

Employment, Labour Force Participation and Education: Towards Gender Equality in Bangladesh

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List of Acronyms

ADB	Asian Development Bank
BANBEIS	Bangladesh Bureau of Educational Information and Statistics
BBS	Bangladesh Bureau of Statistics
CAMPE	Campaign for Popular Education
FLFPR	Female Labour Force Participation Rate
HIES	Household Income and Expenditure Survey
HSC	Higher Secondary Certificate
ILO	International Labour Organisation
LFS	Labour Force Survey
LFP	Labour Force Participation
LFPR	Labour Force Participation Rate
SSC	Secondary School Certificate
SDG	Sustainable Development Goals

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Executive Summary

The objective of the present study is to provide an in-depth analysis of gender equality¹ in Bangladesh in terms of labour force participation, employment and education, and to focus on the interlinkages among these. The recent changes in these spheres, along with factors affecting the changes, will be analysed with the aim of arriving at policy suggestions for the reduction of gender inequality. It addresses the following specific issues: a) The overall trend regarding the participation of women in the labour force (including comparison with men) and differences between rural and urban areas, b) The factors determining female labour force participation rate² (LFPR) and especially the role of different levels of education, c) The nature of the gender gap in education at various levels of education and the factors that influence women's participation in education, especially at levels above primary and secondary education, focusing on rural-urban differences and the effect of marriage, d) The trend in unemployment among young educated women, and e) The gender difference in employment by sector and sub-sector, status, informality, occupation and the prospective areas of women's work in future, especially from the point of view of accommodating women with higher levels of education, and ensuring higher earnings.

Inequality in terms of LFPR

During the period 2000 to 2017, LFPR of women increased from 23.9 per cent to 36.3 per cent, although there have been some fluctuations. During 2010 to 2017, female LFPR stagnated at around 36 per cent. Data shows large differences between male and female LFPR. Male-female difference was 60.1 and 44.2 percentage points in 2000 and 2017 respectively, thus showing a decline of gender inequality.

One would obviously wonder why female LFPR has stagnated during the period 2010 to 2017. This has resulted from a balance of two contrasting trends in the rural and urban areas. In rural areas, the female labour force participation rate (FLFPR) has increased while it has gone through a decline in urban areas. Therefore, an understanding of the reasons behind the stagnation of overall LFPR requires investigation into the factors underlying the decline of urban FLFPR.

LFPR among urban women has declined from 34.5 per cent to 31.0 per cent during 2010 to 2017 while in the rural areas it has increased from 38.6 per cent to 42.2 per cent. Much of the decline in the urban areas is due to a lack of appropriate paid employment opportunities.

¹ Gender inequality refers to unequal achievement, of individuals, which are wholly or partly due to their gender.

² Labour force participation rate is a measure of the share of a country's working-age (15 years and above) population that engages actively in the labour market, either by engaging in productive employment or by looking for such work. Employment covers any work, be it for wage/salary, profit or family gain (including production of goods and services for family consumption).

Lack of self employment³ opportunities in urban areas is another factor behind the decline of FLFPR. The number engaged in self plus family work has gone through a continuous decline in the urban areas (the numbers are 2306 thousand, 1800 thousand and 1600 thousand in respectively, 2010, 2013 and 2017).

Moreover, high unemployment rates among young educated women has also discouraged women's entry into the labour force.

Supply side determinants of female LFPR

An important personal feature acting as a constraint to women's labour force participation is the presence of small children, which raises the demand for time spent on childcare. This is revealed by the negative and significant coefficient of this variable in the regression equation.

Quantitative analysis has highlighted another important point. Female LFPR is lower in families with large landownership or higher income. In the regression on determinants of women's LFPR, the highest landownership group and receipt of remittance income have significantly negative coefficients. This income effect acts as a barrier to future increase of female LFPR. Data shows that if male heads of household have a monthly wage/salary income higher than Taka 18000, spouses' LFPR is 50 per cent or lower. It ranges from 61 per cent to 85 per cent for male heads earning less than 18000 per month. The relationship holds for both rural and urban areas but is clearer for urban households. It implies that the income effect may also have worked in reducing urban women's LFPR over the period 2010 to 2017 when urban income increased and poverty incidence in urban areas went through a faster decline (HIES 2016). More in-depth study on why and how such income effects work may help overcome this barrier. Possible reasons include lack of suitable jobs for educated women from upper and lower middle income groups. Push factor induced participation in poor quality jobs may not be acceptable to these women and this merely highlights the need for focusing on generating better quality jobs.

Female labour supply shows a non-linear relationship with level of education. It is higher among those with primary or lower levels and for tertiary educated women. Female LFPR is 56.9 per cent and 39.7 per cent among those with tertiary and primary education respectively. Among SSC and HSC holders, the values are 25.9 per cent and 31.9 per cent respectively.

Access to education and links with marital status

Improvements in the quality of labour force in terms of education have taken place during 2010 to 2017. The share of the labour force without education has declined among men and women. Among women, the share has declined from 40.6 per cent to 36.4 per cent. The decline was much higher among men, from 39.9 per cent to 29.8 per cent. The share with tertiary education increased among both men (from 4.4 to 6.1 per cent) and women (from 2.1 to 3.4 per cent).

³ Self employment is performing work for profit or family gain in cash or kind (or in other words, generation of his/her own employment).

Gender equality in terms of higher education has also been improving, but given the high unemployment rate among young educated women (mentioned below), there is uncertainty about the sustainability of this positive trend.

Data shows a high degree of inequality in access to education in the rural and urban areas. Higher shares of both male and female populations in rural areas (55.8 and 59.3 per cent) compared to urban areas (39.2 and 44.4 per cent) have primary and less attainment only. In the higher levels, (SSC to tertiary) urban men and women are in an advantage. In fact, only a small share of women in rural areas has completed tertiary education (1.2 per cent), whereas among urban women it is 5.9 per cent.

Married women are less likely to be enrolled as students. In the age group 15 to 17 years, 80.7 per cent of unmarried and only 16.2 per cent of women who are/were married are enrolled in educational institutions. The difference among the two groups is even larger for 19-24 years aged women. In this age group, respectively 6.9 per cent of married women and 65.1 per cent of unmarried women are currently enrolled in educational institutions.

In this context, social and cultural constraints may also play important roles (Khosla 2009). The institution of purdah (veil) has often been used to exclude women from taking part in education and economic activities. However, the rise of the ready-made garments industry in Bangladesh and increased emphasis on girls' education has considerably reduced the social exclusion of women. At present both married and unmarried women, irrespective of whether they observe purdah, participate in RMG employment. Nonetheless, the scope of such employment may raise the continuation of women's education beyond the primary level and even delay marriages.

Unemployment rate

Unemployment rate among young women has risen during the period 2016 to 2017, from 11.3 per cent to 15.0 per cent. The rates of unemployment are higher among HSC and tertiary educated women (35.1 and 42.5 per cent respectively) and especially younger women (aged 15 to 24 years). The increase in unemployment rate during 2016 to 2017 is larger among the female labour force, compared to the male labour force.

But why this is happening cannot be answered on the basis of Labour Force Survey (LFS) data. Possible reasons are that there is a shortage of job creations, especially jobs that match the preferences of young educated job seekers. They are likely to prefer jobs in the commuting distance from home whereas most of the job creation takes place in larger towns far from home. Generation of self employment may not often be possible due to lack of business knowledge and experience. Employers often show a preference for male workers. Of course, the weight of these forces can be assessed only through additional empirical data generation.

Gender Inequality in the Structure of Employment and Earnings

Bangladesh has witnessed a limited degree of change in the structure of women's employment

in terms of the sector composition. However, the pace of change has slackened somewhat after 2010. The share of agriculture in total employment of women declined from about 65 per cent in 2010 to 63 per cent in 2016-17. The share of manufacturing increased from about 12 per cent to 14.6 per cent over the same period.

The change in the structure of employment is more noticeable in terms of status, with a sharp decline in the share of unpaid family work from 56 per cent in 2010 to 28 per cent in 2016-17. But it seems that the shift has been more towards self-employment in agriculture rather than wage/salary-based employment in the modern sectors of the economy. Also to be noted is the stubborn persistence of a high proportion of the informal economy in total employment – for both men and women. Gender inequality is noticeable in this respect as well in that the share of the informal economy in total employment is much higher for women (91 per cent compared to 82 per cent in 2016-17). Moreover, the decline in the share of this component has been slower for women.

One positive finding is the rise in the share of women in certain sectors/occupations – albeit from a very low base. They include manufacturing, accommodation and food, information and communication, finance and insurance, legal and accounting activities, public administration, education, and health services. In the education sector, for example, the share of women rose from 25 per cent in 2010 to nearly 41 per cent in 2016-17. In finance and insurance, the rise during the same period was from a little over 5 per cent to nearly 19 per cent. Similar increases in areas like legal and accounting services, ICT, food and accommodation, public administration, etc. point to the potential for expanding the horizon of women’s employment.

Gender inequality exists also in the spheres of earnings and occupation. The shortfall in women’s earnings compared to men’s vary considerably between various occupations, with agriculture and elementary occupations showing 17-18 per cent lower earnings for women. At the other end, technicians and associated professionals do better with a difference of only about 5 per cent. Another important dimension of gender inequality in employment is reflected in their gross under-representation in higher-level positions. In industry and services, the share of women in executive positions was only 8 and 12 per cent respectively in 2016-17.

Education seems to be a major driver of the structural change in women’s employment – be it in terms of sector or status. This variable also has a statistically significant impact on the level of earnings, but it is education beyond the secondary level that makes the real difference.

In analysing earnings, a variable that is usually found important is experience (usually examined through age as a proxy). In the case of Bangladesh, a non-linear relationship is found between age and earnings, with earnings declining after a certain age which is found to be much earlier for women compared to men. Women’s earnings are found to start declining from about 35 years of age compared to 45-54 years for men.

Policy recommendations

Macro policies and job creation

Macroeconomic and sector level policies consisting of monetary policies and fiscal incentives are needed to steer economic growth in a direction that would generate employment suitable for women in large numbers. Export oriented labour intensive industries are a case in point. In addition to macro and sectoral policies, expansion of tertiary education and improvement of the quality of both secondary and tertiary education as well as vocational education is essential.

Policies for raising FLFPR

Policies need to be adopted with the aim of addressing the factors that have a negative effect on women's LFPR. Urban women's LFPR has been declining and policies are needed to reverse the trend. Policies will range from creating more decent jobs to creating an enabling environment. Easing of child care responsibilities is one such issue deserving policy attention. This will require institutionalised child care facilities. Policies for reducing early marriage and early child bearing can also have a positive effect on female LFPR. The other relevant policy intervention is increasing women's access to tertiary education. Counteracting the negative income effect through attitudinal change can help in this context. It has been observed that women in rural areas and poorer regions (Rangpur, Rajshahi Divisions) have higher LFPR. Therefore, policies are needed to raise productivity of women's employment in these areas.

Policies have to look beyond push factor induced participation in poor quality jobs. This may not be acceptable for women from middle income groups. As has been mentioned above, female LFPR falls as one moves up the income scale. This merely highlights the need for a focus on generating better quality jobs.

Age of marriage and education

The quality of lives of young women can be improved through increased participation in post-secondary and tertiary education, vocational and technical education, and by raising the age of marriage. In this respect, in addition to laws for a minimum age of marriage, proper implementation of the law and motivation to do so is essential. Moreover, marriage at even a higher age can be conducive for completion of tertiary education. This can be achieved through motivation and attitudinal change of parents and girls. The school curriculum should be reviewed and revised from this angle. Job creation for HSC and tertiary degree holders can have a motivational impact which is at present being negatively influenced by high unemployment rates among young educated women.

Education, skill and poverty

Low income and less wealth create obstacles to girls' higher education. Stipend programmes for unmarried girls from poorer families and remote regions who are going for higher studies may be expanded. Women from poorer families, for whom there is an urgency to enter the

labour market, may be clients for skill development. Targeted skill development plans may be adopted for this group.

Policies for positive changes in structure of employment and women's earnings

There has been a move of women from unpaid family work to self-employment. The next stage in structural transformation for them has to be to move to higher level jobs, either in self-employment or in wage/salary-based employment. Policy measures need to be geared towards facilitating that process. The rise in the share of women in certain sectors like information and communication, legal and accounting services, education, and health services that has been seen since 2010 is quite encouraging, and policy interventions need to be geared towards accelerating such change. There is a need to blend vocational training with general education, to enable young women's participation in a job market that demands modern skills.

Chapter 1

Introduction

1.1. Background, Objectives and Rationale of the Study

Women's participation in the labour force and employment can have important implications for economic growth. It can be even more important for the degree of inclusiveness of growth and gender equality. While education is one of the important variables that influence labour force participation and its outcomes in terms of returns from employment, educated women's participation in paid employment, can also create positive external effects on perception about the value of education.

Another indirect beneficial effect of women's education could be on age at marriage. Their participation in education may help delay marriages. Thus, there are possibilities of interlinkages between women's employment, education and age of marriage. Such interlinkages can have important implications for gender equality in employment and education and hence on women's empowerment and participatory development of Bangladesh.

Despite the importance of women's participation in the labour force and education, the countries of South Asia are found to be lagging behind in these respects. Not only is their labour force participation low (lower, for example, compared to that in countries of East and South-East Asia), there is no clear upward trend. In fact, in India, there has been a decline in women's LFPR during the 2000s (Klassen and Pieters 2015, Verick 2017). In Bangladesh, after a rise during the period 2000-2010, there was a decline during 2010-2013. Even though the rate increased somewhat after 2013, in 2017 it has remained at about the same level as in 2010. This trend does give rise to questions, both in terms of optimising the contribution of labour to economic growth and in terms of gender equality.

As for women's participation in the world of education, Bangladesh has witnessed significant progress in the enrolment of girls at the primary and secondary levels. However, gender differences in terms of completion of schooling and enrolment at the tertiary level has not received much attention from researchers. There are several issues which need to be addressed in this regard.

In the earlier studies relating to women's LFPR (e.g., Rahman and Islam, 2013) education was found to be a significant explanatory variable – playing a positive role. Hence, from the point of view of both raising their participation in the labour force and from the point of view of gender equality in education and overall empowerment, education is important. Whether this relationship is continuing during recent years needs to be examined.

