has constrained their mobility towards better jobs. Data indicate that about fifty percent of the workers remained employed in their present occupations for decades together.

In our study, we have noticed structural change in employment and occupations of the workers. Data indicate that out of 125 workers who were day labourers in the past, at present 32 are day labourers, 23 are transport workers, 6 are business workers, 14 are factory workers, 25 are service workers and 25 are construction workers. This change is quite consistent with the structural transformation of the economy switching dependence from agriculture to manufacturing sectors. Data indicate a decline in the proportion of business workers in the present occupation compared to the previous occupations. The decline in the business service sectors may be due to mismatch in their skill, low level of wages or bad working conditions. The manufacturing sector in Bangladesh has flourished remarkably following rapid development of garments industries. The transport and communication sectors have also developed due to increase in economic activities. Therefore, it is very likely that the workers would rush to those sectors for employment.

We have tried to estimate the length of joblessness of the workers who had been employed previously. The extent of waiting period for a job spans less than three months to more than two years. Majority of the workers had to wait for seven to

twelve months to get the job. The proportion of workers waiting for more than two years to be reemployed is less than ten percent. The workers who had similar jobs previously took relatively less time to be reemployed. Among them manufacturing workers are predominant. About a quarter of the manufacturing workers have been found to be re-employed even at less than three months. Majority of the manufacturing workers were reemployed between three to six months. This implies that employers prefer experienced workers because they are more productive than inexperienced workers.

An investigation into the reasons for leaving previous job has provided interesting results. Data indicate that majority of the workers (both males and females) deserted the previous job due to low wages. The proportion of workers leaving the previous job for bad working condition, inadequate work, closure of business, better job, conflict with the employer, job insecurity etc. account for about one third of the total workers. Only one tenth of the workers left the previous job because of termination. The female workers leaving the previous job for child care constitute the majority. The remaining the female workers left job due to distance, heavy workload, bad working conditions, lack of safety, job insecurity, maltreatment, low wages, sexual harassment etc.

There is no denying that in our society women's employment is constrained by their preoccupations at home. Data indicate that three fourths of the child caring activities are borne by the women. As indicated by our study, the cooking task is solely done by the women. Majority of the women workers have reported that child care is a constraint to getting and sustaining a job. Besides, they have to face obstacles from within the family as well as the society. The obstacles are mainly 'wearing cloak outside the home', 'returning home before evening' etc. It is interesting to note that as the level of education of the female household members' increases, the restriction gradually decreases.

The workers under study have been found to work in conditions which cannot be said decent by any standard. Data indicate that only one fifth of the manufacturing workers have been recruited through formal appointment letter and the rest verbally. In the service sector one third has been recruited through formal appointment letter while two thirds were appointed verbally. In fact, the workers do not have any right

to take shelter of law in case of unlawful dismissal or termination from the job. The factories under study have been found to be inadequately equipped with safety instruments. The garments factories provide fire extinguishers and safety exits, textiles factories safety exits, steel & engineering factories gloves and eye protectors, and, leather & footwear factories gloves and masks only. Majority of the workers reported that the working condition was harmful to their health as well as life.

The employers do not take any responsibility of occupational injuries. Some of the employers have been found to take responsibility not as a matter of legal obligation but on humanitarian grounds. Roughly, about a quarter of the workers reported that the employers share the responsibility of any injury in the workplaces. The employers tend to compensate any such injury in terms of treatment, medicine, paid leave, leave without pay etc. Besides a few exceptions, the workers alone bear the cost of any injury or accident in the workplaces. The workers have been found to work long hours ranging from 10 to 15 hours a day. Data indicate that garment workers work as long as 15 hours a day on average if overtime hours are added to regular hours. For other manufacturing sub-sectors the figure is about 10 hours a day on average. The long hours of work indicate low productivity and low wage of the workers. The workers are granted paid leave for religious festivals twice a year for a total period of 6 days. There are no other leaves except those mentioned above.

In both India and Bangladesh, informal sector occupies a large segment of the economy and plays a vital role in providing employment to the workers looking for jobs. The excess supply of labour is usually absorbed by the informal sector. They are those workers who fail to get jobs in the formal sector due to lack of skill. With low level of skill they end up with low productive jobs and low level of wages. Among others, the informal sector is characterised by discrimination arising from unequal job assignment. As a result, workers face serious wage discrimination which cause and perpetuate poverty of the workers.

9.2 Policy recommendations

The relationship between female education and the number of children per woman has been found negative. The implication for policy is that if women are educated, it will work as a deterrent to population growth. Therefore educating the girl children

should be emphasised while formulating education policies. Female-headed households tend to keep their household size relatively small. This implies that the female heads are aware of the population problem. The implication for policy is that females as decision makers are an important element in controlling population. So, measures should be undertaken to empower women so that they could plan their families jointly with their counterparts.

Relatively small number of children per wage earner woman implies women's understanding about the advantages of small family size. The policy implication is that if women are provided with employment it will work as a check on population growth. The employment policy of the government should focus on creation of women employment opportunities at all levels. Self-employment of the women workers will reduce poverty of the household through supplementing income thus earned. This will also help maintaining a balance between job and the family.

Households with some of their members unemployed are most likely to be vulnerable to poverty. This implies that unemployed persons constrain economic wellbeing the households. Therefore, it is suggested to create adequate employment opportunities for those who are unemployed. As a matter of strategy, as the local job market is saturated, they could be provided with skill development training in trades which are demanded abroad. Employment policy of the government should be framed to capture overseas employment opportunities for the unemployed.

Widowhood and disability increase the risk of poverty of the household. The prosperity of the household is inhibited by their inability to contribute productively to the household. The implication for policy is that if they are brought under safety net programmes their dependence on household income would be reduced which in turn offset poverty of the household to some extent. Therefore, it is suggested to expand scope of social protection schemes, provide adequate allowance to the widows and the disabled persons and increase the share of budgetary allocation for social sectors as a whole. The government should maintain a quota in the public sector for employment of the widowed and the disabled. The private sector may be motivated to follow the scheme in accordance with the government.

Only a small number of households have been found to own land and other assets. This in turn indicates their inaccessibility to resources which is a binding constraint to their economic wellbeing. Land undoubtedly is an important reproductive asset to the rural households. The implication for policy is that if land is judiciously redistributed through land reform, the poor households could overcome their poverty utilising it. Empirical evidences from India suggest that ownership of cattle contributes to reducing poverty of the household. Therefore, apart from land, the agricultural workers may be provided with cattle as loan in kind. Besides, the women workers may be provided with equipments such as sewing machines so that they could generate economic activities at their own initiative.

The gender dimension of asset ownership indicates that women own less assets compared to men. This implies that the disadvantaged women should be empowered through fast expanding microfinance schemes so that they can establish small scale enterprises to supplement their income. Besides financial resources, women workers may be provided with equipments (sewing machine), poultry birds etc. free of cost. This will ensure their access to resources and minimise gender discrepancy of asset ownership between men and women. Special employment promotion program in Bangladesh such as 100-day employment scheme has provided employment for thousands of un-and underemployed youths in Bangladesh. Any such scheme directed solely to women no matter what should be its duration is expected to promote their employment and lessen poverty of the household.

The female workers have been found to be discriminated at work as reflected by wage inequality between males and females. The female workers are paid less than male workers for equal worth jobs. In extreme cases, female workers have been found to be paid less even they work more than the male workers. The implication for policy in this regard is enormous. The women workers are the weaker party in the collective bargaining process which may be due to their low level of productivity, ignorance, lack of representation in labour market institutions, social attitude, employers' stereotypes etc. Due to low pay, wage inequality and other reasons the female workers are being marginalised in the society.

Therefore, the skill of the womenfolk should be developed through appropriate education and training. Labour market information system should be such that they

get access to information regarding wages and employment easily as and when necessary. Convention like equal pay for equal worth job should be ratified and implemented by Bangladesh immediately. Legislations related to rights and privileges of the workers should be updated and enforced. An up-to-date labour market monitoring system should be introduced to keep track of the basic principles of labour laws. The existing administrative machinery should be strengthened for compelling informal sector employers to recruit and terminate their employees as per labour laws. If necessary, a separate statutory body should be formed to work as watch dog for capturing violations of labour laws and undertake remedial measures if necessary.

The workers under study have been found to work at a depressingly low level of wage. The level of wages in some cases is even below the minimum wages. The low level of wages causes and sustains poverty of the household. The implication for policy is that adequate wages is necessary to lift households from poverty. Therefore, it is suggested to provide a remuneration package consisting of adequate wages and other service benefits such as: paid leave, allowances, pension etc. The remuneration package must be based on an objective assessment of cost of living and adjusted for inflation from time to time. The minimum wages must be ensured for all workers at all levels through legislations. Only enactment of legislation should not be enough, it must be enforced at the same time. The unethical practices of employers of giving workers remuneration below the minimum wages must be stopped through legal measures.

The nature and pattern of employment show that the workers face severe unemployment during lean seasons in the agricultural sector. The implication for policy is that unemployment of the work force reduces income of the workers. The reduced income thus contributes to the poverty of the households. Therefore, special employment schemes such as: public works programme, food for works programme should be introduced during the lean season. The unemployed may be provided with food assistance in the lean period so that they could overcome starvation and hanger. The rural non-farm activities should be diversified through massive infrastructural development in the rural areas. The manufacturing and service sectors would develop following development of infrastructure in the rural areas.

Majority of the workers under study work in hazardous working conditions which are harmful to their health as well as life. The situation has emerged from violation of international labour standards and conventions which has not been properly monitored by relevant government agencies. The implications for policy are that if the condition of work is improved it will lead to improving economic condition of the workers. Therefore, a separate wing in the existing labour law enforcing government machinery should be introduced with appropriate persons and adequate resources. This wing will be responsible for implementing labour standards as suggested in the international conventions on decent work. The government should ratify and implement conventions on decent work with top priority. Along with implementing conventions, legislations concerning decent work must be enforced in all sectors of the economy.

Rural workers tending to migrate in urban areas for jobs have been found to fall victims of the third party because of their ignorance about the labour market. The third party takes advantage of their ignorance and the workers become trapped in low level of wages so long as they continue to work in urban areas. Both short-term and long-term polices are needed to address the problem. *In short-term, the workers may be provided with cheap communication instrument such as mobile phones so that they can contact directly with the employers in urban areas.* A scheme may be undertaken to broadcast urban job opportunities through electronic media such as radio and TV. This arrangement will help workers in getting information about urban jobs easily and free of cost. In long-term, they may be provided functional literacy so that they can get access to print media such as newspapers, magazines etc. The third party will be eliminated if the workers can contact directly with the employers. If necessary, government may enact new laws to eliminate third party from the labourmarket.

BIBLIOGRAPHY

Abernathy, FH Volpe, A and Wei, D 2004, 'The apparel and textile industries after 2005–prospects and choices', Harvard Centre for Textile and Apparel Research, Cambridge, Massachusetts.

Ahmed, S 2002, 'Social protection and safety nets: the case of Bangladesh', in Muktada, M Singh, AM and Rashid, MA (eds.), *Bangladesh: Economic and Social Challenges of Globalisation*, University Press, Dhaka.

ADB and World Bank 2003, Poverty in Bangladesh: building on progress, Dhaka.

Aigner, DJ and Cain, GG 1977, 'Statistical theories of discrimination in the labour market', *Industrial and Labour Relations Review*, vol. 30, no.2 pp. 175–87.