However, educated women's unemployment may act as a deterrent to women's participation in higher education. This may create a negative perception not only about the value of higher education (including secondary and higher secondary) but also about the desirability of

delaying the age of marriage. There is a complex interaction among women's participation in labour force, their unemployment, their participation in education at higher levels (after primary), and marriage. While a few studies have been undertaken to explain the factors influencing access to education (mostly primary and secondary), its links with employment has not received much attention.

In the area of employment, a distinction needs to be drawn between women's self-employment and wage/salary-based employment because it is possible to hypothesise that the latter is more empowering than the former. An important question in this regard is whether education makes any difference to the prospects of women getting into regular paid employment, and if so, what level of education.

In recent years, a number of studies (e.g., Aslam 2013, Rahman 2006, Rahman and Islam 2013) have been undertaken on women's LFPR. However, they mostly focused on women's LFPR as a whole and factors that influence the rate. Not much attention has been given to the linkages between education and different categories of employment (i.e., by sector and status).

Most of the available studies cover the period 2000 to 2010. It is also important to examine the recent trend of LFPR, taking due account of rural-urban differences and differences in the level of education, which has not been covered in any of the recent studies.

An important aspect of women's employment that has not received adequate attention in research is the sector of their employment and the type of occupation in which they are and could potentially be employed. Women's wage employment in Bangladesh has remained concentrated in one manufacturing industry, viz., readymade garments (RMG). The limitations of such narrowly conceived gendered spheres of women's employment can be serious for raising women's participation in the labour force (as seen from recent developments, for example, a decline in the rate of growth of women's employment in the RMG industry).

It is important to go beyond the conventional thinking about spheres of women's employment and examine the potential for their employment in different sectors/activities. In doing so, it is important to bear in mind the prospects of women with different levels of education.

As already mentioned, women's participation in the labour force is important not only from an economic point of view but also from the point of view of gender equality as a whole and women's empowerment. Sustainability of economic growth and development depends crucially on the participation of both men and women and on the quality of the labour force in terms of education and skills.

It should be mentioned that several of the sustainable development goals (SDGs) include issues relating to gender equality. While Goal 5 is on achieving gender equality and empowering all women and girls, other goals also include indicators focusing on gender equality. For example, Goal 8 on full employment includes the target of equal pay for work of equal value. Although a single study like the present one cannot possibly cover much of the issues surrounding the SDG

of gender equality, by analysing some of the relevant issues, it can contribute to the process of formulating necessary policies and of monitoring progress in attaining the goals and targets.

Employment and education of women and the persistent gender gap in these spheres are closely related to the overall issue of social justice. Research on such issues can make a contribution towards the fight for attaining greater degrees of social justice and adoption of relevant policies towards this goal.

This study will be relevant for the purposes of formulating policies and programmes in the field of education and promotion of employment for women. Analyses relating to younger and educated women can be particularly useful in formulating policies for their education and skill development. Therefore, the study provides results relevant for the various government agencies including Ministry of Labour and Employment (MoLE) and Ministry of Women's and Children's Affairs (MoWCA). Other stakeholders in the labour market, especially trade unions and NGOs, will also be able to use the findings of the study in shaping their programmes aimed at attaining gender equality in the labour market. Given the background mentioned above, the objective of the present study is to provide an in-depth analysis of progress towards gender equality in terms of labour force participation, employment and education, and the interlinkages among these. The recent changes in these spheres, along with factors affecting the changes, will receive attention.

1.2 Organisation of the Paper

The study report is organised as follows:

- i) Chapter 1 provides the background of the study, brief review of literature and notes on the data sources.
- ii) Chapter 2 provides an analysis of gender difference in LFPR, its changes over time (2000 to 2017), the urban rural difference of LFPR and offers explanations of the differences.
- iii) Chapter 3 analyses the factors that explain women's LFPR with special focus on the role played by different levels of education and other supply side factors.
- iv) Chapter 4 examines the nature of the gender gap in education in Bangladesh considering various levels of education and the factors influencing women's participation in education, especially at levels above primary and secondary education. In this context, the difference between rural and urban areas will also receive attention.
- v) Chapter 5 examines the extent of unemployment and its recent changes among young, educated women.
- vi) Chapter 6 discusses the gender difference in employment by sector and sub-sector, status, informality, and quality of work, and explores the prospective areas of women's work in future, especially from the point of view of accommodating women with higher levels of education.
- vii) Policy implications of the study are presented in Chapter 7.

1.3 Data and Methodology

The study is based on data from the Labour Force Surveys of Bangladesh Bureau of Statistics (BBS). These large scale national sample surveys conducted by the Bangladesh Bureau of Statistics (BBS) include data on variables relevant for the present study. Data from the Reports of LFS of the 2017, 2016, 2013 and 2010 rounds are used. In-depth quantitative analyses based on unit records of LFS 2017 have also been used. In addition, secondary data from other published sources are used.

1.4. Brief Review of Literature

This section reviews two types of studies.

- a) Those related to women's access to education at various levels, gender differences in this context and its implications for the labour market, and
- b) Those related to trends of female employment, LFPR and its determinants.

Studies on women's education and labour market

The literature on education related achievements of Bangladesh and the future challenges is quite vast. However, most of the studies provide sector level analysis of enrolment, efficiency etc and focus on the programmes and policies of government. The present Chapter will review only the studies related to inequalities and household/individual level analysis.

Aslam (2013) is a multi country study covering Bangladesh, India and Pakistan and concludes that there is an association between an individual's own education (as well as father's and spouse's education) and empowerment, variously defined. Women with high levels of education are able to take advantage of labour market benefits. The paper focuses on the influence of education on labour market outcomes and empowerment and not so much on gender inequality in education. Data used in the report cover the period of 2000 to 2005.

A study by Chowdhury, Nath and Choudhury (2003) has included analysis of inequalities but mainly with a focus on inequality related to poverty and its impact on access to education. The study reveals that while disparity between girls and boys has been reduced, girls are still behind boys in terms of learning achievement. Children coming from poorer families and ethnic minority groups lag behind the respective dominant groups in terms of enrolment and learning achievement. The study highlights the impact of positive discriminatory steps by Government and NGOs.

Since then, new programmes and policies have been put in place and World Bank (2013) provides a thorough evaluation of such sectoral policies.

Poverty creates lack of access to education. CAMPE (2008, 2007) shows that the economic condition of a household is an important determinant of children's school enrolment at primary and secondary levels. However, the series of studies by CAMPE has not looked at the access to HSC or higher level education.

Blunchand Das (2015) arrived at the conclusion that changes in female education in Bangladesh have had equally far-reaching effects on the perceived value of education for girls relative to education for boys. Education norms were found to differ substantially across cohorts, with women from the younger cohort expressing far more positive views than older female respondents.

The most important missing dimension in these studies is the family level determinants of access to education and the links among education, employment, unemployment and marriage.

Studies on female employment, LFPR and its determinants

Studies which focused on the female labour market in Bangladesh during the last two decades are not large in number. Only a few studies have examined the factors behind female labour force participation. This section presents a review of the recent studies focusing on female LFPR and their earnings in Bangladesh.

A study by Amin (2005) has argued that the rise of female labour force participation during 1996 to 2003 has been due to better enumeration of women's home based economic activities. The focus of the paper is factors associated with women's participation in paid employment. Amin's study shows that women who are heads of households, live in urban areas and have less wealth are more likely to engage in paid work. Also, smaller family size and less education have positive effects. Number of children below age five has insignificant impact. The only problem is related to the interpretation of the negative impact of education. This has possibly resulted from the fact that paid work is actually a combination of regular salaried employment and casual/daily employment. The first is likely to be positively related to education and the reverse is expected for the second. The equation fails to distinguish the two effects.

Kapsos (2008) uses the Bangladesh Occupational Wage dataset to investigate determinants of wage differences and provides estimates of gender related differences. The study finds that women's earnings are 21 per cent lower than men's. Out of this, pure gender wage gap was 15.9 per cent.

A study by Ahmed and Mitra (2010) reports the presence of gender related wage discrimination. Such discrimination is higher in urban areas compared to rural.

Mahmud and Tasneem (2011) examine why official statistics in Bangladesh fail to properly enumerate women's economic activities. In addition, the research includes data from a sample survey in eight districts and provide estimates of female LFPR. Use of the same definition as BBS yields LFPR of 67 per cent whereas in the LFS 2010 it was only 36 per cent. The authors argue that in the case of large surveys, the prevailing social attitude does not recognise women's home-based economic activity as work.

On the basis of HIES 2010 data, Bridges, Lawson and Begum (2011) examines the factors influencing female LFPR. It has highlighted the positive link between severity of poverty and the

probability of women's LFP. The study has arrived at the conclusions that presence of young children has a positive effect on self employment and a negative effect on wage employment. Being married has a negative effect. This result may have been influenced by the fact that paid employment dominated by the RMG sector requires long hours of work. The study finds that there is a growing acceptance of outside employment among young unmarried workers. These conclusions should be used cautiously because of some shortcomings of the HIES data. HIES data possibly underestimates female employment and female LFPR. The study estimates FLFPR as 12 per cent, while LFS based estimates provide a much higher figure (36 per cent). These are in line with the findings of Klasen and Pieters (2015), who find that in India urban women with lower education are usually engaged in low paid wage employment.

A number of papers by Rahman (2005 and 2006) discuss the gender dimensions of labour market characteristics. These studies highlight the large differences in male and female labour force participation rate and highlighted the large differentials between male and female wage rates. Rahman (2006) has examined the changes of female LFPR during 1991 to 2003 and has analysed the determinants of LFPR on the basis of the 2003 LFS data. It shows a negative impact of primary and secondary education, head's education and being married. The results should be used with caution because it is based on the 2003 LFS which has various deficiencies.

The factors influencing women's employment and gender composition of employment in the formal manufacturing sector has been analysed by Rahman (1996). Although the study is somewhat dated, it is worth mentioning because none of the recent studies on the female labour market touches this issue. The study is based on data from 100 manufacturing enterprises in Dhaka city. It concludes that the characteristics of enterprises and the attitude of employers towards women's employment are significant determinants of female employment in these units. Among the characteristics of enterprises, the export orientation has the largest positive impact on the number of women employed in a unit. The entrepreneurs of female employees did not provide an evidence of higher non-wage and/or non-financial costs of having female employees. Female workers did not show a greater absenteeism or higher turnover rate compared to male employees.

Rahman and Islam (2013) discuss the determinants of female LFPR using the 2010 LFS data. It finds positive impacts of education, especially higher levels of education, on female LFPR. The impact of marriage, and children are negative as expected. But the paper has not dealt with the prospects of female education which could raise female LFPR.

ADB and ILO (2016) has dealt with a large range of issues related to the female labour market. As a result, it does not have the scope to go in-depth into the determinants of LFP of women. However, it has highlighted the role of education in raising female LFPR. Landownership was not found to be systematically related to FLFPR. This study has made comments on why marriage may act as a constraint to women's LFP, but has not substantiated it with data.

Heintz, Kabir and Mahmud (2017) paper analyses the factors behind women's participation in the labour force. It is based on a survey of households in eight districts conducted in 2008. It has used regression models to examine the role of various factors. Conservative norms of society have a negative influence. The economic factors like better wage and pressure of household needs have positive influences on women's probability of employment. Lower educated women have a higher chance of LFP. It has not, however, looked at the difference between women with higher education and SSC or HSC education. Unmarried women have higher probability of LFP, which is similar to other studies. SANEM (2018) also emphasises the role of education in enabling women to participate in paid employment, which is considered to be important for empowering women.

Rahman and Al-Hasan (2018) have focused on the LFPR of women and on the male female wage differential. The wage differential is 12.5 per cent, out of which about half is due to women's lower human capital endowment. Education of women has a higher return compared to men. The study estimates equations to explain "married" women's LFP. Since it has done the estimation only for married women, the impact of marriage cannot be uncovered in this study. In fact, most studies on FLFPR in high income countries focus on married women because the unmarried women are expected to be independent and the factors behind their LFP and men's LFP are likely to be similar. But in Bangladesh, this is far from reality and unmarried women may face even more constraints from parents. The study finds that education up to the HSC level has a negative influence and tertiary education has a positive influence on female LFP.

Chapter 2

Female Labour Force Participation: Trends and Rural Urban Difference

As has been mentioned in the introduction, a rise of labour force participation (LFP) among women can raise women's contribution to the economy and also enhance their own income and empowerment. In most of the south Asian and middle-east Asian economies, female LFPR is low. In India, the figures were 42.7 per cent in 2004-05 and 27.4 per cent in 2015-16. In Pakistan and Sri Lanka, the rates are respectively 25 per cent and 35 per cent (WB, 2017). Therefore, the female LFPR in Bangladesh also deserves attention so that appropriate policies may be adopted to attain a desirable trend in this respect.

2.1 Hypotheses on the Link between Female Labour Force Participation Rate (LFPR) and Development

Before presenting actual data and analysis on Bangladesh, it will be useful to briefly discuss the prevailing hypotheses on the links between LFPR and development, as postulated by the path breaking contributions of the pioneers of development analysts.

Boserup and others writing during 1970 to 1990 hypothesised a U-shaped relationship between economic growth and women's employment, which implies that the rate of participation of women in the labour market declines in the early stage of development and rises in the later stage of further advancement. The factors contributing to the early phase of downward sloping female labour supply include a decline in traditional agriculture which depends on family labour (including female labour), stigma against factory jobs and women's reluctance to enter such employment and increasing schooling rates of women. In the more advanced stage of development, the effect of these factors reverses. Wages increase with more education and there is sufficient incentive to accept new types of jobs.

This is termed as substitution effect, as it compensates for the forgone benefits from alternative use of women's time, for example, in family care activities. In contrast, another type of impact that may be at work is the "income effect", implying that when her own or her family's income increases, there will be a rise in the preference for leisure/care activities and additional income from her labour market participation will be valued less. Substitution effect outweighs the income effect until some limit of wage increase, which takes place with rising education, productivity and development. After some time, a downward slope in the labour supply curve sets in.

These neo-classical concepts have been widely used to explain labour supply decisions of women, although its usefulness has not been accepted uncritically. On the basis of neo-classical theory, the predictions of individual factors which influence women's labour supply are quite

straightforward. Factors which positively affect wage and female labour supply include education, experience etc and factors which contribute to higher preference for housework including marriage, having small children, etc.