Akerlof, GA 1982, 'Labor contracts as partial gift exchange', *Quarterly Journal of Economics*, vol. 97, no.4, pp. 543–569.

Akerlof, GA 1984, 'Gift exchange and efficiency wage theory: four views', *American Economic Review*, vol. 74, no. 2, pp. 79–83.

Akerlof, GA and Yellen, J 1988, 'Fairness and unemployment', *American Economic Review, Papers and Proceedings*, vol. 85, pp. 250-284.

Akerlof, GA and Yellen, J 1990, 'The fair wage–effort hypothesis and unemployment', *Quarterly Journal of Economics*, vol. 105, no. 2, pp. 255–283.

Al-Ubaydli, O Andersen, S Gneezy, U and List, J 2006, 'For love or money? testing non-pecuniary and pecuniary incentive schemes in a field experiment', Working Paper.

Alam, S 1985, *Women and poverty in Bangladesh*, Women Studies International Forum vol. 8. no. 4, 361-371.

Alberto, A and Rodrik, D 1994, 'Distributive policies and economic growth', *Quarterly Journal of Economics*, vol. 109, no. 2, pp. 465-490.

Alderman, H and Paxson, C 1992, 'Do the poor insure? a synthesis of the literature on risk and consumption in developing countries', Policy Research Working Paper no. 1008, World Bank, Washington, DC.

Aliber, M 2001, 'An overview of the incidence and nature of chronic poverty in South Africa', Chronic Poverty Research Centre Background Paper No. 3, University of Manchester.

Amin, ATMN 1987, 'The role of the informal sector in economic development: some evidence from Dhaka, Bangladesh', *International Labour Review*, vol. 126, no. 5, pp. 611- 623.

Amis, P 1994, 'Indian urban poverty–labour market, gender and shocks', *Journal of International Development*, vol. 6, no. 5, pp. 635-643.

Anderson, DR Sweeney, DJ and Williams, TA (eds.) 1989, *Statistics for Business and Economics*, Harper.

Anker, R 1997, 'Theories of occupational segregation by sex: an overview', *International Labour Review*, vol. 136, no. 3, pp. 315–39.

Anker, R, Chernysehev, I, Egger, P, Mehran, F and Ritter, J 2003, 'Measuring decent work with statistical indicators', *International Labour Review*, vol. 142, no. 2, pp. 147-178.

Anker, R and Hein, C 1985, 'Why third world urban employers usually prefer men'? *International Labour Review*, vol. 124, no.1, pp. 73-90.

Anker, R and Hein, C 1986, *Sex inequalities in urban employment in the third world*, Macmillan, London.

Arif, F 1988, 'Self-employment for rural distressed female headed households–a case study of a pilot project in Bangladesh', paper prepared for the National Workshop on Female Headed Households and Development, ILO, New Delhi.

Arrow, KJ 1973, 'The theory of discrimination', in Ashenfelter, O and Rees, A (eds.), *Discrimination in labour markets*. Princeton University, New Jersey.

Asif, M 2007, 'An empirical analysis of the determinants of rural poverty in Pakistan, a case study of Bahawalpur District with special reference to Cholistan', Islamia University, Pakistan.

Australian Government 2004, Senate report on poverty and financial hardship, Canberra.

Autor, DH Katz, LF and Krueger, AB 1998, 'Computing inequality–have computers changed the labour market'? *Quarterly Journal of Economics*, vol. 113, no. 4, pp. 1169-1213.

Bardhan, PK 2010 '*Awakening giants, feet of clay: assessing the economic rise of China and India'*, MIT, Massachusetts.

Bane, MJ and Ellwood, DT 1991, 'Is American business working for the poor?' *Harvard Business Review*, September–October, pp. 58-66.

Bangladesh Bureau of Statistics 2009, *Statistical yearbook of Bangladesh–2008*,

Dhaka.

Bangladesh Bureau of Statistics 2008, *Statistical yearbook of Bangladesh*, Dhaka.

Bangladesh Bureau of Statistics 2006, *Statistical yearbook of Bangladesh*, Dhaka.

Bangladesh Bureau of Statistics 2005, *Statistical yearbook of Bangladesh–2005*, Dhaka

Bangladesh Bureau of Statistics 2001, *Report of the household income and expenditure survey 2000*, Dhaka.

Bangladesh Bureau of Statistics 1994, *Disability prevalence survey*, Dhaka.

Bangladesh Bureau of Statistics 1990, *Statistical yearbook of Bangladesh–1990*, Dhaka.

Banton, M 1994, *Discrimination*, Open University, Buckinghamshire.

Barbezat, D 1993, 'Occupational segmentation by sex in the world', IDP Women/WP–13, *Equity for Employment*, ILO, Geneva.

Barbotte, E Guyillemin, F Chau, N and Lorhandicap Group 2001, 'Prevalence of impairments, disabilities, handicaps and quality of life in the general population: a review of recent literature', *WHO Bulletin*, vol. 79, pp. 1047–1055.

Bardhan, P 1984, *Land, labour and rural poverty: essays in development economics*, Oxford University Press, New Delhi.

Bardhan, P and Rudra, A 1983, *Agrarian relations in West Bengal: results from two surveys*, Somaiya, Bombay.

Barnes, C 1991, *Disabled people in Britain and discrimination*, University of Calgary, Calgary.

Barros, R Fox, L and Mendonca, R 1997, 'Female-headed households, poverty, and the welfare of children in urban Brazil', *Economic Development and Cultural Change*, vol. 45, no 2, pp. 231–57.

Barrow, R 1999, 'Inequality, growth and investment', NBER Working Paper 7038, National Bureau of Economic Research, Massachusetts.

Batbaatar, M Bold, TS Marshall, J Oyuntsetseg, D Tamir, CH and Tumennast, G 2005, 'Children on the move: rural–urban migration and access to education in Mongolia', Country Report 17, Childhood Poverty Research and Policy Centre CHIP, London.

Bayard, K Hellerstein, J Neumark, D and Troske, K 1999, 'New evidence on sex segregation and sex differences in wages from matched employee–employer

data', NBER Working Paper Series No. 7003, National Bureau of Economic Research, Cambridge, Massachusetts.

Becker, GS 1957, 1971, *The economics of discrimination*, University of Chicago, Illinois.

Becker, GS 1962, 'Investment in human capital–a theoretical analysis', *The Journal of Political Economy* vol. 5, no. 70, pp. 9-49.

Becker, GS 1999, 1964, *Human capital: a theoretical and empirical analysis with special reference to education*, University of Chicago, Illinois.

Bellemare, C and Shearer, B 2007, 'Gift exchange within a firm: evidence from a field experiment', IZA Discussion Paper No. 2696.

Bencivenga, VR and Smith, BD 1997, 'Unemployment, migration and growth,' *Journal of Political Economy*, vol. 105, pp. 582–608.

Berger, S 2001, 'The working poor in developing countries: changes in the past decades and prospects for 2010', mimeo, Employment Strategy Department, ILO, Geneva.

Berger, S and Harasty, C 2002, 'World and regional employment prospects: halving the world's working poor by 2010', Employment Strategy Department, ILO, Geneva.

Bergmann, B 1974, 'Occupational segregation, wages and profits when employers discriminate by wage or sex', *Eastern Economic Journal*, vol. 1, Nos. 2–3, pp. 103-110.

Berman, E Bound, J and Machin, S 1998, 'Implications of skill-biased technological change–international evidence', *Quarterly Journal of Economics*, vol. 113, no. 4, pp. 1245-1279.

Bernstein, J 1999, 'Demand shifts and low wage workers', *Eastern Economic Journal*, vol. 25, Issue 2, pp. 191-208.

Berthoud, Lakey, J and Mckay, S 1991, 'The economic problems of disabled people', Policy Studies Institute, London.

Bescond, D Châtaignier, A and Mehran, F 2003, 'Seven indicators to measure decent work: an international comparison', *International Labour Review*, vol. 142, no. 2, pp. 179-221.

Besley, T 1995, 'Savings, credit, and insurance', in Behrman, J Srinivassan, TN (eds), *Handbook of development economics*, Volume 3b, North Holland, Amsterdam.

Bewley, TF 1999, *Why wages don't fall during a recession*? Harvard University, Massachusetts.

Bashaasha B. Kidoido, M and Hansen, EF 2006, 'Determinants of wellbeing among smallholders in Adjumani District, Uganda', paper presented at the International Association of Agricultural Economists Conference, August 12–18, Gold Coast, Australia.

Bhattacharya, D and Rahman, M 1999, *Female employment under export propelled industrialisation: prospects for internalising global opportunities in the apparel sector in Bangladesh*, CPD, Dhaka.

Bangladesh Institute of Development Studies 2005, Analysis of poverty trend project, mimeo, Dhaka.

Blackaby, D Booth, AL and Frank, J 2005, 'Outside offers and the gender pay gap: empirical evidence from the UK academic labour market', *Economic Journal*, vol. 115, no. 501, pp. 81-107.

Blank, R 2002, 'Evaluating welfare reform in the US' *Journal of Economic Literature*, vol. 40, no. 4, pp. 1105–66.

Blau, FD and Kahn, LM 2006, 'The US gender pay gap in the 1990s: slowing convergence', *Industrial and Labour Relations Review*, vol. 60, no. 1, pp. 45–66.

Blau, FD and Kahn, LM 1992, 'The gender earnings gap: some international evidence', National Bureau of Economic Research Working Paper No. 4224.

Blau, PM 1964, *Exchange and power in social life*, Wiley, New York.

Blinder, AS 1973, 'Wage discrimination: reduced form and structural estimations', *The Journal of Human Resources*, vol. 8, no. 1, pp. 23–47.

Bluestone, B Murphy, WM and Stevenson, M 1993, 'Low wages and the working poor', Institute of Labour and Industrial Relations, University of Michigan–Wayne State University, Michigan.

Bogale, A and Korf, B 2009, 'Analysis of poverty and its covariates among smallholder farmers in the eastern Hararghe Highlands of Ethiopia', paper presented at the International Association of Agricultural Economists Conference, August 16–22, Beijing, China.

Bonnet, F, Figueiredo JS and Standing, G 2003, A family of decent work indexes. *International Labour Review*, vol. 142, no. 2, pp. 113-145.

Boulding, ES, Nuss, DC and Greenstein, M 1976, *Handbook of International Data on Women*, New York, Sage.

Bound, J Duncan, G Laren, DS and Oleinik, L 1991, 'Poverty dynamics in widowhood', *Journal of Gerontology: Social Sciences*, vol.46, no. 3, pp.115-124.

Brown, JN 1989, 'Why do wages increase with tenure?', *American Economic Review*, vol. 79, no. 5, pp. 971–91.

Brown, M, Fehr, E and Falk, A 2004, 'Relational contracts and the nature of market interactions', *Econometrica*, vol. 72, pp. 747–780.

Brown, R S Moon, M and Zoloth, BS 1980, 'Incorporating occupational attainment in studies of male/female earnings differentials', *The Journal of Human Resources*, vol. 15, no. 2, pp. 225-224.

Brueckner, J K and Zenou, Y 1999, 'Harris–Todaro models with a land market', *Regional Science and Urban Economics*, vol. 29, pp. 317–339.