In addition to these theoretical contributions, recent empirical studies on the determinants of female labour supply/labour force participation in some of the neighbouring countries (e.g. Verick 2017 for India) provide useful insights and have been used in formulating hypotheses for the present study.

2.2 Change of LFPR in Bangladesh: 2000-2017

Data on changes of FLFPR has been compiled from the LFS reports of various rounds during 2000 to 2017 (Table 2.1). Although the gaps between two rounds have not always been equal, a broad picture emerges from the data. During the period 2000 to 2017, the rate has increased from 23.9 per cent to 36.3 per cent. Female LFPR has gone through some fluctuations during this period. The rate of increase has not been continuous as shown in Figure 2.1. In particular, during 2010 to 2017, it has been stagnant at around 36 per cent. a

The data shows a large difference between male and female LFPR. Male-female difference was 60.1 and 44.2 percentage points in 2000 and 2017 respectively, thus showing a decline of gender inequality. This decline is resulted from a rise of female LFPR (by 13.3 percentage points) and decline of male LFPR (by 3.5 percentage points). Only in some high-income industrial economics, the gender difference in LFPR is close to zero. For Bangladesh, the more relevant observation is that there is improvement in terms of gender equality and there is need for sustaining this trend by raising female LFPR, without reducing male LFPR.

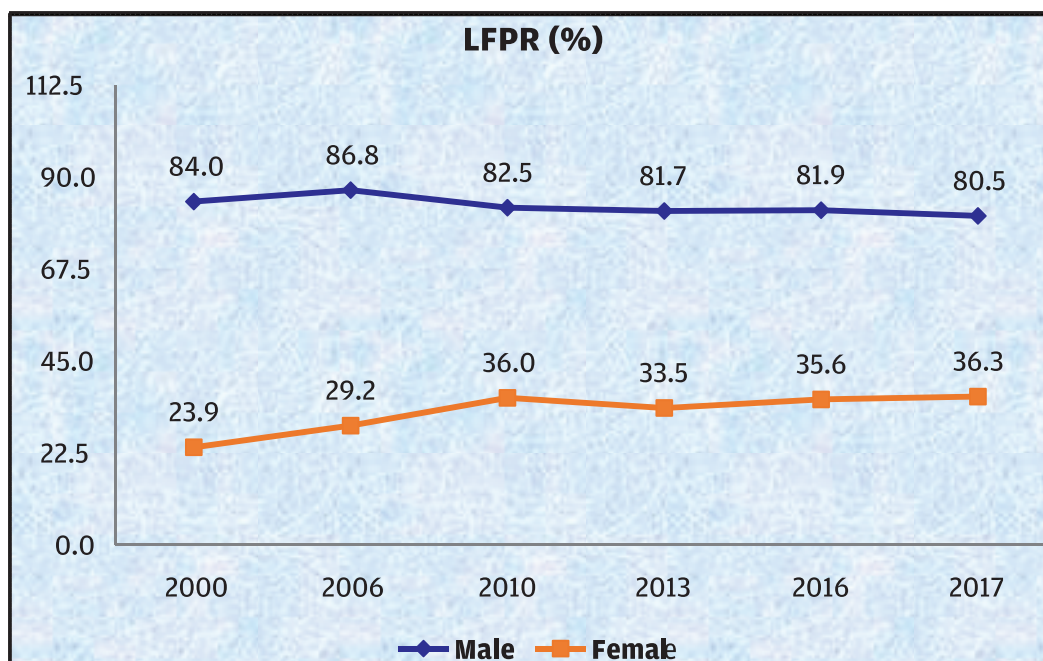
One would obviously wonder why female LFPR has stagnated during the period 2010 to 2017. This has resulted from a balance of two contrasting trends in the rural and urban areas. In the rural areas, FLFPR has increased while it has gone through a decline in the urban areas.

Table 2.1: Male and Female LFPR: 2000 to 2017

Year	Male (M) LFPR (%)	Female (F) LFPR (%)	All LFPR (%)	M-F (percentage points)
2000	84.0	23.9	54.9	60.1
2006	86.8	29.2	58.5	57.6
2010	82.5	36.0	59.3	46.5
2013	81.7	33.5	57.1	48.2
2016	81.9	35.6	58.5	46.3
2017	80.5	36.3	58.2	44.2

Source: LFS (various years).

Figure 2. 1: Male and Female LFPR: 2000 to 2017



Source: LFS (various years).

Therefore an understanding of the reasons behind stagnation of overall LFPR requires investigation into the factors underlying the decline of urban FLFPR. This has been attempted below.

2.3 Rural-urban Difference

LFPR data (Table 2.2) for rural and urban areas show that during 2010 to 2017 it has increased from 38.6 per cent to 42.2 per cent among rural women. However, LFPR among urban women has declined from 34.5 per cent to 31.0 per cent. During the period of 2006 to 2010, urban women's LFPR has increased.

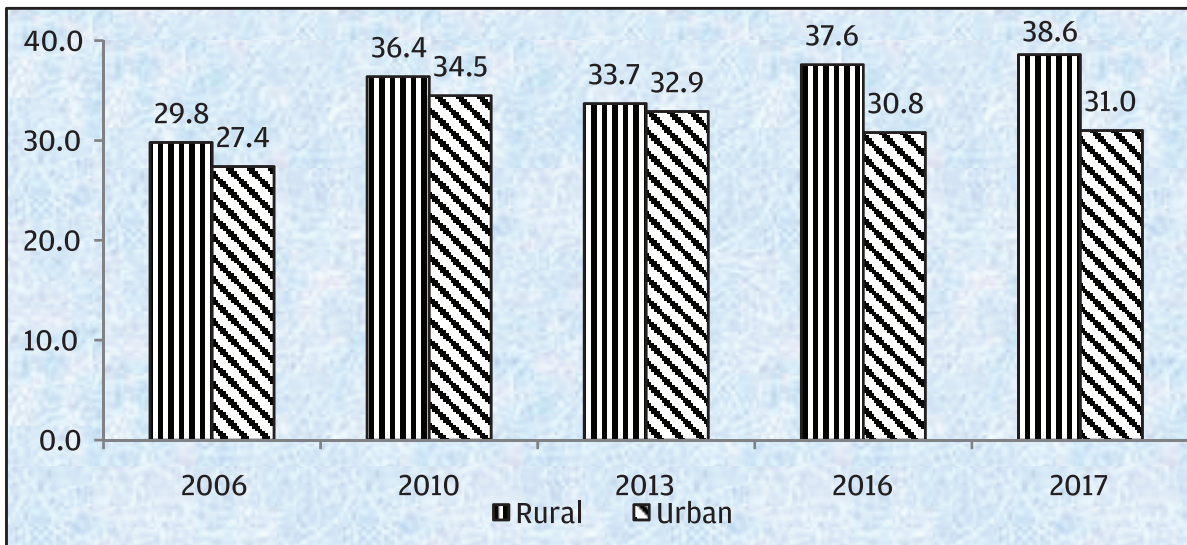
Table 2. 2: Urban and Rural Women's LFPR: 2006 -2017

Year	Female LFPR (%)			Changes over previous round (% age point)	
	Rural	Urban	All	Rural	Urban
2006	29.8	27.4	29.2	+4.2	0.0
2010	36.4	34.5	36.0	+6.6	+7.1
2013	33.7	32.9	33.5	-2.4	-2.4
2016	37.6	30.8	35.6	+3.9	-2.1
2017	38.6	31.0	36.3	+1.0	+0.2

Source: LFS (various years).

This phenomenon stands in contrast to the common notion that development and modernity leads to women's employment. The observed trend of rise of FLFPR in rural areas may come as a surprise since the share of agriculture in total GDP has declined from 31 per cent in 1990 to 16.3 per cent in 2016. This may to some extent be due to the expansion of livestock raising activities based on microfinance, which depends mostly on female labour.

Figure 2. 2: Urban and Rural Women's LFPR: 2006–2017



Source: LFS (various years).

One possibility is that the declining trend had started from earlier years (1990s) when growth acceleration just started. However, comparable data on FLFPR is not available for that period. One may also speculate that the initial decline in rural women's LFPR had taken place during that period and it has started to rise after 2000.

The observed pattern of FLFPR in urban areas during 2010 to 2017 needs further attention. There is a need for explaining this decline of female LFPR, especially during a period when there has been an acceleration of economic growth, from around 6.2 per cent to 7.2 per cent per year. During this period, improvements have also taken place on the front of social development. Such advancements are more visible in urban areas where income growth and poverty decline has been faster.

In fact, such decline of LFPR among urban women has also been observed in India. There have been a few studies on the factors behind this decline (Klassen and Pieters 2015, Mehrotra 2015, Afridi, Dinkalman and Mahajan 2017). In the Indian context, a number of factors have contributed to the decline of urban FLFPR. These are rising school enrolment, income effect (from rising income of family members including husband), social stigma and measurement problems.

To explain the observed decline of urban FLFPR in Bangladesh and arrive at a testable hypothesis on the link between female labour market and development, the suggestions from

development visionaries and the findings of recent studies on other South Asian countries will be combined. In this context, two factors need special attention. These are: the macro level social changes of school enrolment and measurement issues.

Among the other macro forces responsible for the decline, the following two deserve special mention:

- a. Social stigma may have imposed barriers to women's entry into new types of jobs.
- b. Lack of availability of sufficient jobs suitable for women, and high unemployment among them, may have acted as a discouraging factor and such demand side factors may reduce their labour force participation.

2.4. Role of rising school enrolment

Whether the falling labour force participation is due to the rise of enrolment in educational institutions may be verified through a simple test. Such rise implies that there will be fewer women among the working age group who could actually enter into labour force. If this group of 'working age women not studying' is used as the denominator in calculating LFPR, it will net out the impact of rising school enrolment. This LFPR-non-student (LFPR-NS) has been calculated for the latest three rounds of LFS and are presented in Table 2.3.

Table 2. 3: LFPR among women not currently studying

Year	LFPR among women who are not studying	
	Urban	Rural
2010	37.8	38.6
2016	34.7	41.0
2017	35.0	42.2

Source: LFS (various years).

This data again shows a declining trend of urban women's LFPR during 2010 to 2017, although there has been a small increase (0.3 percentage points) during 2016 and 2017. Thus the decline of overall LFPR cannot be attributed solely to rising school enrolment. The decline between 2010 and 2017 stands at 2.8 percentage points among those who are not studying, compared to 3.5 percentage points when overall LFPR is considered. It means that 0.7 percentage points, i.e. 20 per cent of the decline has been due to rising enrolment and the rest has been due to other forces.

In a few Indian studies (Klasen and Peiters 2015, Mehrotra 2015) measurement issues (or under enumeration) have been considered to be a factor behind declining urban women's LFPR. In the context of Bangladesh, it is difficult to conceive that measurement accuracy declines for urban areas. Rather, the criterion for being a member of labour force is wide and awareness about the

need for proper accounting of women in the labour force is likely to increase with time. This is likely to contribute to a rise of LFPR of both rural and urban women and thus possibly underestimate the decline of LFPR.

Most of the decline of female LFPR in urban area and the overall low level is therefore likely to be the result of constraints faced in entering the labour force, i.e. the supply side. However, the demand side must also be taken into account because in an economy with “excess supply of labour”, total employment and unemployment is expected to be, at least partly, demand determined.

2.5: Demand side: Unemployment among women

Deficiency of demand is expected to be reflected in the unemployment rate and therefore the recent changes in the unemployment rate in rural and urban areas require attention. Data on female unemployment rates in urban and rural areas (Table 2.4) shows that

- a) Female unemployment rate is higher than that of male labour force.
- b) Female unemployment rate in urban areas is higher than in rural areas.
- c) Female unemployment rate in urban areas has risen during 2006 to 2017.

Thus one finds support for the hypotheses that high unemployment rates among women and its gradual rise discourages women’s participation in the labour force in urban areas. This has been highlighted by Semasinghe (2017) in the Sri Lankan context. In a time series based regression with female LFPR as the dependent variable, the study observes that unemployment rate has a negative coefficient.

The above findings clearly demonstrate that there is inadequate demand for women in the labour market. It affects LFPR adversely. As will be discussed in Chapter 4, the adverse effect works especially among young educated women.

Table 2.4: Unemployment Rate in Urban and Rural Areas: 2006 to 2017

Location	(UE rate %) 2017	
	Female	Male
Urban	8.9	3.3
Rural	5.9	3.0
	(UE rate %) 2010	
Urban	8.3	4.9
Rural	5.7	3.6
	(UE rate %) 2006	
Urban	6.7	3.6
Rural	7.2	3.3

Source: LFS various years

Self-employment opportunity and the demand side: urban rural difference

The role of demand side in raising women's LFPR is indirectly demonstrated through the data on opportunities of self-employment. This will be elaborated with relevant data.

Since female LFPR in rural areas is higher than that in urban areas and rural women's LFPR has been rising, the question obviously is why the demand force is less of a constraint for rural women compared to women in the urban labour market. Data from various rounds of LFS show that the difference can be explained, to some extent, through the difference in composition (status) of employment. Two major categories of employment which constitute more than 90 per cent of employment are paid employment and family employment (self-employed plus contributing family workers).

Table 2.5: Extent of family/self employment of women: 2010-2017

2017 (number in 000)			2013 (number in 000)		2010 (number in 000)	
Category	Rural	Urban	Rural	Urban	Rural	Urban
Employee/ paid casual worker	2914	2903	3255	2269	1629	1363
Self/family empl	1101 1	1600	8700	1800	10883	2306

Source: Estimates based on data from LFS reports.

While the first is outside the control of a prospective worker, the second may be generated by the worker or her family. Data on these two types are presented in Table 2.5, which shows the changes in total female employment in these two categories during 2010 to 2017. Paid employment has risen in urban areas (from 1363 thousand in 2010 to 2903 thousand in 2017) whereas family source employment increased in rural areas (from 10883 thousand to 11011 thousand during 2010 to 2017). During 2013 to 2017, the increase in the number of the latter type of employment in rural areas was more sizeable. This has resulted in the increase of female employment and LFPR in rural areas.

In contrast, in the urban areas the increase in the size of paid employment during 2013-17 is smaller than the increase during 2010-2013. This deceleration has taken place despite a rise of GDP growth. Moreover, the number engaged in the self plus family work group has gone through a continuous decline in the urban areas (2306, 1800 and 1600 thousand respectively in 2010, 2013 and 2017 as shown in Table 2.5). These two forces together led to a decline of urban women's employment rate and labour force participation rate⁴. The sectoral changes in demand for labour associated with this pattern will receive attention again in chapter 6.

⁴ Klassen and Pieters (2015) have pointed out that in India, a demand side factor has contributed to the decline of female LFPR. The sectors which draw in female workers have expanded least during the period of declining female LFPR.

These changes give rise to an obvious question. Why can't urban women generate employment for themselves through family initiatives? The rural-urban difference in this respect is the outcome of the nature of economic activities feasible in the rural areas which are not so in the urban locations.

Women's family employment in the rural areas consists mainly of livestock and poultry raising, kitchen gardening and crop processing and storage. Prerequisites of all these activities are family's productive assets in the form of land for crop cultivation and for building sheds for livestock, etc. In the urban areas, such assets are scanty and are gradually disappearing under the pressure of housing demands for a growing population. Generating non-farm self/family employment requires skill and financial investment, to which women do not have access. Moreover, in urban areas a large majority of male workers are engaged in paid employment and therefore, the scope of joint engagement of a household's men and women in a family enterprise is rather limited.

Higher unemployment rate in urban areas and declining self/family employment opportunities definitely indicate demand shortage as a factor behind women's labour force participation. Nonetheless, it does not mean that the supply side problems do not exist. Supply related constraints are presented in chapter 4.

The major findings of the chapter are summarised below:

During the period 2000 to 2017, LFPR among women increased from 23.9 per cent to 36.3 per cent although there have been some fluctuations. During 2010 to 2017, female LFPR has been stagnating at around 36 per cent.

Data shows a large difference between male and female LFPR. Male-female difference was 60.1 and 44.2 percentage points in 2000 and 2017 respectively, thus showing a decline of gender inequality.

LFPR among urban women has declined from 34.5 per cent to 31.0 per cent during 2010 to 2017 while in the rural areas it has increased from 38.6 per cent to 42.2 per cent. Data on non-students' LFPR demonstrates that the increase in school enrolment cannot explain the decline in female LFPR in urban areas. Much of it is due to a lack of appropriate employment opportunities. Lack of self employment opportunities in the urban areas is a major factor behind the rural-urban difference in LFPR.

Chapter 3

Determinants of Women's LFPR: Supply Side

On the supply side, constraints to women's participation in the labour market operate at the societal level as well as at the individual level. At the societal level, the most important issue which has been raised time and again is the social stigma against paid work outside the household or village. Muslim societies have usually been viewed as more conservative (e.g. in the Indian contexts, Das 2004). However, the urban part of a country is likely to be less conservative. So this attitude factor cannot provide a strong logic behind lower and declining LFPR of urban women.

Recent experiences of women's large-scale employment in the RMG sector also supports the absence of strong social barriers against industrial employment of women. Over the last two decades, the RMG sector became competitive on the basis of young female workers' employment. Initially about 75 per cent of production workers in RMG were women, which at present stands at 55 to 60 per cent (Lopez-Acevedo and Robertson 2016). Many of these workers migrated from rural areas to take up these jobs.

Women employed in the RMG sector come mostly from the poorer segment of society. Majority of them have only a few years' of schooling. The example of these workers implies that poverty acts as a push factor which helps overcome the social barrier against outside employment. This leads us to the question of whether women from wealthier families face harder barriers from the supply side. The present analysis probes into this factor along with other individual and household characteristics. The supply side factors behind cross sectional variation of women's participation and particularly the role of income effect will receive attention.

3.1 Role of Age, Education and Marital Status

The hypotheses related to these factors, including marital status, follow from the literature on the opportunity cost of time in household activities and in income generating activities.

Age and marriage are both likely to raise the burden of family care activities. Moreover, those aged above 40-45 years would have entered the labour market three decades ago when conservatism and social barriers against women's entry into the labour force would have been more prevalent. While age may increase the burden of domestic chores and related activities, there may be a counteracting impact as well. Among women in the age group 15-19, a large share would be unmarried and/or studying. In Bangladeshi society, the prevailing norm is that young unmarried women live with parents unless there is a compelling reason for doing the contrary. Parents may be unwilling to allow them to take up paid jobs or even to participate in the family enterprise. Thus, net impact of age on LFPR will depend on the balance of these forces.

Table 3.1 shows that LFPR among married men and women is much higher compared to unmarried women. This holds for each age group and also on the aggregate (except 25-44 year old women which may be because of a very small number of women in this category). Both male and female LFPR decline after age 44.

Table 3.1: Female and Male LFPR by Age and Marital Status

Age	Female LFPR (%)			Male LFPR (%)		
	All	Ever married*	Unmarried	All	Ever married*	Unmarried
15-17	13.2	21.4	12.1	32.2	58.5	32.1
18-24	31.5	31.5	30.5	67.1	90.6	62.0
25-44	46.2	45.8	54.6	96.6	97.7	87.5
45+	29.5	29.4	28.4	80.1	80.2	66.4
All	36.3	38.1	22.1	80.5	89.4	56.0

Note: *married+ widowed+ divorced+ separated

source: Estimated from the LFS 2017 data

Next, we look at the effect of education on LFPR and gender difference in this context (Table 3.2). For both men and women, the pattern is non-linear. Initially for those with low education the rate is high, then in the medium range of education it declines and is again high among the tertiary educated persons. For women, LFPR is the highest among the tertiary educated ones. This is expected because they wish to reap the benefits from the investment on education.

Table 3.2: LFPR of male and female aged 15 years & above by education

Education group	Labour force participation rate (per cent)		
	Male	Female	Both Sex
No education	84.2	38.1	59.0
Up to primary	91.5	39.7	66.2
Five to less than SSC	75.6	34.0	53.0
SSC	66.5	25.9	47.2
HSC	63.2	31.9	50.3
Tertiary	89.4	56.9	79.4
Others	75.6	41.8	67.3
All	80.5	36.3	58.2

Source: Estimated from unit records of the LFS 2017 data

3.2. Role of Male Income

To verify whether female LFPR is influenced by male spouse's income in the households, FLFPR has been estimated for spouse's income groups. Data permits that this can be done only for those who have earned income from salary and wage. LFS does not provide data on income from self employment. Therefore this variable could not be used in the regression analysis as its inclusion will reduce the sample.

Data from cross tabulation presented in Table 3.3 show a negative influence of salary earnings on female LFPR. The relationship holds for both rural and urban areas but is clearer for urban households. Data shows that if male heads of household have monthly incomes higher than Taka 18000 or less, spouses' LFPR is 50 per cent or lower. It ranges from 61 per cent to 85 per cent for male heads earning less than 18000 per month.

It implies that income effect has, to some extent, contributed to the reduction of urban women's LFPR over the period 2010 to 2017 when urban incomes have risen.

Table 3.3: Female spouse's LFPR by income group of male head of household

Male Head's Income from salary/ wage (taka per month)*	Female spouse's LFPR		
	Rural	Urban	All
01 to 5000	75.9	100.0	85.3
5001 to 7500	69.5	77.5	72.8
7501 to 10000	65.4	67.5	66.6
10001 to 18000	67.0	55.8	61.0
18001 to 36000	45.6	52.2	50.0
36001 to 60000	100.0	38.9	43.7
60001 & above	--	49.9	49.9

*This table is only for male head and spouse when male head has a salary/wage income.
Source: Estimated from unit records of LFS 2017 data

3.3. Multivariate Analysis of Determinants of Female Labour Supply

This section presents results of a multivariate analysis to examine the determinants of women's participation in the labour market. A logic regression equation has been estimated with "whether a woman is a labour force participant" as the dependent variable and her own and household characteristics as independent variables.

The direction of effect of the dependent variables as reflected in the sign of the coefficients, shown in column 2, and their significance, support the conventional hypotheses (appendix Table A 2.2). The major results are mentioned below.

Household heads' (in most cases male) characteristics are significant. Head's age has a negative effect, which possibly reflects more conservatism among aged persons.

Landownership of household has been included in the form of three dummy variables: very

small, medium and large (1, 2, and 3 respectively), with no land ownership as the base group. Group 1 and 2 have positive coefficients. This is because landownership creates scope of women's self/family employment. The largest group (land group 3) has a negative coefficient because such large landowners usually use hired workers for all agricultural activities and given the traditional attitudes of better off families, the women do not participate in such work.

Households receiving remittance money has a negative coefficient, again reflecting a negative income effect.

Number of children below age five has a negative effect through higher opportunity cost of women's time because of more demand for child care. Household size is likely to have similar effects, but the contrary has been observed, the coefficient being positive. This is possibly due to two forces working simultaneously. First, larger number of members in the family raises the pressure of consumption needs, necessitating women's work in the labour market. In addition, in such families there are possibly more adult persons who may share the domestic chores.

Women's education related variables are some of the important policy relevant variables. Dummy variables for no education and tertiary education have positive effects. Those with medium range of education, secondary below SSC, SSC and HSC have significantly lower chances of labour force participation. This is possibly due to lack of demand for their employment. They may have some inhibition to family employment because of lack of scope for utilising their education in the currently available activities.

Quality of education is outside the scope of present study. But this may have implications for women's participation in the labour force because the employers may consider that the quality of education is not sufficient to justify the higher wage expected by women with higher levels of education. This deserves attention in future research.

Muslim women have lower LFPR compared to those of other religions. A similar result was obtained by Das (2003) in the Indian labour market.

Among the division dummy variables, Rajshahi has the highest positive coefficient. This indicates that female labour force participation is poverty induced (this district has the highest poverty rate).

The major findings of the chapter are summarised below:

The most important point to be highlighted is that female LFP is lower among families with large landownership or higher income. This income effect acts as a barrier to future increase of female LFP. More in-depth study on why and how such income effect works may help overcome this barrier. Possible reasons include lack of suitable jobs for the educated women from upper and lower middle income groups. Push factor induced participation in poor quality jobs may not be acceptable to these women and this merely highlights the need for focus on generating better quality jobs.

The other important personal feature acting as a constraint to women's LFP is the presence of small children raising the demand for time for childcare.

Chapter 4

Education and Gender Inequality

The importance of education as a factor behind the rise of female LFPR has been discussed in Chapter 2. This chapter therefore looks at women's access to education at different levels, especially at levels above secondary. It first looks briefly at gender differences in enrolment rates and other indicators of school achievement at the national level.

Household level data on educational attainment has been used to examine the differences in educational attainment of the male and female labour force. The analysis also goes into the links among continuation of education and marriage, and the rural-urban difference in this respect. In addition to bivariate analysis, the present chapter uses a multivariate analysis of household level determinants of education.

4.1 Enrolment Rates

National data on school enrolment at the primary level shows progress towards gender equality, as is already well known (BANBEIS, various years). In fact, net enrolment of girls at the primary level is close to one hundred per cent and is higher than that of boys. However, the picture is not as bright in the secondary level. At grades 7 and above, girls' dropout rates are higher (Annex Table A 4.1).

Dropout rates at the primary level has fallen among girls and the decline is higher than that of boys. At the higher secondary level, during 2010 to 2015, the picture is less clear. Dropout rates declined only by a small percentage point among girls and the decline was higher among boys. For both boys and girls, there have been some fluctuations (Annex Table A 4.2).

At the tertiary level, girl students constitute 40 per cent of all students. Thus at levels above secondary, gender inequality continues, and it may not be redressed soon because even if enrolment rates rise, dropout rates continue to be high at secondary and higher secondary levels (Annex Table A 4.3).

4.2 Educational attainment of the labour force

Educational attainment of the employed labour force aged 15 years and above shows (Table 4.1) that a large share is without education or is educated up to the primary level only. Among male and female, 36.4 and 60.6 percent are in this category. The higher percentage of the uneducated female labour force reflects past differences of male and female enrolment in schools. The gender difference persists in the upper levels of education as well. For example, 6.1 and 3.4 percent of male and female labour force respectively has tertiary or higher levels of education.

Table 4.1: Education Attainment of Male and Female Labour Force

Education group	Education of 15 to 34 years aged			Education of 35 plus years aged			Education of 15 years& above aged		
	Male	Female	All	Male	Female	All	Male	Female	All
No education	14.1	15.1	14.4	40.6	55.1	44.7	29.2	34.9	31.0
Up to primary	31.2	25.4	29.2	22.4	22.0	22.3	26.2	23.7	25.4
Five to less than SSC	28.4	35.8	31.0	16.4	14.2	15.7	21.5	25.1	22.7
SSC	9.7	10.0	9.8	8.2	3.6	6.9	8.9	6.8	8.2
HSC	8.5	7.9	8.3	4.9	2.0	4.0	6.4	5.0	6.0
Tertiary	6.2	5.0	5.8	6.7	2.9	5.6	6.5	4.0	5.7
Others	1.9	0.7	1.5	0.9	0.3	0.8	1.4	0.5	1.1
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Estimated from the unit records of the LFS 2017 data

Table 4.2: Whether Enrolled in Educational Institution by Age and Marital Status

Currently studying (% in each age group)	Age of women (years)				Age of men (years)			
	15-17	18-24	25+	All	15-17	18-24	25+	All
	Unmarried							
Yes	80.7	65.1	18.3	70.3	64.6	44.0	13.8	46.0
No	19.3	34.9	81.8	29.8	35.4	56.0	86.3	54.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Ever married							
Yes	16.2	6.9	0.3	1.5	32.0	7.6	0.2	0.5
No	83.8	93.2	99.7	98.6	68.0	92.4	99.8	99.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Estimated from unit records of the LFS 2017 data

Comparisons between data from 2017 and 2010 (appendix Table A.4.1) shows that improvements have taken place over this period. The share of the labour force without education has declined among men and women. Among women, the share has declined from

40.6 per cent to 36.4 per cent. The decline was much higher among men, from 39.9 per cent to 29.8 per cent. The share with tertiary education increased among both men and women.