Burdett, K and Judd, KL 1983, 'Equilibrium price dispersion', *Econometrica*, vol. 51, pp. 955–970.

Burgoyne, C B and Routh, DA 1991, 'Constraints on the use of money as a gift at christmas: the role of status and intimacy', *Journal of Economic Psychology*, vol. 12, pp. 47–69.

Burkhauser, RV Butler JS and Holden KC 1991, 'How the death of a spouse affects economic well-being after retirement: a hazard model approach', *Social Science Quarterly*, vol. 72, no. 3, pp. 504–519.

Burtless, G 1986, 'Public spending for the poor: trends, prospects and economic limit' in Danziger, SH & Weinberg, DH (eds.), *'Fighting poverty: what works and what does not'*? Cambridge, Harvard University Press.

Buvinic, M and Gupta, GR 1997, 'Female-headed households and female-maintained families: are they worth targeting to reduce poverty in developing countries? *Economic Development and Cultural Change*, vol. 45, no. 2, pp. 259–80.

Byron, R P 1990, 'Return to education in China', *Economic Development and Cultural Change*, vol. 38, no. 2, 783-796.

Cain, G 1976, 'The challenge of segmented labor market theories to orthodox theory: a survey', *Journal of Economic Literature*, vol. 14, no. 4, pp. 1, 215–48.

Caldwell, LA and Rosenzweig, MR 1980, 'Economic mobility, Monopsonistic discrimination and sex differences in wages', *Southern Economic Journal*, vol. 46, no. 1, pp. 105-116.

Camerer, C 1988, 'Gifts as economic signals and social symbols', *The American Journal of Sociology*, vol. 94, supplement: organisations and institutions-sociological and economic approaches to the analysis of social structure.

Caputo, RK 1991, 'Patterns of work and poverty: exploratory profiles of working-poor households', *The Journal of Contemporary Human Services*, vol. IV, no.2, pp. 451-460.

Carmichael, H L and MacLeod, BW 1997, 'Gift giving and the evolution of cooperation', *International Economic Review*, vol. 38, pp. 485–509.

Chambers, R Longhurst R and Pacey, A 1981, *Seasonal dimensions to rural poverty*, London, Frances Printer Limited.

Chang R. (1994). "Income inequality and economic growth: evidence and recent theories." *Federal Reserve Bank of Atlanta Economic Review*, 79(4), pp. 1-10.

Chapman, B J and Harding, RJ 1986, 'Sex differences in earnings–an analysis of Malaysian wage data', *Journal of Development Studies*, vol. 23, pp. 362-76.

Charness, G 2004, Attribution and reciprocity in an experimental labor market, *Journal of Labor Economics*, vol. 22, pp. 665–688.

Charness, G and Rabin, M 2002, Understanding social preferences with simple tests, *Quarterly Journal of Economics*, vol. 117, pp. 817–869.

Charness, G, Frechette, GR & Kagel, JH 2004, How robust is laboratory gift exchange? *Experimental Economics*, vol. 7, pp. 189–205.

Chatterjee, S 2007, 'Majority of working indians earning less than 50 cents a day–a study', *International Business Times*, August 17.

Chaudhuri, K, Schneider, F and Chattopadhyay, S 2006, 'The size and development of the shadow economy: an empirical investigation from states of India', *Journal of Development Economics*, vol. 80, no. 2, pp. 428–443.

Chaudhury, S and Paxson, C 2001, 'Smoothing consumption under income seasonality–buffer stocks vs. credit', Colombia University, Department of Economics, Discussion Paper Series.

Chen, M Renana, J and Frances, L 2002, 'Supporting workers in the informal economy: a policy framework', working paper on the informal economy, no. 2, Geneva : ILO

Chen, S & Ravallion, M 2000, ‘ How the world’s poorest fare in the 11990s’, Policy Research Paper 2409, World Bank, Washington DC.

Chichilnisky, G and Frederiksen, E H 2008, ‘An equilibrium analysis of the gender wage gap’, *International Labour Review*, vol. 147, no. 4, 297-317.

Choudhury, S and Leonesio, MV 1997, ‘Life-cycle aspects of poverty among older women’, *Social Security Bulletin*, vol.60, no. 2, pp.17–36.

Cohn, A Fehr, E and L Goette, L 2007, ‘Do fair wages increase labor supply? Evidence from a Large-Scale Field Experiment’, Working Paper 1236.

Coltrane, S 2000, ‘Research on household labour: modelling and measuring the social embeddedness of routine family work’, *Journal of Marriage and Family*, vol. 62, no. 4, pp. 1208-1233.

Coppedge, RO and Davis, CG 1977, *Rural poverty and policy crisis*. Ames, Iowa State University Press.

Council of Economic Advisers 1998, ‘Explaining trends in the gender wage gap, a report’, US.

Cox, DR 1958, ‘The regression analysis of binary sequences with discussion’, *Journal of Statistical Society*, B20, pp. 215-42.

Cox, J C Friedman, D and Gjerstad, S 2007, ‘A tractable model of reciprocity and fairness’, *Games and Economic Behavior*, vol. 59, no. 1, pp. 17–45.

CPD 2003, *Phasing out of the apparel quota–addressing the livelihood concerns in Bangladesh*, University Press Limited.

Cronbach, L J 1951, ‘Coefficient alpha and the internal structure of tests’, *Psychometrika*, vol. 16, pp. 297–334.

Cutler, DM, and Glaeser, EL 1997, ‘Are ghettoes good or bad?’ *Quarterly Journal of Economics*, 112, pp. 827–72.

Dasgupta, P and Barbattani, S 2003, ‘Gender segmentation in the informal economy’, IDRC Working Paper.

Dasgupta, P and Ray, D 1986, ‘Inequality as a determinant of malnutrition and unemployment theory’, *Economic Journal*, 97, pp. 177–186.

Davis, J C and Huston, J H 1991, ‘Counting the working pPoor’, *Southern Economic Journal*, vol.57, no. 4, pp. 1144-47.

Davis, SN Theodre NG and Garteisen JP 2007, ‘Effects of union type on division of household labour: do cohabiting men really perform more housework’? *Journal of Family Issues*, vol. 28, no. 9, pp. 1246-1272.

Deaton, A 2001, 'Measuring poverty in a growing world or measuring growth in a poor world', NBER Working Paper No. 9822, Cambridge, Massachusetts, National Bureau of Economic Research.

Deininger, K and Squire, L 1996, 'A new data set for measuring income inequality', *World Bank Economic Review*, vol. 10, no. 3, pp. 565-91.

Denziger, S and Gottschalk, P 1986, 'Work, poverty and the working poor': a multifaceted problem', *Monthly Labour Review*, vol. 109, no. 9, pp. 17-21.

Dercon, S and Krishnan, P 2000, 'Vulnerability, seasonality and poverty in Ethiopia'. *Journal of Development Studies*, vol. 36, no. 6, pp 25-53.

Desai, J 1995, 'Vietnam through the lens of gender: an empirical analysis using household survey data', Unpublished Manuscript.

Doeringer, P and Piore, M 1971, '*International labor markets and manpower analysis*', Heath Lexington Books, Lexington.

Donohue, JH and Heckman, J 1991, 'Continuous versus episodic change: the Impact of civil rights policy on the economic status of blacks,' *Journal of Economic Literature*, 29, pp. 1603–43.

Dorman, P 2000, 'The economics of safety, health and well-being at work: an overview', Geneva, ILO.

Doumbia, S and Meurs, D 2003, 'Gender equality at work in sub–saharan Africa: a case study of Mali's modern sector', *International Labour Review*, vol. 142, no. 3, pp. 295-316.

Dufwenberg, M and Kirchsteiger, G 2004, 'A theory of sequential reciprocity', *Games and Economic Behaviour*, vol. 47, pp. 268–298.

Duncan, K C 1991, 'A longitudinal analysis of gender wage disparity: evidences from the 1980s', unpublished paper, School of Business Administration, University of San Diego.

Ehrenberg, RG 1970, 'Absenteeism and the overtime decision', *American Economic Review*, 60, pp. 311–322.

Ehrenberg, RG 1988, 'Part-time employment': in Robert, H (ed.): *Employment Unemployment and Labour Utilisation*, Boston: Unwin, Hayman.

Ehrenberg, RG and Smith, RS 1991, *Modern Labour Economics: Theory and Public Policy*, Now York, Harper Collins.

Ellingsen, T and Johannesson, M. 2007, 'Paying respect', *Journal of Economic Perspectives*, 21, pp. 135–150.

Ellwood, D. 2000. 'Anti-poverty policy for families in the next century: from welfare to work–and worries', *The Journal of Economic Perspectives*, 14. pp.187–98.

Elwan, A 1999, 'A survey of the literature', Social Protection Discussion Papers No. 9932, World Bank.

ESCAP 2006, 'Poverty and the informal sector–role of the informal sector in poverty reduction', a note by the Secretariat.

Esping-Anderson, G 2002, *Why we need a new welfare state*? Oxford, Oxford University Press.

European Commission 2003, *Employment in Europe 2002: recent trends and prospects*, Luxembourg.

European Foundation 2004, 'Working poor in the European Union', Seminar Report, Brussels.

Eurostat 2000, 'Statistics in focus', Population and Social Conditions No.11/2000.

Falk, A 2007, 'Gift-exchange in the field', *Econometrica*, 75, pp. 1501–1511.

Falk, A and Fischbacher, U 2006, 'A theory of reciprocity, games and economic behavior', vol. 54, pp. 293–315.

Fehr, E and S Gächter, 2000, Fairness and retaliation: the economics of reciprocity, *Journal of Economic Perspectives*, 14, pp. 159–181.

Fehr, E Kirchsteiger, G and Riedl, A 1993, 'Does fFairness prevent market clearing? an experimental investigation', *Quarterly Journal of Economics*, 108, pp. 437–460.

Fehr, E, Goette, L and C Zehnder, C 2007, 'The behavioral economics of the labor market: central findings and their policy implications', Working Paper.

Fehr, E, Gächter, S and Kirchsteiger, G 1997, 'Reciprocity as a contract enforcement device, *Econometrica*, 65, pp. 833–860.

Feika, I 1999, 'Women with disability–the most marginalised group of all', DPI *News Letter*, vol. 6, no. 1, pp. 18-23

Fields, G 1980, *Poverty, inequality and development*, Cambridge University Press, London.

Fields, G S 1975, 'Rural-Urban migration, urban unemployment and underemployment, and job-search activity in LDCs', *Journal of Development Economics*, vo. 2, no. 2, pp. 165–187.

Fields, G S 1989, 'On-the-job search in a labour market model : ex ante choices and ex-post outcomes', *Journal of Development Economics*, 30, pp. 159–178.

Fields, G S 2003, 'Decent work and development policies', *International Labour Review*, vol. 142, no. 2, pp. 239-262.

Finnie, R 2000, 'An econometric analysis of poverty dynamics in Canada', Working Paper 9, School of Policy Studies.

Fomenko, H 2004, 'The determinants of poverty in ukraine, MA Thesis', EERC.

Fortin, M and Fleury, D 2001, *A Profile of the working poor in Canada*, Social Development Canada.

Fox, J 1984, *Linear statistical models and related methods*, Wiley & Sons, New York.

Francois, P and van Ours, J C 2000, 'Gender and wage differentials in a competitive labour market: the household interaction effect', Centre for Economic Research, Discussion Papers 36, Tilburg University.

Frey, B and Neckermann, S 1994 'Awards - a view from psychological Economics', *Journal of Psychology* (forthcoming).

Frey, B Oberholzer-Gee, F and R Eichenberger, R 1996, 'The old lady visits your backyard: a tale of morals and markets', *Journal of Political Economy*, vol. 104, pp. 1297–1313.

Fullerton, H N 1999, 'Labour force participation: 75 years of change, 1950–98 and 1998–2025',*Monthly Labour Review*, vol. 122, no.12, pp. 3-12.

Gallie, D White, M Cheng, Y and Tomlinson, M 1998, *Restructuring the Employment Relationship*, Clarendon Press, Oxford.

Gannicott, K 1986, `Women, wage and discrimination: some evidence from Taiwan', *Economic Development and Cultural Change*, vol. 34, no. 4, pp. 721–30.

Gardberg-Morner, C 2000, 'Making ends meet–lone mothers local subsistence strategies', Case studies from Italy and Sweden, MZES Working Paper 13/2000.

Gardner, JM and Hertz, DE 1992, Working Poor in 1990, Monthly Labour Review, http://www.bls.gov/opub/mlr/1992/12/art2full.pdf.

Garnier, D Simondon, KB Hoarau, T and Eric Benefice, E 2003, 'Impact of health and living conditions of migrant and non-migrant Senegalese adolescent girls on their nutritional status and growth', *Public Health Nutrition*, 6, pp. 535–547.

Ghai, D 2002, 'Decent work: concepts, models and indicators', DP 139/2002, International Institute for Labour Studies, Geneva.

Ghai, D 2003, 'Decent Work : concept and indicators', *International Labour Review*, vol. 142, no. 2, pp. 113-146.

Gibbons, R 1998, 'Incentives in organizations', *Journal of Economic Perspectives*, 12, pp. 115–132.

Gindling, TH 1990, 'Women's earnings and economic crisis in Costarica'. unpublished manuscript, Department of Economics, University of Maryland at Baltimore.

Glendinning, C and Baldwin, S 1988, 'The costs of disability', in Walker, R and Parker, G (eds.), *Money Matters, Income, Wealth and Financial Welfare*, Sage Publications, London.

Gneezy, U and Rustichini, A 2000, 'Pay enough or don't pay at all', *Quarterly Journal of Economics*, vol. 115, pp. 791–810.

Gneezy, U and List, JA 2006, 'Putting behavioral economics to work: testing for gift exchange in labor markets using field experiments', *Econometrica*, vol. 74, pp. 1365–1384.

Goldberg, GS and Cremen, E 1990, *The feminization of poverty: only in America*, Praeger, New York.

Grimshaw, D Rubery, J 2002, 'The adjusted gender wage pay gap: a critical appraisal of standard decomposition technique', Manchester School of Management, UMIST, Manchester, UK

Guha-Khasnobis, B Kanbur, SM Ravi (eds,) 2006, *Informal labour markets and development*, Basingstoke, Palgrave Macmillan.

Gunderson, M 1994, '*Comparable worth and gender discrimination: an international perspective*', Geneva, International Labour Office.

Gundogan, N Naci and Bicerli, Mustafa Kamal and Aydin 2005, 'The working Poor: a comparative analysis', MPRA Paper No. 5096.

Gursel, S Lavent, H Selim, R Sanca, O 2000, *Individual income distribution in Turkey–a comparison with the European Union*, publication no. 2000–12/296.

Hakim, C 1992, ‚Explaining trends in occupational segregation: the measurement, causes and consequences of the sexual division of labour', *European Sociological Review*, vol. 8, no. 2, pp. 127-152.

Hakim, C 2004, *Key Issues in women's work: female diversity and the polarisation of women employment*, Glass House Press, London.

Hannan, RL Kagel, J and Moser, DV 2002, 'Partial gift exchange in an experimental

labor market: impact of subject population differences, productivity differences and effort requests on behavior', *Journal of Labor Economics*, vol. 20, pp. 923–951.

Harris, JR and Todaro, MP 1970, 'Migration, unemployment and development: a two-sector analysis', *American Economic Review*, 60, pp.126-142.

Harris, JR and Sabot, RH 1982, Urban unemployment in the LDCs: towards a more general search model' in Sabot, RH (ed.), *Migration and the labor market in developing countries*, Westview Press: Boulder, Colorado.

Harris, JR 1990, 'Linkages between the formal and the informal sectors in developing countries: A review of literature', Working Paper No. 50, World Employment Programme Geneva, ILO.

Harris-White, B 1996, *The political economy of disability and development with special reference to India*, United Nations Research Institute for Social Development, Geneva.

Hart, O and Holmstrom, B 1987, *The theory of contracts in advances in economic theory*, Cambridge University Press.

Hashimoto, M and Raisian, J 1985, 'Employment tenure and earnings profiles in Japan and the United States', *American Economic Review*, vol. 75 no. 4, pp. 721–30.

Heckman, J 1979, 'Sample selection bias as a specification error,' E*conometrica*, vol. 47, no. 1, pp.153-161.

Helander, E 1995, 'Sharing opportunities - A guide on disabled people's participation in sustainable human development', Inter Regional Program for Disabled People, United Nations Development Programme, Geneva.

Hennig-Schmidt, S Rockenbach, HB and Sadrieh, A 2005, 'In search of workers' real effort reciprocity–a field and a laboratory experiment', mimeo.

Hertz, T Paula, A Campos, P and Zezza, A 2008, 'Wage inequality in international perspective: effects of location, sector and gender', ESA Working Paper No. 08–08, Agricultural Development Economics Division, the Food and Agricultural Organisation of the United Nations.

Hess, M 1994, 'The working poor–their dilemma and assistance through provincial income supplementation programs', Laurentian University Report Document # 22.

Heyman, J and Ariely, D 2004, 'Effort for payment: a tale of two markets',

Psychological Science, vol. 15, pp. 787–793.

Higgins, M & Williamson, JG 1999, 'Explaining inequality the world round: cohort size, Kuznets curves, and openness', *Journal of Southeast Asian Studies*, vol.40, no.3, pp.286-302.

Holden, KC Burkhauser, RV and Myers, DA 1986, 'Income transition at older stages of life–the dynamics of poverty', *the Gerontologist*, vol.26, no.3, pp.292-297.

Hossain, M 1995, 'Socioeconomic characteristics of the poor' in Rahman and Hossain (eds.), *Rethinking Rural Poverty: Bangladesh as a Case Study*. University Press Limited, Dhaka.

Hotchkiss, JL and Moore, RE 1996, 'Gender compensation differentials in Jamaica'. *Economic Development and Cultural Change*, vol. 44 no. 3, pp. 657–76.

House, WJ 1983, 'Occupational segregation and discriminatory pay–the position of women in the Cyprus labour market', *International Labour Review*, vol. 122, no. 1, pp.75-93.

Huang, T C 1999, 'The impact of education and seniority on the male–female wage gap: is more education the answer'? *International Journal of Manpower*, vol. 20, no.5, pp.361-374.

Hur, JJ Seo, HJ and Lee, YS 2002, 'Information and communication technology and the demand for skilled labour', Korea Labour Institute.

Hurd, MD and Wise, DA 1987, 'The wealth and poverty of widows: assets before and after the husband's death', NBER working paper no. 2325, Massachusetts: National Bureau of Economic Research.

Hussmanns, R 2004, *Defining and measuring informal employment*, Bureau of Statistics, International Labour Office, Geneva.

Hutches, RM 1989, 'Seniority, wage and productivity: a turbulent decade', *Journal of Economic Perspectives*, vol. 3 no. 4, pp. 49–64.

ILO 1984, *Employment of disabled persons–manual on selective placement*, Geneva.

ILO 1996, *International labour conventions and recommendations*, Geneva.

ILO 1997, *Bulletin of labour statistics*, International Labour Office, Geneva.

ILO 1999, 'Decent work, report of the Director–General of the ILO to the 87th session of the international labour conference', Geneva.

ILO 1999, 'Report of the Director General: decent work', International Labour Conference, 87th Session, Geneva.

ILO 2001, 'Youth and Work: Global Trends', Geneva.

ILO 2003, 'Working out of poverty', Report of the Director General, International Labour Conference, 91st Session, Geneva.

ILO 2004, *Global employment trends for women, 2004*, Geneva.

ILO 2005, *World employment report: 2004–2005*, Geneva.

ILO 2002, *Women and men in the informal economy: a statistical picture*, Geneva.

Islam, M 1991, Women heads of household in rural Bangladesh–strategies for survival, Narigrantha Probartana, Dhaka.

Islam, R 2003, Employment–poverty linkages: a cross-country analysis', a paper presented at the seminar on *Accelerating Growth and Poverty Reduction in Bangladesh*, Dhaka.

Jacobs, D 2000, 'Low public expenditure on social welfare: do East Asian countries have a secret'? *International Journal of Social Welfare*, vol. 9, pp. 2–16.

Jalan, J and Ravallion, M 1999, 'Are the poor less well insured? evidence on vulnerability to income risk in rural China', *Journal of Development Economics*, vol. 58, no. 1. pp. 61-81.

Jenkins, S 2000, 'Modelling household income dynamics', *Journal of Population Economics*, vol. 13, no. 4, pp. 529-567.

Jenkins, SP 1991, 'Poverty measurement and the within-household distribution–agenda for action', *Journal of Social Policy*, vol. 20, pp. 457-483.

Jepsen, M 2000, 'What do we know about the link between low pay, gender and part-time work?', *Trnasfer*, vol. 6, no. 4, pp.673-686.

Jomo, KS and Todd, P 1994, *Trade unions and the state in peninsular Malaysia*, Oxford University Press: Kuala Lumpur.

Kahneman, D Knetsch, JL and Thaler, R 1986, 'Fairness and the assumptions of economics', *Journal of Business*, vol. 59, pp. 285–300.

Kao, C Polachek, SW and Wunnava, PV 1994, 'Male–female wage differentials in Taiwan: a human capital approach', *Economic Development and Cultural Change*, vol. 42 no. 2, pp. 351–74.

Kasnakoglu, Z 1997, 'Income distribution in Turkey–who gets what'? http://www.tusiad.org/yayin/private/autumn 97/html/kasnak.html.

Katz, L and Murphy, K 1992, 'Changes in relative wages, 1968–1987: Supply and demand factors', *Quarterly Journal of Economics*, vol. 107, pp.35-78.

Khandker, SR 2009, 'Poverty and income seasonality in Bangladesh'. Policy Research Working Paper, WPS 4923, the World Bank, Washington D.C

Kim, M 1997, 'The working poor–lousy jobs or lazy workers?', Jerome Levy Economics Institute of Bard College, Working Papers No. 194.

Kitov, IO 2006, 'Modeling the age–dependent personal income distribution in the USA', ECINEQ 2006–17.

Klein, BW and Rones, PL 1989, 'A profile of the working poor', *Monthly Labour Review*, vol. 112, no. 10, pp.3-11.

Knight, JB and Sabot, RH 1982, 'Labour market discrimination in poor urban economy', *Journal of Development Studies*, vol.19, no. 1, pp. 67-87.

Kosonen, P 2001, 'Household composition, labour market attachment and poverty: Denmark, Greece, Ireland and the Netherlands', unpublished paper, RC 19 Annual Conference, *Old and new inequalities: what challenges for welfare states*?