It is expected that the younger among the female labour force captures the opportunities of improvement in education attainment. Therefore, the education levels of the labour force in the ranges of 15 to 34 and 35 and above have been examined. Data presented in Table 4.1 shows that among the younger female labour force, a much higher share is educated. This is true for all education levels, primary to tertiary. Data show that 5.0 per cent and 2.9 per cent of young and older female labour respectively are found to have tertiary education. Those with SSC and HSC are 17.9 per cent and 5.6 per cent respectively among the young and older female labour force. Data from Table 4.1 suggest that gender equality in terms of higher education has also been going through an improvement.

It implies that if there is an increase in LFPR among younger women, it may result in an improvement in the overall quality of the labour force. Suitable policies should be designed with this objective.

4.3 Links between Education and Marriage

Supply side forces affecting female LFPR, either in the form of the burden of family responsibility or conservatism, are likely to be linked with women's age, level of educational attainment and marital status. The evils of early marriage are many and its demographic and health impacts have been widely discussed. The concerns about low and non-declining age at first marriage in Bangladesh have been widespread.

Apart from the health and early child bearing impact, low age of marriage is also likely to have a negative effect on school enrolment and educational attainment of women. This impact occurs due to existing social constructs about married women's roles. Home making is expected to be the predominant responsibility of married women and being a student stands in the way of this. And things get much worse when a child is born.

In addition to the social acceptability issue, there is also the problem of shifting of residence. As a girl moves to live with her husband in another place, she has to enrol at another educational institution, which is often difficult and expensive.

Moreover, parents who plan to arrange the marriage of their daughter at an early age are less likely to invest in their education and to ensure that girls get the good grades required for progressing to secondary or tertiary education. Thus the chances are that within a certain age group, married women are less likely to be enrolled as students. This has been observed with data from the LFS 2017.

Enrolment rates among married and unmarried women of various age groups have been examined (Table 4.2). The association between marriage and education is negative. In the age group 15 to 18 years, 80.3 per cent of unmarried and only 16.2 per cent of ever married women

are enrolled in educational institutions. The difference among the two groups is even larger for 19-24 years aged women.

Marriage before age 18 will thus mean that these women have very low chances of completing SSC/HSC and marriage before age 24 reduces the chance of women's tertiary education.

Nonetheless, it must be clarified that the link operates in both directions. While dropout from schools may result in a girl's marriage at a low age, marriage may also lead to the discontinuation of studies.

In this scenario, the social and cultural context may also play important roles (Khosla 2009). The institution of purdah (veil) has often been used to exclude women from taking part in social, political and economic activities. However, the increased emphasis on girls' education has reduced the social exclusion of women considerably. This is also demonstrated by the fact that both married and unmarried women irrespective of whether they observe purdah, participate in RMG employment. These women have greater economic independence, respect, social standing and louder "voices" than before. The scope of such employment may encourage the continuation of women's education beyond primary level and even delay marriages.

Is there a male female difference in the effect of marriage on education?

In this context, most of the disadvantages which lead to the discontinuation of studies immediately before or after a young women's marriage do not apply to young men. Social constructs of men's role in the family strongly support that they are the main earners in the family and therefore, families are keen to invest in their education. Moreover, most young men choose their own age of marriage after they take a decision to conclude their student life and begin income earning activities. Their age of marriage is much higher than that of women's age at first marriage, and the concerns related to the negative impacts of marriage on education are not therefore, equally valid. In 2017, in the age group 15-17, the shares of married women and men were 10.7 per cent and 0.7 per cent respectively. In the age group 18-24 years, the shares of married women and men were 73.9 per cent and 17.7 per cent respectively.

Table 4.3: Distribution of male and female population by Age by Marital Status

Age group (Years)	Female			Male		
	Ever married	Unmarried	Total	Ever married	Unmarried	Total
15-17	10.7	89.3	100.0	0.7	99.3	100.0
18-24	73.9	26.1	100.0	17.7	82.3	100.0
25+	98.9	1.1	100.0	94.1	5.9	100.0
All	88.1	11.9	100.0	73.4	26.6	100.0

Source: Estimated from unit records of the LFS 2017 data

Although the marriage for men aged 18-24 years may not affect the possibilities of their continuation of studies, it may have other indirect negative effects. In the present context, the relevant concern is that there is usually a spousal age gap of 3 to 10 years and if 18-24 years aged men are getting married, it may also mean the marriage of women in the age range of 15-18 years.

4.4 Rural Urban Difference in Education

Differences between the educational attainment of men and women in rural and urban areas deserve attention because this may constitute an important dimension of rural-urban inequality. Although the “Urban bias” theory (Lipton 1978) behind unequal development of urban and rural areas may not be valid in its original form, rural urban inequality in per capita income and poverty incidence continues to exist. This may result in unequal access to education.

Data on educational attainment in rural and urban areas show that (Table 4.4):

- a) Better educational endowment in urban areas prevails both among men and women.
- b) Higher shares of both male and female populations in rural areas compared to urban areas have primary or less than SSC levels educational attainment only.
- c) In the higher levels (SSC to tertiary), urban men and women are at an advantage. In fact, only a small share of women in rural areas have completed tertiary education (1.2 per cent), whereas among urban women it is 5.9 per cent.

Table 4.5 shows that among rural and urban women, 8.85 per cent and 11.5 per cent are currently studying. In this respect, there is no urban-rural difference among men.

Table 4.4: Educational Attainment in Rural and Urban Areas

Education level of Age 15+ population	Rural		Urban	
	Male	Female	Male	female
No education	31.9	36.9	18.4	24.3
Up to primary	23.9	22.4	20.8	20.1
Five to less than SSC	22.6	26.9	23.7	26.7
SSC	9.8	8.1	13.0	13.2
HSC	7.1	4.2	10.9	9.2
Tertiary	3.5	1.2	11.5	5.9
Others	1.3	0.3	1.7	0.8
All	100.0	100.0	100.0	100.0

Source: Estimated from unit records of the LFS 2017 data

Table 4.5: Current Enrolment in Educational Institution by Rural and Urban, Male and Female Aged 15 and Above

Currently studying (% in each group)	Women			Men		
	Rural	Urban	All	Rural	Urban	all
Yes	8.8	11.5	9.6	12.6	12.6	12.6
No	91.2	88.5	91.4	87.4	87.4	87.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: LFS Report 2016-17.

4.5 Determinants of Women's Access to Education: Multivariate Analysis

This section presents the results of a multivariate analysis of the determinants of women's access to education. Logic regression equation has been estimated for women aged 15 to 29, with "whether a woman is studying" as the dependent variable and her own and household characteristics as independent variables (Table A4.4).

The major findings are discussed below. Women's personal characteristics have, in most cases, the expected direction of effects. The probabilities of studying are smaller in the higher age groups. The coefficients get smaller for dummies for age groups 20-24 and 25-29 years with 15-19 as base. Marriage and number of children aged less than 5 reduce her chances significantly.

Head of household's education has a positive effect and age has a negative effect as expected.

Variables reflecting income have positive effects. This is true for the dummy variable where a household receives remittance income, and the landownership variable.

Those who live in rural areas have significantly lower chances of studying. Thus women's advantage of higher school enrolment in rural areas (BANBEIS) is lost when their age is 15 or higher. The three divisions, Dhaka, Chittagong and Sylhet, have lower chances of women in the age group 15-29 being enrolled in educational institutions. Sylhet is known for conservatism. The negative coefficient for Dhaka is difficult to explain. It may be due to more employment opportunities among the low income households.

To summarise the major findings, the association between marriage and education is negative. Only 16.2 per cent of married women in the age group 15-17 are studying while among unmarried women in this age group, 80.7 per cent are studying. Similarly, marriage before age 24 reduces the chances of women's tertiary education. In 2017, in the age group 15-17, 10.7 per cent of women and 0.7 per cent of men were married. In the age group 18-24 years, the shares of women and men who were married were 73.9 per cent and 17.7 per cent respectively. Women in the rural areas have lower chances of education.

The results on the factors behind FLFPR show a few trends which apparently appear to be

contradictory. For example, it has been observed that tertiary education raises FLFPR and urban women aged 15 and above have a higher share in the tertiary educated group. Yet, urban FLFPR is lower and declining. This is because of two factors. First, the share of women with such education is still low and those with lower education dominate the trend of LFPR. Second, as shown in Chapter 2, rural women have more employment opportunities in self/family employment.

The same is true for the relationship between marriage, education and FLFPR. It is true that married women have higher LFPR, and it has been observed that a higher percentage of rural women are married and rural LFPR is higher and has increased. Does this imply that marriage does not hinder women's participation in the labour force? It is not possible to answer this question because there is no information on whether these women entered the labour force before or after marriage.

It is also seen that unmarried women in lower age groups (15-24) have lower LFPR than married ones. But the relationship reverses after age 24 (Table 3.1). All these findings indicate that rural women at low ages who are married are in the labour force, but usually engage in traditional self/unpaid family employment. In contrast, those at higher ages and still unmarried have a better scope of education, and enter the labour force with better jobs and higher earnings (Chapter 6).

Chapter 5

Unemployment among Young Educated Women

Whether demand deficiency is operating in the case of female employment opportunities will be reflected in the “unemployment rate” among women. High unemployment rates are likely to discourage women from entering the labour force.

Table 5. 1: Unemployment Rate by Education Level: 2010-2017

Education	2017		2016		2010	
	Male	Female	Male	Female	Male	Female
No education	1.0	2.5	1.3	3.9	3.3	6.1
Primary	1.8	4.8	1.4	5.2	7.4	8.1
SSC	3.2	7.4	4.8	9.7	15.4	13.9
HSC	11.1	26.2				
Tertiary	8.3	21.4	6.9	16.8	7.6	15.4
All education	3.1	6.7	3.0	6.8	6.8	8.5

Source: Estimated from data from LFS Reports, (various years).

Data on unemployment rates of women and its changes during the last few years have been shown in Table 5.1. The unemployment rate among women is higher than that of men. The rate is higher among tertiary educated women compared to those with lower education. Among primary and SSC educated women, the unemployment rates in 2017 are 4.8 per cent and 7.4 per cent; among HSC and tertiary educated women, the rates are 26.2 per cent and 21.4 per cent. Among those with tertiary education, the unemployment rate has risen during 2010 to 2017 and the rate of the increase is worse for women.

Data on unemployment rates among young women is actually a more relevant indicator of job prospects for new entrants in the labour market. In fact, before moving on to discuss this data, it will be useful to highlight why it is important to focus on the youth labour market.

In a resource poor country like Bangladesh, youth populations who enter the labour force are an asset. However, the potential of this young labour force can be realised only if they are absorbed in productive employment. This asset has been termed as demographic dividend, as it may contribute to the economic growth of a country. Nonetheless, if this labour force remains unemployed after completing their education, not only will the demographic dividend be lost, but this frustrated group may also express their grievances through unsocial means. Therefore, the extent of unemployment among the educated youth female labour force requires attention.

Data on unemployment rates among young women (Table 5.2) show the following:

The unemployment rate among young women is higher than the rate for women of all ages. In

2017, the values are respectively 15.0 per cent and 6.7 per cent (Table 5.1 and Table 5.2).

The unemployment rate has risen during 2016 to 2017 from 11.3 per cent to 15.0 per cent.

Table 5. 2: Unemployment Rate among Educated Youth (age 15 to 24 years)

Education	2017 (UE rate %)			2016 (UE rate %)		
	Male	Female	All	Male	Female	All
No education	2.3	10.0	4.8	6.1	7.4	6.7
Primary	3.7	9.3	5.3	6.4	13.4	8.7
SSC	6.7	11.7	8.7	7.8	17.7	10.7
HSC	22.7	35.1	27.0	6.1	5.8	6.0
Tertiary	30.1	42.5	34.3	10.8	15.0	12.1
All education	8.2	15.0	10.6	7.4	11.3	8.7

Source: LFS Reports, (various years).

Thus the situation of the job market for young women contains discouraging features for new entrants. What is more alarming is that the unemployment rate among educated women (HSC and higher) is substantially higher than that among less educated women. Among educated females aged 15 to 24 years, unemployment rates among those with HSC are 35.1 per cent in 2017 and 5.8 per cent in 2016. Among the tertiary level educated, these are 45.5 per cent and 15.0 per cent in 2017 and 2016 respectively. It should also be mentioned that this increase has taken place despite the fact that LFPRs among young women were at the same level in these two years.

But why the unemployment rate is rising cannot be answered on the basis of LFS data only. Possible reasons are that there is a shortage of job creation which could match the preferences of young, educated job seekers. They are likely to prefer jobs within commuting distance from their homes whereas most of job creation takes place in larger towns far from home. Generation of self employment may not often be possible due to a lack of business knowledge and experience. Employers often show preference for male workers. The unemployment rate among the educated, young male labour force is also high. Of course, the weight of these forces can be assessed only through additional empirical data generation.

For adoption of policies, it is pertinent to go deeper into the factors influencing why the educated youth labour force faces such unemployment. The large scale labour force surveys, however, do not provide enough in-depth information to understand the process of unemployment and this may be a subject of future research.

To summarise the major findings, female unemployment rates have risen during the period of 2010 to 2017. The rates of unemployment are higher among HSC and tertiary educated women and have risen during 2010 to 2017, and the increase is larger among women. High female unemployment rates contribute to a decline of LFPR by discouraging women's participation in the labour force.

Chapter 6

Gender Inequality in the Structure of Employment and Earnings

The process of economic growth and development involves transformation of the structure of economies in a way that is characterised by a reduction in the share of agriculture and a rise in the share of industries and services in total output as well as employment. This process is reflected in the historical experience of developed countries of the West as well as the countries that have developed in recent decades.

While a number of economists have offered explanations for the process mentioned above, models developed by W. A. Lewis (Lewis, 1954), and Ranis and Fei (1961) provided a framework for analysing this issue in the context of developing countries that have an abundance of labour. According to them, transfer of workers from the traditional sector to the modern sector is an important part of the development of such economies. The experiences of the countries of East and South East Asia (ESEA) brings out two additional features of the process of structural change: (i) the role of export-oriented labour-intensive industries in creating jobs, and (ii) employment of women in such industries. A high rate of growth of such industries helped absorb surplus labour rapidly, and many of those jobs were taken up by women. As a result, women's participation in the labour force of those countries (i.e., in the ESEA region) was also high⁵.

The purpose of the present chapter is to provide an empirical analysis of the degree of structural change that has taken place in women's employment and of inequality in terms of earnings and mobility in jobs. The structure of employment is analysed both in terms of sector composition and status in employment. As for inequality in earnings, a quantification of male-female differences in various sectors is followed by an analysis of the role of education and experience⁶.

6.1 Changes in the Structure of Employment: Sector

Data presented in Table 6.1 show that between 2005-06 and 2013, there was a gradual decline in the share of agriculture in overall employment as well as women's employment. There was a corresponding rise in the share of manufacturing. This is in line with the theory and experience of economic growth and development mentioned earlier. However, there was a reversal of this trend after 2013 for women. While the share of agriculture in total employment as a whole

⁵ As already mentioned in this study, female labour force participation in that region has been higher than in South Asia (including Bangladesh). Rapid growth of export-oriented labour-intensive industries has been a major contributory factor.

⁶ One could, of course, argue that the differences in education and experience also reflect discrimination that women are subjected to. For example, although gender equality has been achieved with respect to enrolment at primary and secondary levels, the rate of drop-out is high for girl students. And the enrolment ratio falls sharply at higher levels. As for experience, there are sectors (e.g., RMG industry) where women remain in employment only when they are young. So, it would be difficult to compare wage/earnings of those who are, say, 40 years of age or older.

Table 6.1: Sector Composition of Employment (% of total) by Gender, 1999-2000, 2005-06, 2010, 2013, 2016-17

Sector	1999-2000			2005-06			2010			2013			2016-17		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Agriculture	50.76	51.91	46.24	45.76	39.27	66.54	47.57	40.18	64.84	45.10	41.41	53.64	40.59	32.16	59.68
Manufacturing	9.55	7.50	17.63	11.03	10.88	11.51	12.45	12.73	11.77	16.36	13.78	22.52	14.42	13.99	15.40
Construction	2.81	3.21	1.22	3.22	3.94	0.92	4.84	6.31	1.40	3.69	4.76	1.00	5.64	7.53	1.32
Services	36.10	36.71	33.71	37.41	43.05	19.36	35.36	41.13	21.87	34.11	40.05	22.85	38.98	45.84	23.45

Source: Calculated from Labour Force Survey, different years.

Table 6.2: Growth of Employed Persons by Industry and Gender (% per year)

Sector	1999-2000 to 2005-06			2005-06 to 2010			2010 to 2013			2013 to 2016-17			2010 to 2016-17		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Agriculture	1.53	-2.14	12.77	4.29	1.79	8.41	0.60	4.12	-5.00	-1.67	-6.53	6.22	-0.63	-1.76	0.89
Manufacturing	5.82	9.09	-1.15	6.34	5.15	9.62	12.34	5.83	25.64	-2.25	0.90	-7.57	4.16	3.15	6.50
Construction	5.66	6.05	1.34	13.52	13.01	19.51	-6.28	-6.17	-9.55	14.39	14.53	12.79	2.87	3.10	0.30
Services	3.91	5.27	-3.24	1.93	0.08	12.88	1.21	2.18	2.68	5.27	5.63	3.73	3.37	3.29	3.27
Total	3.30	2.51	6.13	3.32	1.22	9.06	2.39	3.08	1.21	1.33	0.60	2.94	1.82	1.67	2.19

Source: Calculated from *Labour Force Survey*, different years.

continued to decline, the share for women increased after 2013. Moreover, in the case of women, the share of manufacturing in total employment declined substantially between 2013 and 2016-17. There was also a decline in the share of services. These trends mark a significant reversal of what was attained and was expected for the future.

Since the decline in the share of manufacturing and services in total employment occurred only in the case of women, it is important to look at the possible reasons for this. One wonders whether this marks the feminisation of lower productivity sectors like agriculture after the departure of men abroad or to urban areas for employment.

The sector composition of employment is related to the growth of employment in different sectors of the economy, data for which is presented in Table 6.2. In this table, growth rates of employment by gender and major sectors are presented for different sub-periods from 1999-2000 to 2016-17. A comparison of growth in the different sub-periods shows that for the growth of women's overall employment, 2005-06 to 2010 was the "golden period" with the highest rate of 9.06 per cent per year. For manufacturing employment, 2010 to 2013 was a similar period, with annual growth of 25.64 per cent. But even such high growth of employment in manufacturing could not offset the decline in employment in important sectors like agriculture, construction and services. As a result, overall employment growth during that period was only 1.21, but there was improvement in that respect during the subsequent years, although there was a decline in manufacturing employment. On the whole, it would appear that the rate of growth of overall employment as well as employment in various sectors has been quite unstable.

Some analysts point out the possibility of overestimation of employment in the 2013 LFS and argue that the negative growth of employment observed after that year is caused by this. Although the present authors do not see any particular reason for the alleged bias in the 2013 LFS, for the sake of avoiding the possible effect of such a bias in the conclusions, this report is presenting data for the earlier years as well. A comparison between 2010 and 2016-17 shows that the share of agriculture in total employment of women has not increased between those two years, but declined a bit. However, the decline was much smaller for women compared to men. Furthermore, it may be noted that while the share of the service sector has increased for men, the opposite has been the case for women. So, the point made above of men leaving sectors with lower productivity and women remaining there should not be ignored altogether.

In a discussion on the employment of women, it is important to go beyond the broad sector classification used in Table 6.1 and see where they are employed in larger numbers and whether any change is taking place in that regard. Based on such an empirical exercise, it may be possible to say something - even though tentatively - about possible sources of employment in the medium-term future. Some data is presented in Table 6.3.

Table 6.3: Share (per cent) of Women in Employment of Different Sectors

Sector	2016-17	2010
Agriculture, forestry and fishery	45.06	40.91
Manufacturing	32.89	28.33
Construction	7.44	8.67
Retail trade	7.68	
Transport and storage	3.83	6.15
Accommodation and food	15.89	6.74
Finance and insurance	18.58	5.45
Legal and accounting activities	11.11	n.a.
Public administration and defence	14.58	6.68
Education	40.81	25.37
Human health	42.94	38.37

Source: Calculated from Labour Force Survey, 2010 and 2016-17

Some patterns and trends seem to emerge from data presented in Table 6.3. First, after agriculture, the major employers of women are health services, education, and manufacturing - in that order. A major change during the past decade or so is the emergence of education as a major employer of women. Of course, this may be due largely to the large proportion of women in teaching at the primary level, but this can be taken as a good beginning, and further progress can be aimed at. Second, although manufacturing has lost the second position to education, nearly a third of this sector's jobs are held by women, which is substantially higher than in 2010. Third, a few other services have emerged as notable employers of women. They include finance and insurance, accommodation and food, public administration, and legal services. Although the proportions are still small in these sectors, their emergence in recent years can be taken as a sign of progress.

The sectors that are traditionally important areas of women's employment (e.g., education and health) as well as some emerging sectors like accommodation and food, public administration and legal services - all require some level of education. Hence it is possible to hypothesise that education is an important variable that can influence the sectors in which women are employed. Data presented in Table 6.4 would appear to support this hypothesis. Data shows

that with just primary education, the possibility of finding employment outside agriculture and manufacturing is limited. The probability of employment in education, health and public administration increases when the level of education is secondary or above. More than 70 per cent of those employed in the information and communication sector reports higher secondary or higher levels of education. The general conclusion that emerges is that in order to move into modern sectors where wage/salaried jobs are the norm, education is an important pre-requisite.

It is true that the rate of unemployment among educated job-seekers – both men and women – is quite high. But that is more an indication of the mismatch between the kind of education and skills required by the employers and that is provided by the educational and training institutions. Unemployment of the educated should not be used as an argument against the importance of education in moving from traditional and low productivity sectors to those with higher levels of productivity and returns. This is also the case for moving from unpaid household work to salaried jobs – as we shall see below.

6.2 Change in the Structure of Employment by Status

Status in employment, i.e., whether one is working as an employer or employee, or is self-employed, is another indicator of the structure of employment. As economic growth takes place and modern sectors like manufacturing and services become more important, it can be expected that more and more people will find jobs with salaries or will be involved in some kind of self-employment rather than simply contribute to the family's economic activities. Data on employment status is presented in Table 6.5. Several observations may be made on the basis of this data.

Some change in the structure of women's employment by status appears to have taken place over time. First, the proportion of unpaid family helpers has declined substantially. For men, this share was low in the earlier years also but for women, the share of this category has declined noticeably from a rather high level. Second, the share of self-employment has increased for women, although it declined for men. It thus seems that while men are moving increasingly towards wage/salaried jobs, women are moving from unpaid family work towards self-employment. Of course, the share of employees⁷ has also increased for women, but that share is much lower than in the case of men in such employment.

As in the case of sectors of employment, if one attempts to identify factors that influence the status of employment, education would probably rank highly. Data presented in Table 6.6 supports this hypothesis. The clear patterns that emerge from this table can be summed up as

⁷ It may be noted in this regard that this category combines what was earlier referred to as “wage/salaried employees” and “day labourers”. After 2013, the published results of the labour force surveys no longer show the latter separately. But in terms of the quality of jobs, the latter obviously would be ranked lower compared to the wage/salary-based employment. So, it is important to distinguish between these two categories.

follows. First, very few with primary or higher levels of education are employed as “day labourers”. Second, about three-fourths of those in wage/salaried employment have primary or higher levels of education. Third, very few of those with higher secondary or higher levels of education are doing unpaid family work. Even in self-employment, most have secondary or lower levels of education. These findings, together with those based on Table 6.4, clearly indicate the importance of education in ensuring upward mobility for women in the labour market.

Table 6.4: Distribution of Women in Different Sectors of Employment by Levels of Education, 2016-17

Level of education	Agriculture, forestry and fishing	Manufacturing	Accommodation & food services	Information & communication	Financial services	Public administration & defence	Education	Human health and social work
None	42.9	27.5	44.8	7.6	9.3	11.6	1.7	9.5
Below primary	8.2	10.5	11.9	6.9	1.3	1.2	1.1	2.2
Primary	16.7	22.6	16.3	2.0	5.7	3.9	1.3	5.4
Below secondary	25.0	29.8	18.2	6.7	13.3	16.5	11.1	17.7
Secondary	5.5	5.8	4.3	4.3	12.3	16.9	13.1	9.6
Higher secondary	1.4	2.4	3.2	13.8	9.4	20.3	28.4	23.1
Tertiary	0.2	1.2	1.3	50.9	48.4	27.4	39.7	25.4
Others	0.1	0.3	0.0	7.8	0.4	2.4	3.7	7.3
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Prepared from unit record data of the 2016-17 Labour Force Survey

Table 6.5: Changes in the Structure of Employment by Status in Employment (percentage of total employment)

Status	1999-2000	2002-03	2005-06	2010	2013	2016-17
Self-employed/own account workers (Total)	35.1	44.8	41.9	40.8	40.7	44.3
Male	49.4	50.6	50.0	47.5	52.22	46.5
Female	10.8	24.5	15.9	25.1	12.31	39.3
Employee	12.6	13.7	13.9	14.6	23.2	39.1 ^a
Male	15.1	13.8	14.5	17.0	22.21	42.6 ^a
Female	8.2	13.4	11.7	8.9	25.5	31.2 ^a
Unpaid family helper	33.8	18.4	21.7	21.8	18.2	11.5
Male	10.2	9.9	9.7	7.1	5.1	4.1
Female	73.2	48.0	60.1	56.3	50.1	28.4
Day labourers	18.3	20.0	18.2	19.7	15.5	n.a. ^x
Male	25.0	22.9	21.9	25.8	18.9	n.a.
Female	7.8	9.6	6.5	5.3	7.2	n.a.

Notes: a: These figures include “day labourers”, a category that was shown separately in the earlier surveys.

X: Day labourers are not shown separately in the 2016-17 report.

Source: Calculated from Bangladesh Bureau of Statistics: *Labour Force Survey*, various years.

Table 6.6: Distribution of Employed Women by Status and Levels of Education, 2016-17

Level of education	Self-employed/own account worker	Unpaid family helper	Salaried employee	Day labourer
None	38.5	39.4	19.9	59.4
Below primary	8.6	7.3	7.6	9.1
Primary	16.2	17.6	15.9	11.8
Below secondary	26.6	27.1	24.9	14.6
Secondary	6.8	6.2	8.4	2.2
Higher secondary	2.3	2.0	9.5	2.4
Tertiary	0.8	0.4	12.4	0.4
Others	0.2	0.1	1.4	0.1
All	100.0	100.0	100.0	100.0

Source: Prepared from unit record data of the 2016-17 Labour Force Survey

6.3 Employment in the Informal Sector (Informal Employment)⁸

Like other developing countries, informal employment is the predominant mode of employment in Bangladesh. Despite an acceleration in the rate of economic growth and some degree of structural change in the economy, the proportion of employment in the informal economy remains very high. For example, in 2016-17, more than 8 out of ten people were in this type of employment. In the case of women, the figure is even higher – 9 out of ten (Table 6.7).

The trend in the proportion of informal employment is not very encouraging either. It rose up to 2010 and then started declining; but the rate of decline has been very slow. For women, the decline was from over 92 per cent in 2010 to a little over 91 per cent in 2016-17. For males, the rate of decline has been higher. So, it seems that gender inequality persists in this respect as well. If one notes the definition of informal employment – jobs that lack basic employment benefits and social or legal protection – it becomes clear that over 91 per cent of employed women are in this type of employment, the corresponding figure for men being 82 per cent.

⁸ The definition of “informal employment” has undergone a change in the labour force surveys of Bangladesh. Up to the survey of 2010, the informal sector was defined by the number of workers employed. Units employing less than four workers were classified as informal sector, and both rural and urban areas were covered by the definition. In the survey of 2013, a broader concept of “informal employment” was adopted. It covered such employment in both formal and informal sectors. “Informal sector” was defined as “unregistered and/or small unincorporated private enterprises engaged in the production of goods and services for sale or barter.” Informal employment was defined as a “job-based concept and encompasses those jobs that lack basic social or legal protections or employment benefits and may be in the formal sector, individual sector, or households” (Bangladesh Bureau of Statistics, 2013). The subsequent surveys of 2015-16 and 2016-17 use the broader definition adopted for the 2013 survey.