Kossoudji, S and Mueller, E 1983, 'The economic status of female-headed households in rural Botswana', *Economic Development and Cultural Change*, vol. 31, no. 3, pp. 831–59.

Krueger, AO 1963, 'The Economics of discrimination', *Journal of Political Economy*, vol. 71, no.2, pp. 481-86.

Kube, S Maréchal, AM and Puppe, C 2007, 'Do wage cuts damage work morale? evidence from a natural field experiment', Working Paper.

Kuznets, S 1955, 'Economic growth and income inequality', *American Economic Review*, vol. 34, no. 1, pp. 1-28.

Lanjouw, P and Ravallion, M 2001, 'Poverty and household size', *The Economic Journal*, vol. 105, no. 433, pp. 443.

LaPlante, MP 1996, 'Families with disabilities in the United States, disability statistics report', US Department of Education, Washington, D. C

Larson, OF 1978, 'Values and beliefs ofrRural people', *Rural USA: perspective and change*, Iowa State Press.

Lawler, JJ et al. 1991, 'Social ascription vs. market forces: impact on MNC employment practices and compensation in Thailand' in *Status Influence in Third World Labour Markets*, JG Scovilled (ed.), Berlin.

Lazear, EP 1998, *Personnel economics for managers*, John Wiley & Sons: NewYork.

Lazear, EP and Oyer, P 2007, Personnel Economics, NBER Working Paper No. 13480.

Leach, M and Sikora, S 2003, 'Continuing the investment in a competitive workforce and a brighter economic future for Arkansas–a policy agenda for investing in Arkansas working families', Public Policy Program of the Good Faith Fund.

Lee, ET 1980, *Statistical methods for survival data analysis*, Lifetime Learning Publications, Belmont, California.

Leibenstein, H 1957, 'The theory of underemployment in densely populated areas', re-printed in Akerlof, GA and Allen, J (eds,), *Efficiency Wage Models of the Labor Markets*, 1986, CUP: New York.

Levin, DA 1991, 'Women and industrial labour Market in Hong Kong: participations and perceptions', in *Status Influence in Third World Labour Market*, JG Scovilled (ed.), Berlin.

Levitan, S Gallo, F and Shapiro, I 1993, *Working but poor: America's contradiction*, Baltimore, Johns Hopkins University Press.

Levitt, SD and List, JA 2007, 'What do laboratory experiments measuring social preferences tell us about the real world', *Journal of Economic Perspectives*, vol. 21, pp. 153–174.

Lewis, WA 1954, 'Economic development with unlimited supply of labour', *the Manchester School*, vol. 22, no. 2, pp. 139-91.

Liang, Z and Chen, YP 2007, 'The educational consequences of migration for children in China', *Social Science Research*, vol. 36, no. 1, pp. 28–47.

Lipton, M 1977, *Why the poor stay poor: urban bias in world* development, London, Temple Smith.

Lipton, M and Ravallion, M 1994, 'Poverty and policy', in Behrman, J and Srinivasan, TN (ed.), *Handbook of Development Economics*, vol. 3, Amsterdam: North Holland.

List, JA 2006, 'The behavioralist meets the market: measuring social preferences and reputation effects in actual transactions', *Journal of Political Economy*, vol. 114, pp. 1–37.

Lustig, N 2000, *Shielding the poor–social protection in the developing world*, Brookings Institution Press, Washington, DC.

Litchfield, J and McGregor, T 2008, 'Poverty in Kagera, Tanzania: characteristics, causes and constraints', PRUS Working Paper No. 42.

Machin, S and Reenen, JV 1998, 'Technology and changes in skill structure: evidence from seven OECD countries', *Quarterly Journal of Economics*, vol.

113, no. 2, pp. 1215-1244.

MacLeod, BW 2007, 'Reputations, relationships and contract enforcement', *Journal of Economic Literature*, vol. 45, no.3, pp. 595–628.

Madden, JF 1975, The e*conomics of sex discrimination*, Lixington, Lexington Books.

Maitra, P 2002, 'The effect of household characteristics on poverty and living standards in South Africa', *Journal of Economic Development*, vol. 27, no. 1, pp. 75-96.

Majid, N 2001, 'The working poor in developing countries', *International Labour Review*, vol. 140, no.3, pp. 271-291.

Majumder, PP and Zohir, SC 1993, 'The socioeconomic condition of garment workers in Bangladesh', BIDS, Dhaka.

Maligalig, D and Barcenas, M 2008, 'Examining Bangladesh's integrated multi-purpose sample design', a paper presented in the inception mission to Bangladesh for RETA 6430: measuring the informal sector.

Maloney, WF 1999, 'Does informality implies segmentation in urban labor markets? evidence from sectoral transitions in Mexico', *World Bank Economic Review*, vol. 13, no. 2, pp. 275–302.

Manning, C 1996, 'Labour market transformation in Indonesia: the halting steps of an East Asian giant', unpublished manuscript, Canberra.

Maréchal, MA and Thöni, C 2007, 'Do managers reciprocate? field experimental evidence from a competitive market', University of St. Gallen, Economics discussion paper no. 2007–09.

Margit, KS Sarkar, P 2004. 'Capital mobility and informal wage in a small economy: two examples', *South Asia Economic Journal*, vol. 5, no. 2, pp. 261–266.

Marini, MM and Brinton, MC 1984, 'Sex typing in occupational socialization', in s*ex segregation in the workplace–trends, explanations and remedies*, Prentice Hall Inc.

Marino, AM and Zabojnik, J 'A rent extraction view of employee discounts and benefits, Journal of Labor Economics (forthcoming).

Marjit, S Dibyendu, M S 2006, 'Globalization, reform and the informal sector', in Guha-Khasnobis and Kanbur, pp. 9–28.

Marlier, E and Ponthieux, S 2000, Low-wage employees in EU countries, Statistics in Focus–Population and Social Conditions 2010-11.

Marx, I and Verbist, G 1998, 'Low-paid work and poverty: a cross-country

perspedtive', in Bazen, S et al. (ed.), *Low-wage Employment in Europe.*

Mauss, M 1974, *The gift*, London: Routledge and Kegan Paul.

Mazumdar, D. 1959, 'The marginal productivity theory of wages and disguised unemployment', *Review of Economic Studies*, vol. 26, pp. 190–197.

Mazumdar, D 1976. 'The urban informal sector', in *World Development*, vol. 4, no. 8, pp. 655–679.

Melkas, H and Anker, M 1997, 'Occupational segregation by sex in Nordic Countries: an empirical investigation', *International Labour Review*, vol. 136 no. 3, pp. 341–63.

Meng, X 1992, 'Individual wage determination in township, village and private enterprises in China', Ph. D. dissertation, Australian National University.

Meng, X and Kidd, M 1995, 'Wage discrimination in China's state Ssctor during the 1980s', unpublished paper.

Meng, X and Miller, W P 1995, 'Occupational segregation and its impact on gender wage discrimination in China's rural industrial sector', *Oxford Economic Papers*, vol. 47, no. 1, pp. 136-55.

Meng, X & Gregory, R 2007, 'Urban poverty in China and its contributing factors, 1986–2000', *Review of Income and Wealth*, vol. 53, no. 1, pp. 167-189.

Metts, RL and Olsen, T 1993, 'Assisting disabled entrepreneurs in Kenya–implications for developed countries', Partners for Independence: Models that Work, proceedings, North American Regional Conference of Rehabilitation International, Atlanta, Georgia.

Milgrom, P and Roberts, J 1992, *Economics, organization and management*, Prentice Hall, USA

Mincer, J 1974, 'Schooling, experience, and earning', National Bureau of Economic Research, New York, NY

Mincer, J 1958, 'Investment in human capital and the personal income distribution', *Journal of Political Economy*, vol. 66 no. 4, pp. 218–302.

Mokyr, J M 1985, *Why ireland starved? a quantitative and analytical history of the Irish economy 1800–1850*, Allen and Unwin: London.

Mokyr, JM 1991, 'Dear labour, cheap labour and the industrial revolution', in Higonett et el. (eds.), *Favorites of fortunes: technology, growth and economic development since the industrial development*, CUP: Massachusetts, pp. 177–200.

Morgan, LA 1981, 'Economic changes at midlife widowhood: a longitudinal analysis', *Journal of Marriage and the Family*, vol.43, no. 4, pp. 899-912.

Mortensen, DT 1986, 'Job search and labor market analysis', in *Handbook of Labour Economics*, Vol II, edited by Asheneflter and Layard, North-Holland: Amsterdam.

Mosissa, AT 2003, 'The working poor in 2001', *Monthly Labour Review*, vol.126, Issue11–12, pp. 138-54.

Muktada, M Singh, AM and Rashid, MA 2002, *Bangladesh: economic and social challenges of globalisation*, University Press Limited, Dhaka.

Muyanga, M 2008, 'Household vulnerability to transient and chronic poverty: evidence from rural Kenya', a paper presented in the ninth annual conference of global development network (GDN), 29–31 January, Brisbane, Australia.

National Council of Welfare, 1998, Child poverty profile, vol. 114, Summer 2011, Canada, pp.22-25.

Narayan, A Yoshida, N and Zaman, H 2007, 'Trends and pattern of poverty in Bangladesh in recent years', mimeo, World Bank South Asia Region.

Neumark, D 1988, 'Employers' discriminatory behavior and the estimation of wage discrimination', *Journal of Human Resources*, vol. 23, pp. 279-95.

Nolan, B adn Marx, I 2000, 'Low pay and household poverty' in Gregory, M Salverda, W and Bazen, S *Labour Market Inequalities: Problems and Policies in an International Perspective*, Oxford University Press, Oxford.

Oaxaca, R 1973, 'Male–female wage differentials in urban labour markets'. *International Economic Review*, vol.14, no. 3, 693-709.

Oaxaca, R and Ransom, M 1994, 'On discrimination and the decomposition of wage differentials,' *Journal of Econometrics*, vol. 61, pp.87–121.

Oberai, A 1993, *Population growth, employment and poverty in third-world mega-cities: analytical and policy issues*, St. Martin's Press, London.

OECD 2002, *Employment Outlook*, Paris.

OECD 2000a, *OECD guidelines for multinational enterprises: global instruments for corporate responsibility*, Paris.

OECD 1998, *Employment outlook 1997*, Paris.

Ornstein, MD 1983, 'Class, gender and job income in Canada', *Research in Social Stratification and Mobility*, vol. 2, pp.41-75.

Osmani, SR 2003, *The macroeconomics of poverty reduction–the case study of*

Bangladesh, Asia–Pacific Regional Program on Macroeconomics of Poverty Reduction, UNDP, Dhaka.

Oyer, P 'Salary or benefits'? *Research in Labor Economics* (forthcoming).

Park, K A 1993, 'Women and development: the case of South Korea', *Comparative Politics*, vol.25, no. 2, pp.127-45.

Paul-Majumder, P and Begum, S 1997, 'Upward occupational mobility among female workers in the garment industry of Bangladesh', research report no. 153, BIDS, Dhaka.

Perdue, BC and Summers, JO 1986, 'Checking the success of manipulationsin marketing experiments', *Journal of Marketing Research*, vol. 23, pp. 317–326.

Perkins, DH Radelet, SC Snodgrass, DR Gillis, Malcolm, RM 2001. *Economics of development*, fifth edition, New York, Norton and Company.

Perlman, R and Pike, M 1994, *Sex discrimination in the labour market: the case for comparable worth*, Manchester, Manchester University Press.

Phelps, E S 1990, 'Economic justice to the working poor through wage subsidy', Columbia Department of Economics Working Paper.

Phelps, FS 1972, 'The statistical theory of racism and sexism', *American Economic Review*, 62, pp.659-61.

Polachek, S 1987, 'Occupational segregation and the gender wage gap', *Population Research and Policy Review*, vol. 6, pp. 47-67.

Polanyi, K 1966, *Dahomey and the slave trade*, University of Washington Press: Seattle.

Ponthieux, S and Concialdi, P 2000, 'Low pay and poor workers: a comparative study of France and the USA', *Transfer*, vol. 6, pp. 650-672.

Prendergast, C 1999, 'The provision of incentives in firms', *Journal of Economic Literature*, vol. 37, pp. 7–63.

Prendergast, C and Stole, L 2001, 'The non-monetary nature of gifts', *European Economic Review*, vol. 45, pp. 1793–1810.

Quisumbing, AR 2007, 'Poverty transitions, shocks and consumption in rural Bangladesh–primary result from a longitudinal household survey', CPRC working paper 105.

Rabin, M 1993, 'Incorporating fairness into game theory and economics', *American Economic Review*, 83, pp. 1281–1302.

Rahman HZ 1996, 'Dynamics of rural poverty in Bangladesh', Bangladesh Institute

of Development Studies. mimeo, Dhaka.

Rahman, H Z 1980, 'Report from Raipur', mimeo, BIDS.

Rahman, HZ 2005, 'Monga forecast 2005: field assessment and action plan', PPRC poverty research', Power and Participation Research Centre, Dhaka.

Rahman, HZ and Hossain, M (eds.) 1995, *Rethinking Rural Poverty: Bangladesh as a Case Study*, New Delhi, Sage.

Rahman, MA 1990, 'Overtime and employment creation in manufacturing industries: issues, constraints and policies', *The Bangladesh Development Studies*, vol. XVIII, no. 4, pp. 77-89.

Rahman, M A 1990, 'The Working Poor in Bangladesh', *mimeo*, ILO, Dhaka.

Rahman, Pk.MM Matsui, N and Ikemoto, Y 2009, 'The chronically poor in rural Bangladesh: livelihood constraints and capabilities', Routledge: London and New York.

Rahman, RI and Islam, KM 2003, 'Employment poverty linkages–Bangladesh', Issues in Employment and Poverty, Discussion Paper 10, ILO, Geneva.

Raihan, S 2003, 'Informal sector in Bangladesh: implications for growth and poverty', *Indian Journal of Labour Economics*, vol. 53, no. 2. pp. 142–57.

Rajan, RG and Wulf, J 2006, 'Are perks purely managerial excess'? *Journal of Financial Economics*, vol. 79, pp. 1–33.

Ramon, PC and Latta, M 2004, 'Working poor in the European Union', European Foundation for the Improvement of Living and Working Conditions, Dublin.

Rani, U 2007, 'Household characteristics, employment and poverty in India', IZA Working Paper No. 3394.

Ravallion, M 2001, comment on 'Counting the world's poor', in *The World Bank Research Observer*, vol. 10, no.2, Pp. 149–156.

Ravallion, M and Sen, B 1996, 'When method matters–monitoring poverty in Bangladesh', *Economic Development and Cultural Change*, vol.44, no. 4, pp.761-92.

Reddy, S and Pogge, TW 2003, 'How not to count the poor', draft paper, New York, Columbia University.

Ringen, S 1988, 'Direct and indirect measures of poverty', *Journal of Social Policy*, vol.17, no. 3, 351-365.

Rothchild, S and Mahmud, G 1988, 'Women's role in agriculture–present trends and potentials for growth', Agriculture Sector Review, UNDP/UNIFEM.

Rozenzweig, M R 1988, Labor markets in low income countries, in Chenery, H and T N Srinivasan, TN (eds.), *Handbook of Development Economics*, New York: North Holland.

Ruspini, E 1998, 'Living on the poverty line–lone mothers in Belgium, Germany, Great Britain, Italy and Sweden', Mannheim, Mannheim Centre for European Social Research.

Saldert, C 1984, 'Female headed households in rural Bangladesh', working paper, deveopment study unit, department of anthropology, University of Stockholm.

Schafer, C 1997, 'Working poor: inequitable wages in Germany and Europe–higher minimum wages as an instrument of justice', in Ott, N Gerts, W (eds.), *Income inequality and poverty in Eastern and Western Europe*, Heidelberg.

Schiller, B 1994, 'Who are the working poor?' *The Public Interest*, Spring, pp. 61-71.

Schwartz, JE and Volgy, T 1992, *The forgotten Americans*, New York, Norton.

Sen, AK 1981, *Poverty and famine - an essay on entitlement and deprivation*, Oxford, Clarendon Press.

Sen, AK 1992, *Inequality re-examined*, Harvard University Press, Cambridge.

Sen, AK 1999, *Development as freedom*, London: Penguin.

Sen, B 1996, 'Explaining movement in and out of poverty' in Rahman, et al. (eds), *Dynamics of rural poverty in Bangladesh: 1987–94*, Bangladesh Institute of Development Studies, Dhaka.

Sen, B and Begum, S 1998, 'Methodology for identifying the poorest at local level', Macroeconomics, Health and Development Series, Technical paper no. 27, Geneva.

Sen, B and Hulme, D 2206, *Chronic poverty in Bangladesh:tales of ascent, descent, marginality and persistence*, PRCPB/Bangladesh Institute of Development Studies and CPRC/University of Manchester.

Sevak, P Weir, DR and Willis, RJ 2003, 'The economic consequences of husband's death: evidence from the HRS and AHEAD', *Social Security Bulletin*, vol. 65, no. 3, pp. 31–44.

Sheppard, C 2002, 'Social and structural sources of inequality at work: insights from the Canadian experience', background paper prepared for *Time for Equality at Work*, ILO, Geneva.

SIDA 1995, 'Poverty and disability–a position paper', Health Division, Stockholm.

Siddiqui, R 1998, 'A decomposition of male–female earning differentials', *Pakistan Development Review*, vol. 37, no. 1, pp. 885-98.

Siggel, E 2010, 'Indian informal sector: impact of globalization and return', *International Labour Review*, vol. 149, no. 1, pp. 93–105.

Sikander, MU and Ahmed, M 2008, 'Household determinants of poverty in Punjab: a logistic regression analysis of MICS 2003–04 data set', paper presented at the 8th Global Conference on Business and Economics, Florence, Italy.

Singh, RD 1996, 'Female agricultural workers' wages, male–female wage differentials and agricultural growth in a developing country, India', *Economic Development and Cultural Change*, vol. 45, no.1, pp. 89-123.

Spence, MA 1973, 'Job Market signalling', *Quarterly Journal of Economics*, vol. 87, no. 3, pp. 355–74.

Standing, G 1989, 'Global feminisation through flexible labour', *World Development*, vol. 17, no. 7, pp. 1077-95.

Standing, G 1987, 'Unemployment and the recomposition of labor reserves', annals of the American Academy of Political and Social Sciences, vol. 492, pp. 80–95.

Strengmann-Kuhn, W 2002, 'Working poor in Europe–a partial basic income for workers', Basic Income European Network.

Subramanium, S and Deaton, A 1994, 'The demand for food and calories', discussion paper no. 175, research program in development studies, Princeton University.

Sundaram, K 1989b, 'Inter-state variations in work force participation rates of women in India – an analysis', in Jose, AV (ed.), *Limited Options: Women Workers in Rural India*, WEP-ILO-ARTEP, 1989, ILO, Geneva.

Sundaram, K and Tendulker, SD 2002, 'The working poor in India: employment–poverty linkage and employment policy options', issues in employment and poverty discussion paper no. 4.

Sundrum, RM 1990, *Income distribution in less developed countries*, Routeledge: London.

Sundstorm, WA 1990, 'The color line: racial norms and discrimination in urban labor markets, 1910–1950', *Journal of Economic History*, vol. 54, no. 2 pp. 382–96.

Swamy, A V 1997, 'A simple test of the nutrition-based efficiency wage model',

Journal of Development Economics, vol. 53, no.1, pp. 85–98.

Tenjo, J 1991, 'Labour markets, wage gap and gender discrimination: the case of Columbia', in Psacharopoulos, G and Tzannatos, Z (eds.): *Women's employment and pay in Latin America :country case studies*, the World Bank, Washington DC,1992.

Terrel, K 1989, 'An analysis of the wage structure in Guatemala city', *Journal of Developing Areas*, vol. 23, no. 3, pp. 405-424.

Todaro, MP 1976, 'Internal migration in developing countries: a review of theory, evidence, methodology and research priorities', International Labour Office: Geneva.

Todaro, MP and Harris, J 1970, 'Migration unemployment and development : a two -sector analysis', *American Economic Review*, vol. 60, no. 1, pp. 126–42.

Todaro, M and Harris, J 1976, 'Urban job expansion, induced migration and rising unemployment: a formulation and simplified empirical test for LDCs', *Journal of Development Economics*, vol. 3, no. 3, pp. 211–225.

Todaro, MP 1969 'A model of labor migration and urban unemployment in less developed countries', *American Economic Review*, vol. 59, no. 1, pp. 138–148.

Tokman, VE 1978. 'An exploration into the nature of informal–formal sector relationships', *World Development*, vol. 6, no. 9/10, pp. 1065–1075.

Tzannatos, Z 1991, 'The industrial and occupational distribution of female employment', in Psacharopoulos, G and Tzannatos, Z (eds.), *Case Studies on Women's Employment and Pay in Latin America*, World Bank, Washington DC, 1992.

UN 1990, *Disability statistics compendium*, Department of International Economic and Social Affairs, Statistical Office, New York.

UNDP 1995, *World development report 1995*, New York, NY/Oxford, Oxford University Press.

UNDP 1999, *Human development report 1999: globalisation with a human face*, New York, Oxford University Press.

United Nations 1988, *Human rights: a compilation of international instruments*, Centre for Human Rights, Geneva.

US Bureau of Census 1975, Current population reports series no. 97, p.60.

US Bureau of Labour Statistics 2000, *A profile of the working poor*, Washington DC, Division of Labour Force Statistics.

US Bureau of Labour Statistics 2005, 'A Profile of the Working Poor 2003', report 983.

Visaria, P 1980, 'Poverty and living standards in Asia', living standards measurement study working paper, no. 2, World Bank, Washington, DC.

Vishwanath, T 1991, 'Information flow, job search and migration', *Journal of Development Economics*, vol. 36, no.2, pp. 313–335.

Vlasblom, J D and Schippers, J J 2004, 'Increases in female labour force participation in Europe–similarities and differences', *European Journal of Population*, vol. 20, no. 4, pp. 329-347.

Wagle, U 2006, 'The estimates and characteristics of poverty in Kathmandu–what do three measurement standards suggest'? *The Social Science Journal*, vol. 43, no. 3, pp.405-423.

Waldfogel, J 1993, 'The deadweight loss of christmas', *American Economic Review*, vol. 83, pp. 1328–1336.

Walker, SH and Duncun, DB 1967, 'Estimation of the probability of an event as a function of several independent variables', *Biometrika*, vol. 54, pp. 167-179.