Table 6.7: Employment in the Informal Sector

Year	Employment in the informal sector (million)			Share of informal sector employment in total employment (%)		
	Total	Male	Female	Total	Male	Female
2002-03	35.1	27.2	7.9	79.23	78.95	79.79
2005-06	37.2	27.5	9.7	78.48	76.18	85.69
2010	47.3	32.4	14.9	87.43	85.5	92.3
2013	50.1	35.6	15.2	87.4	86.3	90.3
2015-16	59.5	41.8	17.8	86.2	82.3	95.4
2016-17	51.7	34.6	17.1	85.0	82.0	91.2

Source: *Labour Force Survey* (various years).

It is not difficult to understand why informality in the labour market has persisted at such a high level. First, growth seems to have taken place more in sectors where the possibility of formal types of employment (i.e., jobs that are covered by formal agreements and social protection measures) is lower. These are jobs that are created through self-employment and in micro enterprises of various types. Second, even in formal sectors, e.g., large and medium scale manufacturing and modern services, a large proportion of the jobs created do not conform to the definition of formal employment. As a result, output growth and informal employment continue side by side.

6.4 Male-Female Differences in Earnings and Occupations

Earnings

Gender differential in earnings is a subject of longstanding discussion in the literature on employment and labour markets. Data from the Labour Force Survey of 2016-17, presented in Table 6.8, shows the extent and variation in this respect. On average, women's wage and salary are ten percent lower than men's⁹. But this difference varies between occupations, the gap being the largest for agriculture and elementary occupations and lowest for technicians and associate professionals. If one looks at the proportion of women in different occupations, one can see that a very high proportion is engaged in the two occupations where the gender pay gap is the highest, implying that a large proportion of women suffer from such discrimination.

⁹ Rahman and Al-Hasan (2018) found that in 2017 women's earnings were 12.2 per cent lower compared to those of men and that discrimination was higher for lower deciles. Wage gap was also found to be higher in the informal sector.

Table 6.8: Gender Differences in Earnings in Wage/Salary-based Employment by Occupation, 2016-17

Occupation	Women's Average Monthly Income as Proportion of Men's (%)
Managers	90.19
Professional	92.49
Technicians and Associate Professionals	95.90
Clerical Support Workers	90.93
Service and Sales Workers	93.37
Skilled Agricultural, Forestry and Fisheries	82.15
Craft and related Trades Workers	92.05
Plant and Machine Operators and Assembler	92.57
Elementary Occupations	83.13
Total	90.22

Source: Calculated from the Labour Force Survey 2016-17 data.

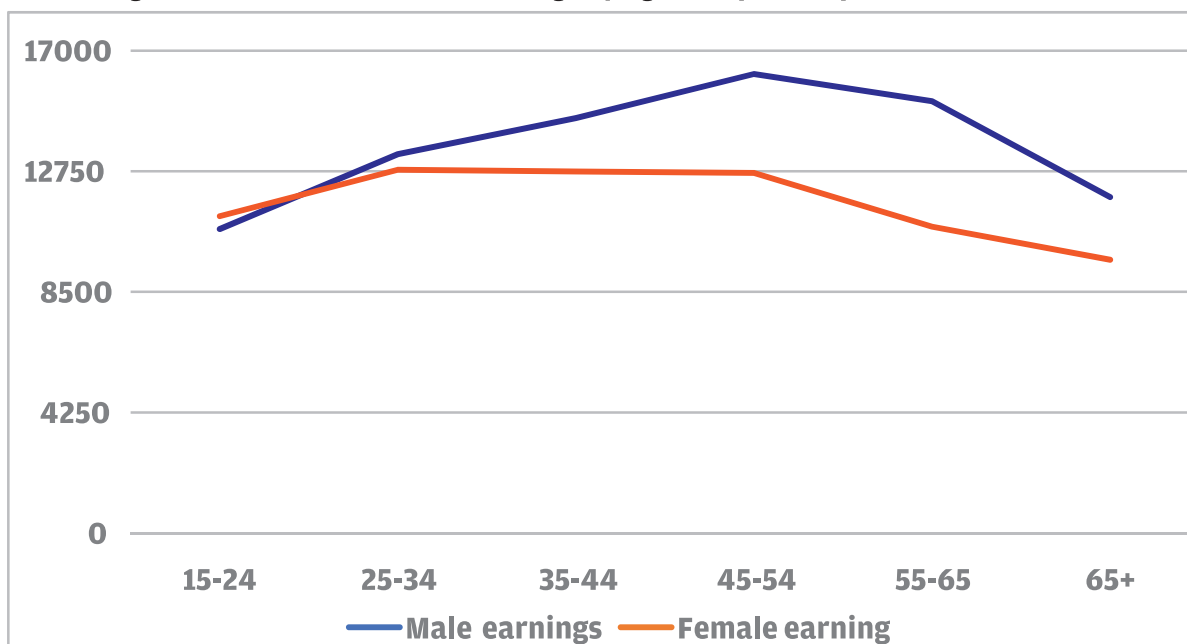
A look at the trend in the gender differential in earnings indicates a widening of the gap over time. In 2013, the gap was less than five per cent; by 2016-17, it increased to nearly ten per cent.

An interesting aspect of the gender gap in earnings is that it widens with the age of individuals, as can be seen from Figure 6.1. For both men and women, earnings rise first, and after a certain age starts to decline. For women, the peak comes much earlier, during 25-34 years, than in the case of men, during 45-54 years.

An attempt has been made to analyse the importance of different factors in influencing the earnings of women and men. The starting point for such an analysis is the received theoretical and empirical analysis of the importance of education and experience in determining the earnings of individuals¹⁰. While data on the level of education of individuals are available from labour force surveys, for information on experience (and other factors like on-the-job training), it is necessary to carry out enterprise-based surveys of employees. In the absence of such data, age of individuals is often used as a proxy for experience; and the present study follows that practice. The education variable in the present exercise is a discrete variable with the following levels of education: primary and below, below secondary, secondary, higher secondary, and tertiary.

¹⁰This is based on Jacob Mincer's pioneering work (Mincer, 1974) on the role of education and experience in determining earnings.

Figure 6.1: Male and Female Earnings by Age Group (Taka per month 2016-17)



Source: Constructed by using data from the labour force survey, 2016-17

A major focus of the present study is the possibility of gender differences in earnings. For an analysis of this issue with a view to examining the existence of discrimination, it would be necessary to select specific occupations where both men and women are employed and see if there are statistically significant differences in wages/salaries. The present study has addressed this issue in two ways. First, a specific sector, viz., manufacturing, has been selected for the purpose, and factors influencing the earnings of individuals employed in the sector have been examined by using regression analysis. The possibility of gender difference in earnings has been examined by using a dummy variable for gender (with 0 for women and 1 for men). If the coefficient of this variable is positive and statistically significant, it would imply that wages/salaries of men are significantly higher than those of women.

Second, in addition to sector-focused analysis, an attempt has been made to examine the possibility of gender differences in earnings in selected occupations. The occupations that have been selected for the purpose are (i) professionals, (ii) clerical support workers, (iii) sales and service workers, (iv) craft and related workers, (v) skilled workers in agriculture, forestry and fishery, and (vi) elementary occupations. The reason for selecting these occupations is that the educational (and training) qualifications required for them are expected to be standard irrespective of the gender of the person employed, and hence there should be no significant difference in earnings between men and women.

Apart from age/experience, education, and gender, other variables could also influence the earnings of employees. For example, location of enterprises could be an important factor - urban based enterprises often offer higher wages. Likewise, the size of enterprises could also be relevant in that larger enterprises could be in a position to offer higher wages.

The results of the regression analysis for employees in manufacturing are presented in Table 6.9. A few observations may be made on the basis of these results. First, the overall fit of the regression model is good from a statistical point of view, although the explanatory power of the model as a whole is not high (as indicated by the low value of R-squared). Second, all the explanatory variables are associated with the right signs. In the case of age, the sign of the coefficient is positive (implying that the earnings of individuals rise with age), but the sign of age-squared is negative which implies that after a certain age, earnings start to decline. This corroborates what was visually observed from Figure 6.1, showing variations in earnings with age. Third, the sign associated with the gender dummy is positive and the coefficient is statistically significant, implying that male earnings are significantly higher than women's earnings in the sector. Fourth, and not surprisingly, education (except primary) emerges as a statistically significant variable influencing earnings. It is important to note that the coefficient of primary education is not statistically significant. The implication of this is that primary education does not have a significant positive impact on earnings. Education starts to matter only if it is over primary, from secondary and beyond. Fifth, the coefficient of the dummy for location is also associated with the positive sign and is statistically significant, implying that earnings are significantly higher in urban enterprises. And finally, the size of the enterprise also emerges as an important variable, with the coefficient of the size dummy showing the right sign and a high level of statistical significance.

Regression estimates for earnings in different occupations (for six occupations as mentioned above) produced somewhat mixed results¹¹. First, the model that was used for employees in manufacturing worked in the case of professionals, clerical and support workers, and those in elementary occupations – in terms of R-squared and F-statistic. As for gender differences, male earnings were found to be significantly higher for those in crafts and related work, agriculture, and elementary occupations. For clerical workers also, the coefficient of the gender dummy was positive, though not statistically significant. The coefficient was found negative for professionals, and sales and service workers – implying that women in these occupations earn more than men, though the difference is not significant.

As for education, different levels of education emerge as significant for different occupations. For professionals, it is only tertiary education that is significant, while for sales and service workers, secondary and higher level education are significant. For craft related workers, education below higher secondary does not have a significant effect on earning.

¹¹ For the sake of brevity, the results of the occupation-focused regressions are not presented here.

Table 6.9: Results of the OLS Regression Analysis of Earnings in Manufacturing, 2016-17

Independent variables	Coefficient.	Standard Error	t-value	p-value	Sig.
Gender	2170.950	112.035	19.38	0.000	***
Age	156.223	19.467	8.03	0.000	***
Age squared	-2.326	0.250	-9.31	0.000	***
Education primary	78.500	155.529	0.51	0.614	
Education below secondary	407.230	147.335	2.76	0.006	***
Education secondary	1642.079	194.163	8.46	0.000	***
Education higher secondary	3473.605	235.419	14.76	0.000	***
Education tertiary	11320.686	229.619	49.30	0.000	***
Education others	276.516	191.411	1.45	0.149	
Size of enterprise	4736.331	102.033	46.42	0.000	***
location	957.067	99.979	9.57	0.000	***
Constant	1181.762	384.054	3.08	0.002	***
R-bar-squared		0.226	Number of observations		24381.000
F-test		648.417	Prob > F		0.000
*** p<0.01, ** p<0.05, * p<0.1					

Source: The regression estimates are based on data from the Labour Force Survey 2016-17.

The upshot of the above-mentioned empirical analysis can be summed up as follows. For employees in the manufacturing sector, women's earnings are significantly lower than men's. The analysis based on occupations did not produce clear conclusions, although statistically significant differences were found in some occupations, viz., craft related work, agriculture and elementary occupations. As women are engaged in these occupations in large numbers, the issue remains important.

Education is found to be important for most occupations and different levels of education are significant in different cases. But education below secondary does not appear to have a significant influence on earnings in several occupations.

It also needs to be added that for analysing gender differences in wages, salaries and earnings, it is important to collect more dependable data through enterprise surveys with a focus on differences in earnings in the same occupations where people with similar educational qualifications are employed.

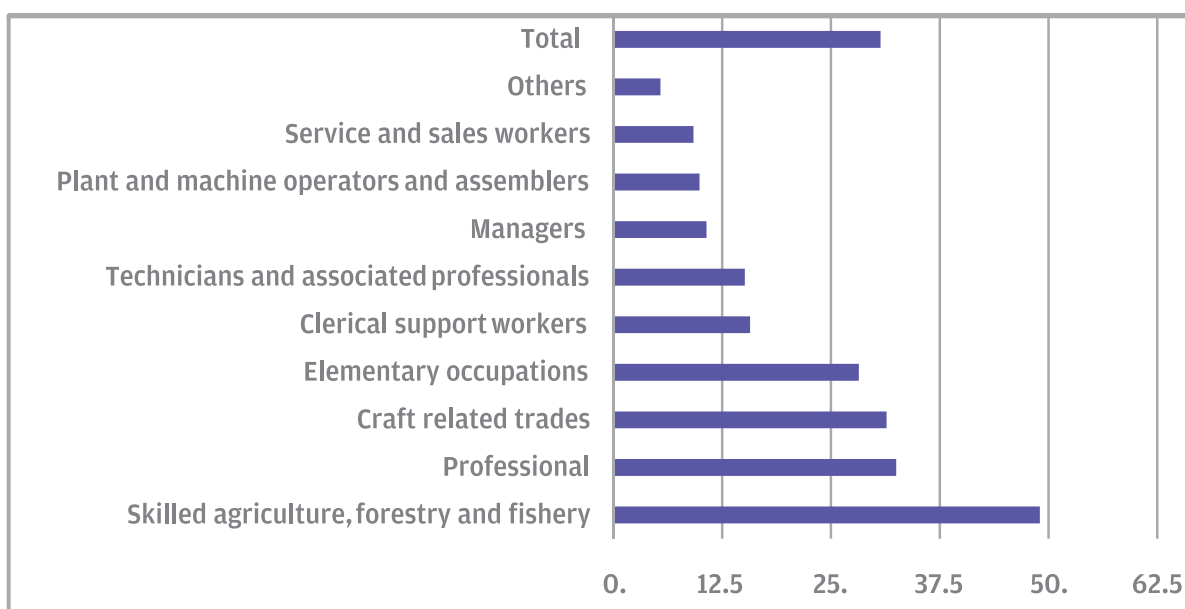
Occupation and mobility

Data on the share of women in different occupations (Figure 6.2) show that they are more visible in a few occupations, viz., skilled agriculture, forestry and fishery, professionals, craft related trades, and elementary occupations. Out of these, professionals and elementary occupations are very broad in terms of scope, and can cover a number of sectors. But the small share in occupations like managers, service personnel, technicians and associated professionals, and clerical support workers is quite noticeable. While an occupation like technician may need specialised qualifications, others like managers, clerical support, service and sales personnel should be accessible with general education. The observed low share of women in such occupations gives rise to a question on whether this is due to discrimination in some form or the other and whether policy interventions could be targeted at raising women's share in such occupations.