Warren, CR 2002, 'Poverty, the working poor and income inequality: review of recent research', Building Ladders for Success Project, Illinois.

Webley, P and Wilson, R 1989, 'Social relationships and the unacceptability of money as a gift', *Journal of Social Psychology*, vol. 129, pp. 85–91.23

Webley, P S Lea, EG and Portalska, R 1983, 'The unacceptability of money as a gift', *Journal of Economic Psychology*, vol. 4, pp. 223–238.

Weiss, A 1992, *Efficiency wages: models of unemployment, layoffs and wage dispersions*, Princeton University Press.

WHO 1980, *International classification of impairments, disabilities and handicaps*, Geneva.

Widyanti, W 2009, 'The relationship between chronic poverty and household dynamics: evidence from Indonesia', working paper, SMERU.

Williamson, J 1988, 'Migration and urbanisation', in *Handbook of Development Economics*, edited by Chenery, H and Srinivasan, TN, North-Holland: Amsterdam.

Willits, FK Bealer, RC and Crider, D 1973, 'Levelling of attitudes in mass society–rurality and traditional morality in America', *Rural Sociology*, vol. 38, no. 1, pp. 36-95.

World Bank 2000, 'The Republic of Latvia poverty assessment', poverty reduction and economic management unit-ECSPE Eastern Europe and Central Asia Region, report no. 20707–LV, The World Bank.

World Bank 1991, '*Gender and poverty in India*', World Bank, Washington, DC.

World Bank 1991, 'Nepal: poverty and incomes–a joint study', the World Bank, Washington, DC.

Zeytinoglu, IU 1998, 'Constructed images as employment restrictions–determinants of female labour in Turkey', in Zehra EA (ed.), *Deconstrucion images of the Turkish women*, St. Martin's Press.

World Bank 1994, *World development report: 1994*, Washington, DC.

World Bank 1999, 'Poverty Trends in Bangladesh during the Nineties', background paper no. 1 (draft), World Bank, Washington DC.

World Bank 2001, 'Hungary: long-term poverty, social protection, and the labour market: Vol 1', main report of poverty reduction and economic management, ECSPE, Washington DC–World Bank and Central Asia Region.

World Bank 2001, *World development report, Oxford*, Oxford University Press.

Yellen, J 1984, 'Efficiency wage models of unemployment', *American Economic Review*, papers and proceedings, vol. 74, pp. 200–205.

Zick, C D and Smith, K 1991, 'Patterns of economic change surrounding the death of a spouse', *Journal of Gerontology: Social Sciences*, vol.46, no. 6, pp. 310-320.

Zveglich, JE Rodgers, Y and Rodgers, W 1997, 'The persistence of gender earnings inequality in Taiwan: 1978–1992'. *Industrial and Labor Relations Review*, vol. 50 no. 4, pp. 594–609.

APPENDIXES

Appendix 1: Distribution of Respondents by Marital Status and Region

Marital Status	Sex		Total
	Male	Female	
Rural:			
Single	2	0	2
	(100.00)	(.00)	(100.00)
	(1.13)	(.00)	(.81)
Married	175	68	243
	(72.02)	(28.98)	(100.00)
	(98.87)	(95.77)	(97.98)
Widowed	0	2	2
	(.00)	(100.00)	(100.00)
	(.00)	(2.82)	(.81)
Divorced	0	1	1
	(.00)	(100.00)	(100.00)
	(.00)	(1.41)	(.40)
Total	**177**	**71**	**248**
	(71.37)	**(28.63)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**
Urban:			
Single	96	10	106
	(90.57)	(9.43)	(100.00)
	(34.66)	(7.41)	(25.73)
Married	179	76	255
	(70.20)	(29.80)	(100.00)
	(64.62)	(56.30)	(61.89)
Widowed	1	23	24
	(4.17)	(95.83)	(100.00)
	(.36)	(17.04)	(5.83)
Divorced	0	7	7
	(.00)	(100.00)	(100.00)

	(.00)	(5.19)	(1.70)
Separated	1	19	20
	(5.00)	(95.00)	(100.00)
	(.36)	(14.07)	(4.85)
Total	**277**	**135**	**412**
	(67.23)	**(32.77)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Appendix 2: Regional Distribution of Respondents by Age and Gender

Age Group (in yrs)e	Sex		Total
	Male	Female	
Rural:			
15 – 24	6	3	9
	(66.67)	(33.33)	(100.00)
	(33.39)	(4.23)	(3.63)
25 – 34	52	19	71
	(73.24)	(26.76)	(100.00)
	(29.38)	(26.76)	(28.63)
35 – 44	67	26	93
	(72.04)	(27.96)	(100.00)
	(37.85)	(36.62)	(37.50)
45 – 54	29	20	49
	(59.18)	(40.82)	(100.00)
	(16.38)	(28.17)	(19.76)
55 – 64	19	2	21
	(90.48)	(9.52)	(100.00)
	(10.73)	(2.82)	(8.47)
65+	4	1	5
	(80.00)	(20.00)	(100.00)
	(2.26)	(1.41)	(2.02)
Total	**177**	**71**	**248**
	(71.37)	**(28.63)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**
Urban:			
15 –24	96	24	120
	(80.00)	(20.00)	(100.00)
	(34.66)	(17.78)	(29.13)
25 – 34	87	43	130
	(66.92)	(33.08)	(100.00)

	(31.41)	(31.85)	(31.55)
35 – 44	54	38	92
	(58.70)	(41.30)	(100.00)
	(19.49)	(28.15)	(22.33)
45 – 54	25	24	49
	(51.02)	(48.98)	(100.00)
	(9.03)	(17.78)	(11.89)
55 – 64	14	5	19
	(73.68)	(26.32)	(100.00)
	(5.05)	(3.70)	(4.61)
65+	1	1	2
	(50.00)	(50.00)	(100.00)
	(.36)	(.74)	(.49)
Total	**277**	**135**	**412**
	(67.23)	**(32.77)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

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Appendix 3: Regional Distribution of Respondents by Level of Education and Gender

Level of Education	Sex		Total
	Male	Female	
Rural:			
Never attended school	124	54	178
	(69.66)	(30.34)	(100.00)
	(70.06)	(76.06)	(71.77)
Class (I–V)	47	16	63
	(74.60)	(25.40)	(100.00)
	(26.55)	(22.54)	(25.40)
Class (VI–VIII)	5	1	6
	(83.33)	(16.67)	(100.00)
	(2.82)	(1.41)	(2.42)
Class (IX– X)	1	0	1
	(100.00)	(.00)	(100.00)
	(.56)	(.00)	(.40)
Total	**177**	**71**	**248**
	(71.37)	**(28.63)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**
Urban:			
Never attended school	120	89	209
	(57.42)	(42.58)	(100.00)
	(43.32)	(65.93)	(50.73)
Class (I–V)	87	24	111
	(78.38)	(21.62)	(100.00)
	(31.41)	(17.78)	(26.94)
Class (VI–VIII)	51	15	66
	(77.27)	(22.73)	(100.00)
	(18.41)	(11.11)	(16.02)
Class (IX– X)	11	6	17
	(64.71)	(35.29)	(100.00)

	(3.97)	(4.44)	(4.13)
SSC or equivalent	7	0	7
	(100.00)	(.00)	(100.00)
	(2.53)	(.00)	(1.70)
HSC or equivalent	1	1	2
	(50.00)	(50.0)	(100.00)
	(.36)	(.74)	(.49)
Total	**277**	**135**	**412**
	(67.23)	**(32.77)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Appendix 4: Regional Distribution of Household Members by Age and Gender

Age Group (in yrs)	Sex		Total
	Male	Female	
Rural:			
Up to 4	100	90	190
	(52.63)	(47.37)	(100.00)
	(17.01)	(15.52)	(16.27)
5 – 14	141	138	279
	(50.54)	(49.46)	(100.00)
	(23.98)	(23.79)	(23.89)
15 – 24	89	96	185
	(48.11)	(51.89)	(100.00)
	(15.14)	(16.55)	(15.84)
25 – 34	75	101	176
	(42.61)	(57.39)	(100.00)
	(12.76)	(17.41)	(15.07)
35 – 44	83	71	154
	(53.90)	(46.10)	(100.00)
	(14.12)	(12.24)	(13.18)
45 – 54	59	48	107
	(55.14)	(44.86)	(100.00)
	(10.03)	(8.26)	(9.16)
55 – 64	33	28	61
	(54.10)	(45.90)	(100.00)
	(5.61)	(4.83)	(5.22)
65 +	8	8	16
	(50.00)	(50.00)	(100.00)
	(1.36)	(1.38)	(1.37)
Total	**588**	**580**	**1168**
	(50.34)	**(49.66)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Age Group (in yrs)	Sex		Total
Urban:			
Up to 4	79	112	191
	(41.36)	(58.64)	(100.00)
	(8.71)	(12.32)	(10.52)
5 – 14	212	196	408
	(51.96)	(48.04)	(100.00)
	(23.37)	(21.56)	(22.47)
15 – 24	259	222	481
	(53.85)	(46.15)	(100.00)
	(28.56)	(24.42)	(26.49)
25 – 34	127	124	251
	(50.60)	(49.40)	(100.00)
	(14.00)	(13.64)	(13.82)
35 – 44	89	101	190
	(46.84)	(53.16)	(100.00)
	(9.81)	(11.11)	(10.46)
45 – 54	84	109	193
	(43.52)	(56.48)	(100.00)
	(9.26)	(11.99)	(10.63)
55 – 64	44	38	82
	(53.66)	(46.34)	(100.00)
	(4.85)	(4.18)	(4.52)
65 +	13	7	20
	(65.00)	(35.00)	(100.00)
	(1.43)	(.77)	(1.10)
Total	**907**	**909**	**1816**
	(49.94)	**(50.06)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Appendix 5: Regional Distribution of Respondents Who Never Attended School by Age and Capacity to Read and Write

Age Group (in yrs)	Capacity to read and write					Total
	Can read	Can write	Cannot read	Sign only	Cannot sign	
Rural:						
15 – 24	1	0	–	4	2	7
	(14.29)	(.00)		(57.14)	(28.57)	(100.00)
	(10.00)	(.00)		(3.74)	(3.51)	(3.93)
25 – 34	3	2	–	28	17	50
	(6.00)	(4.00)		(56.00)	(34.00)	(100.00)
	(30.00)	(50.00)		(26.17)	(29.82)	(28.09)
35 – 44	4	1	–	41	16	62
	(6.45)	(1.61)		(66.13)	(25.81)	(100.00)
	(40.00)	(25.00)		(38.32)	(28.07)	(34.83)
45 – 54	2	1	–	26	9	38
	(5263)	(2.63)		(68.42)	(23.78)	(100.00)
	(20.00)	(25.00)		(24.30)	(15.79)	(21.35)
55 – 64	0	0	–	5	11	16
	(.00)	(.00)		(31.25)	(68.75)	(100.00)
	(.00)	(.00)		(4.67)	(19.30)	(8.99)
65 +	0	0	–	3	2	5
	(.00)	(.00)		(60.00)	(40.00)	(100.00)
	(.00)	(.00)		(2.80)	(3.51)	(2.81)
Total	**10**	**4**	–	**107**	**57**	**178**
	(5.62)	**(2.25)**		**(60.11)**	**(32.02)**	**(100.00)**
	(100.00)	**(100.00)**		**(100.00)**	**(100.00)**	**(100.00)**
Urban:						
15 – 24	0	4	0	13	2	19
	(.00)	(21.05)	(.00)	(68.42)	(10.53)	(100.00)
	(.00)	(26.67)	(.00)	(11.61)	(2.50)	(9.09)

25 – 34	1	2	1	40	23	67
	(1.49)	(2.99)	(1.49)	(59.70)	(34.33)	(100.00)
	(100.00)	(13.33)	(100.00)	(35.71)	(28.75)	(32.06)
35 – 44	0	4	0	40	24	68
	(.00)	(5.88)	(.00)	(58.82)	(35.29)	(100.00)
	(.00)	(26.67)	(.00)	(35.71)	(30.00)	(32.54)
45 – 54	0	3	0	13	23	39
	(.00)	(7.69)	(.00)	(33.33)	(58.97)	(100.00)
	(.00)	(20.00)	(.00)	(11.61)	(28.75)	(18.66)
55 – 64	0	2	0	6	6	14
	(.00)	(14.29)	(.00)	(42.86)	(42.86)	(100.00)
	(.00)	(13.33)	(.00)	(5.36)	(7.50)	(6.70)
65 +	0	0	0	0	2	2
	(.00)	(.00)	(.00)	(.00)	(100.00)	(100.00)
	(.00)	(.00)	(.00)	(.00)	(2.50)	(.96)
Total	**1**	**15**	**1**	**112**	**80**	**209**
	(.48)	**(7.18)**	**(.48)**	**(53.59)**	**(38.28)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Appendix 6: Regional Distribution of Household Members by Level of Education and Gender

Level of education	Sex		Total
	Male	Female	
Rural:			
Never attended school	289	341	630
	(45.87)	(54.13)	(100.00)
	(59.22)	(69.59)	(64.42)
Class (I–V)	155	110	265
	(58.49)	(41.51)	(100.00)
	(31.76)	(22.45)	(27.10)
Class (VI–VIII)	40	32	72
	(55.56)	(44.44)	(100.00)
	(8.20)	(6.53)	(7.36)
Class (IX–X)	3	7	10
	(30.00)	(70.00)	(100.00)
	(.61)	(1.43)	(1.02)
HSC or equivalent	1	0	1
	(100.00)	(.00)	(100.00)
	(.20)	(.00)	(.10)
Total	**488**	**490**	**978**
	(49.90)	**(50.10)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**
Urban:			
Never attended school	292	390	682
	(42.82)	(57.18)	(100.00)
	(35.27)	(48.93)	(41.97)
Class (I–V)	320	233	553
	(57.87)	(42.13)	(100.00)
	(38.65)	(29.23)	(34.03)
Class (VI–VIII)	136	110	246
	(55.28)	(44.72)	(100.00)

	(16.43)	(13.80)	(15.14)
Class (IX–X)	40	48	88
	(45.45)	(54.55)	(100.00)
	(4.83)	(6.02)	(5.42)
SSC or equivalent	26	11	37
	(70.27)	(29.73)	(100.00)
	(3.14)	(1.38)	(2.28)
HSC or equivalent	10	3	13
	(76.92)	(23.08)	(100.0)
	(1.21)	(.38)	(.80)
Graduate or equivalent	4	2	6
	(66.67)	(33.33)	(100.00)
	(.48)	(.25)	(.37)
Total	**828**	**797**	**1625**
	(51.95)	**(49.05)**	**(100.00)**
	(100.00)	**(100.00)**	**(100.00)**

Note: Terms in the parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: Calculated from data obtained from the sample survey.

Appendix 7: Disability and Income of Household Members (in Taka)

Type of household	Total number of household members	Per capita monthly income
Households without disabled persons	2535	659.79
Households with disabled persons	449	633.60
Total	**2984**	**674.45**

Source: calculated from data obtained from the sample survey.

Appendix 8: Status of Households and Average Monthly Income (in Taka)

Status of households	Number of households	Average monthly income
Male-headed households	454	3044.09
Female-headed households	206	2825.15

Source: calculated from data obtained from the sample survey.

Appendix 9: Distribution of Household Members by Age and Gender

Age group (in years)	Sex		Total
	Male	Female	
Up to 4	179 (46.98) [11.97]	202 (53.02) [13.57]	381 (100.00) [12.77]
5 – 14	353 (51.38) [23.61]	334 (48.62) [22.43]	687 (100.00) [23.02]
15 – 24	348 (52.25) [23.28]	318 (47.75) [21.36]	666 (100.00) [22.32]
25 – 34	202 (47.31) [13.51]	225 (52.69) [15.11]	427 (100.00) [14.31]
35 – 44	172 (50.00) [11.51]	172 (50.00) [11.55]	344 (100.00) [11.53]
45 – 5	143 (47.67) [9.57]	157 (52.33) [10.54]	300 (100.00) [10.05]
55 – 64	77 (53.85) [5.15]	66 (46.15) [4.43]	143 (100.00) [4.79]
65 +	21 (58.33) [1.40]	15 (41.67) [1.01]	36 (100.00) [1.21]
Total	1495 (50.10) [100.00]	1489 (49.90) [100.00]	2984 (100.00) [100.00]

Note: figures in parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: calculated from data obtained from the sample survey.

.Appendix 10: Household Income with or without Infants (in Taka)

Type of households	No. of households	No. of female HH members	Average monthly HH income	Per capita monthly income
Households with infants (0–4 yrs.)	297	1366	2810.63	611.09
Households without infants (0–4 yrs.)	363	1618	3110.85	697.92

Source: calculated from data obtained from the sample survey.

Appendix 11: Distribution of Respondents by Level of Education and Gender

Level of education	**Sex**		**Total**
	Male	Female	
Never attended school	244 (63.05) [53.74]	143 (36.95) [69.42]	387 (100.00) [58.64]
Class I–V	134 (77.01) [29.52]	40 (22.99) [19.42]	174 (100.00) [26.36]
Class VI–VIII	56 (77.78) [12.33]	16 (22.22) [7.77]	72 (100.00) [10.91]
Class IX & above	20 (74.07) [4.41]	7 (25.93) [3.40]	27 (100.00) [4.09]
Total	**454** **(68.79)** **[100.00]**	**206** **(31.21)** **[100.00]**	**660** **(100.00)** **[100.00]**

Note: figures in parentheses indicate percentage. First and second rows indicate row and column percentages respectively.
Source: calculated from data obtained from the sample survey.

Appendix 12: Description of Model Variables

$$Sex\ ratio = \frac{Male}{Female} x100$$

$$Dependency\ ratio = \frac{Population\ 0-14\ years + Population\ 65+\ years}{Population\ 15-64\ years} x100$$

$$Child-woman\ ratio = \frac{No.\ of\ children\ 0-4\ years}{No.\ of\ women\ 15-49\ years}$$

$$Worker-population\ ratio = \frac{No.\ of\ workers\ 15+\ years}{Total\ household\ members\ 15+\ years}$$

$$PWWTW = \frac{No.\ of\ women\ workers\ 15+\ years}{No.\ of\ total\ workers\ 15+\ years}$$

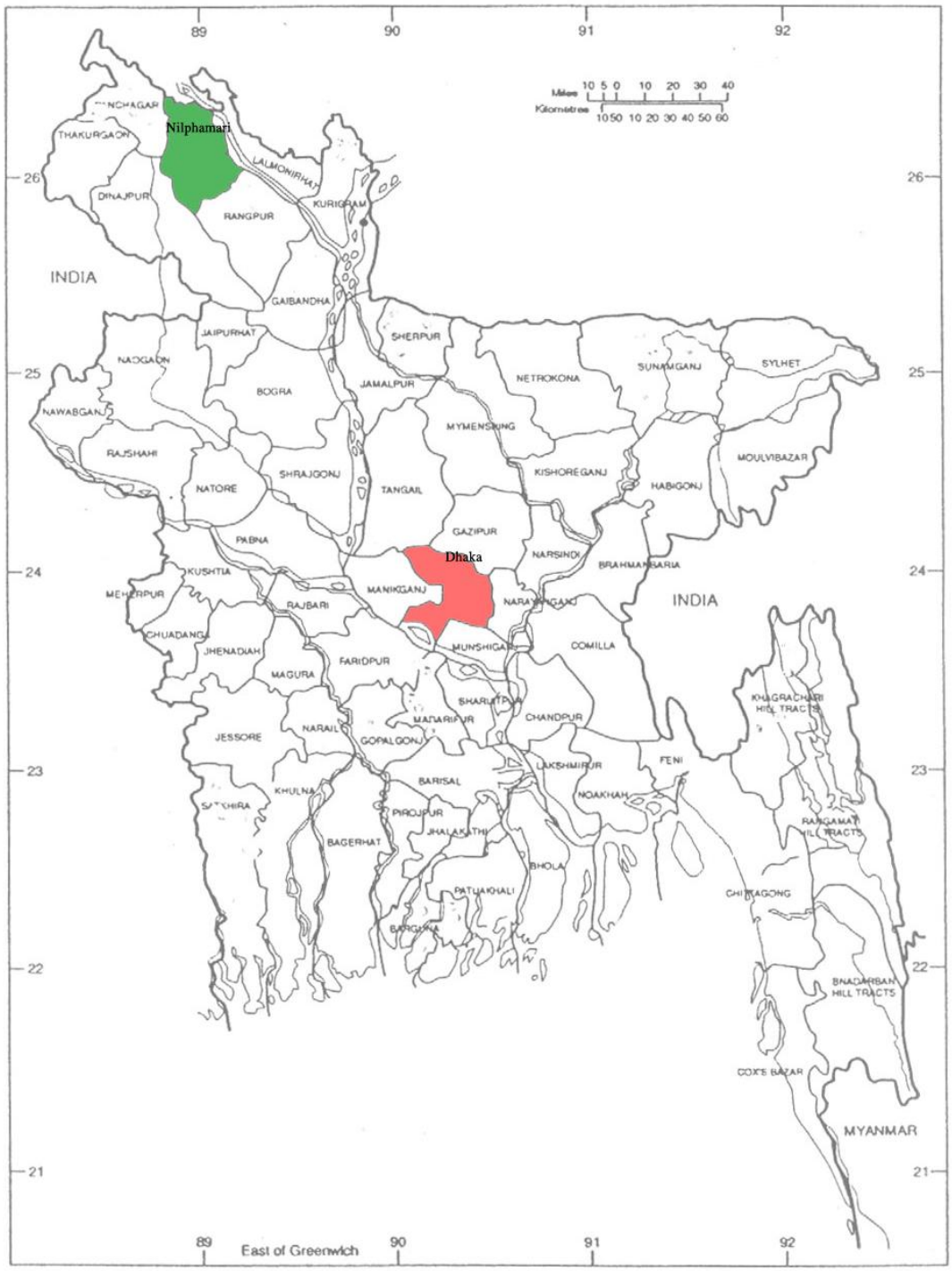
$$PFW = \frac{No.\ of\ female\ members}{No.\ of\ total\ household\ members}$$

Abbreviation:

$PWWTW$ = Proportion of women workers to total workers.

PFW = Proportion of female workers to total workers.

Map of Bangladesh Showing Location of Survey Area



Source: Asiatic Society of Bangladesh, Banglapedia: National Encyclopedia of Bangladesh: 2004 (multi-media CD)