That women are grossly under-represented in high level positions can be seen from data presented in Table 6.10. This is particularly so in industry and services, which are sectors that are expected to expand as an economy grows. Hence, it is important to address the issue of women's upward mobility in these sectors¹².

¹² For a detailed discussion of this issue, see ADB-ILO (2016), Chapter 6. The example provided there (pp. 122-123) of the discrimination faced by women in the RMG industry is particularly noteworthy.

Figure 6.2: Women's Share (%) in Employed Population by Occupation, 2016-17



Source: Constructed by using data from the Labour Force Survey, 2016-17.

Table 6. 10: Share (per cent) of Women in Superior Positions, 2016-17

Sector	Senior officials, chief executives and legislators	Administrative and commercial managers
Agriculture	20.5	45.2
Industry	8.1	7.4
Services	12.3	9.7

Source: Labour Force Survey, 2016-17

Some key findings emerging from the chapter

The economy of Bangladesh appears to have witnessed a limited degree of change in the structure of women's employment in terms of the sector composition. However, the pace of change seems to have slackened somewhat after 2010. The change in the structure of employment is more noticeable in terms of status, with a sharp decline in the share of unpaid family work. However, it seems that the shift has been more towards self-employment rather than wage/salary-based employment in the modern sectors of the economy.

Also to be noted is the stubborn persistence of a high proportion of the informal share in total employment, for both men and women. Gender inequality is noticeable in this respect as well, in that the share of the informal economy in total employment is much higher for women. Moreover, the decline in the share of this component has been slower for them.

One positive finding is the rise in the share of women in certain sectors/occupations - albeit from a very low base. They include manufacturing, accommodation and food, information and

communication, finance and insurance, legal and accounting activities, public administration, education, and health services.

Gender inequality exists also in the spheres of earnings and occupation. The shortfall in women's earnings compared to men's varies considerably between various occupations, with agriculture and elementary occupations showing 17-18 per cent lower earnings for women. At the other end, technicians and professionals do better with a difference of only about 5 per cent.

Education seems to be major driver of the structural change in women's employment – be it in terms of sector or status. This variable also has a statistically significant impact on the level of earnings.

A non-linear relationship is found between age and earnings, with earnings declining after a certain age that is found to be much earlier for women compared to men. Women's earnings are found to start declining from 35 years of age. Moreover, there is very little information on whether older women leaving the major employing sector remain in the labour market.

Chapter 7

Policy Suggestions and Issues for Future Research

7.1 Policy Suggestions

The discussions of the paper point towards the need for several policy adoptions. Policies are required for raising women's LFPR, for reducing unemployment, for raising their productivity and income, for enabling them to participate in higher education, and for raising the age of marriage.

Macro policies

Macroeconomic and sector level policies are needed to steer economic growth in a direction that can accelerate the growth of employment opportunities suitable for women. Export oriented labour intensive industries are a case in point. More industries like the RMG industry need to grow; and policy measures need to be geared towards promoting such a pattern of growth.

Raising women's LFP

The paper identified the forces that reduce women's LFP. These may be counterbalanced by policies. Urban women's LFP has been declining and policies are needed to reverse the pattern. Policies will range from creating more jobs to creating a facilitating environment. Easing of child care responsibilities is one such issue deserving policy attention. This will require institutional child care facilities. Simultaneously, policies for reducing early marriage and early child bearing can have a positive effect. The other area of policy intervention is increasing tertiary education of women, which is associated with higher LFP.

In the rural economy, especially in agriculture, women have a natural role to play in terms of contribution of labour input. However, male employment may become more prominent with the growth of non farm sectors. Therefore, one should not be complacent about the higher LFPR of rural women. Special efforts will be needed to create incentives for women's self employment and paid employment in the emerging non-farm sectors in rural and peri urban areas.

Counteracting the negative income effect through attitudinal change and better jobs

Evidence shows that higher income/wealth/remittance income of households tends to have negative effects on female LFP. To counteract this, attitudinal change is required for both women and men, because female LFP is likely to be influenced by the opinions of male earning members as well. Such attitudinal change can take place through publicity in electronic media, through teaching curriculum, etc.

Lack of suitable jobs for educated women from upper and lower middle income groups contributes to this phenomenon. Push factor induced participation in poor quality jobs may not be acceptable to these women and this merely highlights the need for focusing on generating

better quality jobs.

Policies for reducing inequality among regions and rural-urban locations

It has been observed that rural areas and poorer regions (Rangpur, Rajshahi divisions) have higher LFP. Therefore, policies are needed to raise the productivity of women's employment in these areas. In addition, it also implies that urban women's LFP may be raised by programmes for increasing scope of self employment, as currently observed in the rural areas.

Access to tertiary education

Quantitative analysis of LFS data concludes that tertiary education among women has a positive impact on LFP. It is education beyond the secondary level that makes the real difference in earnings. Hence, rather than remaining content with the success attained in terms of enrolment of girls at the primary level, efforts need to be made to move to the subsequent levels of education and see that girls complete not just primary education but also secondary education and beyond.

Ensuring female education beyond the high school level can be an important component of the female job market strategy, particularly in view of the dynamic labour market demand in an economy which aspires to cross the higher middle income cut off. The access to college and universities is lower in the rural areas and policies on the expansion of facilities are required.

Of course, the quality dimension also matters and higher standards of institutions can help create demand for tertiary education. In fact, this can happen if more demand for women with such education is clearly visible. High rates of educated unemployment as observed gives a negative signal in this respect. Therefore, policies for the reduction of unemployment can help break the vicious cycle of low education, high unemployment rates and low LFPR.

Secondary and higher secondary education and women's LFPR

Analysis of data shows that LFPR among women with SSC and HSC education is lower. Simply because LFPR is higher among the tertiary educated, emphasis on tertiary education at the neglect of SSC or HSC education may not be justified. There is a need for raising LFPR among those educated up to SSC and HSC levels as well. The size of these cohorts is larger and by virtue of its size, this can contribute to more incremental change in overall LFPR.

The current low LFPR among these women is at least partially due to the low employability of persons with this level of education. Therefore, quality improvements are required.

Reduction of unemployment

The million dollar question is how to reduce unemployment. In this context, suggestions of macro policies are available in various papers (Rahman 2007). There is no substitute for employment intensive GDP growth policies through proper export orientation and expansion of skill intensive modern service sectors. In addition to macro policies, expansion of tertiary education and improvement of quality of both secondary and tertiary education are essential.

Demand oriented skill generation in combination with general education can reduce the mismatch of qualifications currently in possession of young women.

Age of marriage and education

Present research shows a strong negative influence of girls' marriage on education.

Therefore, the improvement of quality of lives of young women and the possibility of their participation in HSC and tertiary education can be achieved by raising the age of marriage. In this respect, in addition to laws for minimum age of marriage, proper implementation of the law is essential.

The minimum legal age of marriage of girls is now 18 years. Nonetheless, marriage at a higher age can be conducive for the completion of tertiary education. This can be achieved through motivation and attitudinal change of parents and girls. The school curriculum should be reviewed and revised from this angle.

Moreover, job creation for HSC and tertiary degree holders can have a motivational impact which is at present being negatively influenced by high unemployment rates among young educated women.

Education, Skill and Poverty

There is a need to blend vocational training with general education, to enable young women's participation in job markets that have high demand for modern skills.

Low income and less wealth create obstacles to girls' higher education. Therefore, those who come from poorer families, for whom there is an urgency to enter the labour market, may be clients for skill development. Targeted skill development plans may be adopted for this group.

Policies for positive changes in structure of employment and women's earnings

Changes in the structure of women's employment in terms of status show that there has been a move from unpaid family work to self-employment. The next stage in structural transformation for them has to be to move from such work to higher level jobs either in self-employment or in wage/salary-based employment. Policy measures need to be geared towards facilitating this process.

The rise in the share of women in certain sectors like information and communication, legal and accounting services, education, and health services since 2010 is quite encouraging, and policy interventions need to be geared towards accelerating such change.

Gender differences in earnings appear to be sharper in certain sectors and occupations compared to others. It is essential to understand the reasons for such differences and devise policy interventions accordingly.

Another area of concern is the decline in earnings well before employed persons reach their retirement age. Policies are needed to ensure a positive relationship between age and earnings

- at least up to one's retirement age. These can be formulated only when the factors influencing the phenomenon have been identified.

Another important dimension of gender inequality is their gross under-representation in higher-level positions. This aspect can be addressed through policy interventions in the areas of education and training, as well as affirmative action where needed. Addressing attitudinal issues towards seeing women in certain occupations and in higher-level positions would also be important.

7.2 Issues for Further Research

Route to higher education and employment of women

To fully understand the links among education, employment and marriage, one needs to go deeper into the experiences of and opinions on these processes. Stakeholders' (parents', teachers', and young women's) views as well as more quantitative information can help explain the observed features. In this context, the following issues should be addressed through further research: do women join the labour force before or after marriage? Do employed women quit jobs because of family/child care responsibilities?

It has been observed that women have lower participation in higher education in rural areas. Is it due to lower household income, or less schools/colleges and facilities? Is it due to lower prospects of employment? What the views of teachers are and what role is played by relevance of the curriculum are worth investigation. Employers' views, especially rural employers' views, may provide useful insights on this.

Is there evidence of parents' negative attitudes towards girls' higher education, which acts as a constraint to higher education of women? How does cultural conservatism affect decisions about girls' education and employment? Why does it affect higher education and not secondary education?

Do women discontinue studies and later get married, or does marriage disrupt education? Role of husbands' families and other forces interacting with this also deserve attention.

Determinants of unemployment among young educated men and women

There should be separate focus on demand and supply side factors in this context. On the demand side, there may be insufficient job creation, limiting the scope of employment of both boys and girls. While this needs investigation, the other dimension of the problem is slower growth of employment opportunities for women, resulting in higher unemployment rates, which needs attention.

What are the views of employers on high unemployment rates among educated women and men and how can we achieve higher employment growth for them? The supply side features contributing to unemployment also deserve attention. What are the aspirations and preferences of young educated persons which do not match with demand?

How much does lower achievement in terms of examination results account for higher unemployment? Are there differences in the quality of education given to boys and girls (measured in terms of SSC/HSC/Tertiary results as well as the relevance of subject studied)?

Role of skill training may also be relevant in this context.

Modalities of recruitment, terms of employment and job search

What are the modalities of job search and recruitment of workers in skilled and unskilled jobs? Does the education system equip young women and men to go through the process of job search efficiently? Is the job search process unfriendly for young women? How can we make these processes friendlier for young job seekers?

Terms of employment, wage negotiation and the role of trade unions in influencing these terms have not received much attention in labour market studies. While getting a job is important, upward mobility in jobs and benefits may be equally important, and these issues and gendered dimensions within these contexts must receive attention in future research.

Gender difference in earnings

How does productivity and earnings compare in self-employment/own-account work between enterprises/activities run by men and women? If women's activities compare unfavourably, what are the reasons, and how can the situation be improved?

Why are gender differences in earnings greater in certain sectors and occupations? How can this be addressed?

Why do women's earnings start declining at an early age (around 35)? What measures are needed to keep women in the labour force longer and ensure continued rise in their earnings throughout their working life?

Employment, education and skills: challenges and prospects of the youth labour force

The above research topics have focused on the female labour force and mostly on young women. However, such research may be more meaningful if it is carried out within the overall context of the youth labour force as a whole, since both young men and women face similar challenges in the labour market in many respects, although there may be some specific aspects (for example, the age of marriage) that are more relevant for young women.

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Annex Tables

Table A2.1: LFPR of Rural and Urban Aged 15 Years & Above by Education Level

Education group	Labour force participation rate (%)			
	Rural		Urban	
	Male	Female	Male	Female
No education	84.3	39.2	83.5	34.1
Up to primary	91.3	41.0	92.1	36.3
Five to less than SSC	74.3	37.1	78.7	26.5
SSC	64.3	30.5	70.7	19.1
HSC	62.0	36.0	65.2	27.4
Tertiary	90.5	69.3	88.6	50.9
Others	72.5	40.0	81.4	43.6
All	80.3	38.6	81.0	31.0

Source: Estimated from unit records of the LFS 2017 data

Table A2.2: Female LFPR (15 years &above) by Education and Age Group

Education group	Female Labour force participation rate		
	Age 15-24	Age 25 ⁺	All
No education	32.0	38.4	38.1
Up to primary	35.8	40.7	39.7
Five to less than SSC	23.9	41.1	34.0
SSC	18.7	32.5	25.9
HSC	28.2	37.1	31.9
Tertiary	51.2	57.7	56.9
Others	23.5	49.6	41.8
All	26.3	39.7	36.3

Source: Estimated from unit records of the LFS 2017 data

Table A3.1: Determinants of Female LFPR: Results of Logistic Regression

Independent variables	Coef.	z-value	Sig.	dy/dx
Woman's_age	0.173	1139.92	***	0.0384
Woman's_age squared	-0.002	-1285.27	***	-0.0005
She is household_head (yes=1)	1.31 6	281.66	***	0.3156*
head_age	-0.009	-102.37	***	-0.0021
head_education	-0.024	-89.24	***	-0.0054
household size	-0.018	-95.48	***	-0.0040
Number of _children	-0.066	-123.6 6	***	-0.0147
education_primary	-0.094	-100.85	***	-0.0207*
educ_Secondary	-0.281	-327.1 4	***	-0.0610*
educ_ssc	-0.599	-482.50	***	-0.1208*
educ_hsc	-0.249	-171.0 3	***	-0.0531*
educ_tertiary	0.679	357.37	***	0.1627*
remittance_income (yes=1)	-0.700	-547.40	***	-0.1385*
Unmarried	-0.200	-149.96	***	-0.0433*
Rural	0.412	575.87	***	0.0886*
land_owner1 (low)	0.11 3	174.60	***	0.0253*
land_owner2 (medium)	0.095	64.08	***	0.0214*
land_owner3 (large)	-0.051	-14.31	***	-0.0113*
Religion Islam	-0.141	-133.60	***	-0.0318*
Barisal	-0.369	-231.15	***	-0.0769*
Chittagong	0.189	163.17	***	0.0426*
Dhaka	-0.050	-48.38	***	-0.0111*
Rajshahi	0.617	524.60	***	0.1451*
Rangpur	0.081	65.96	***	0.0182*
Syhet	-0.711	-430.75	***	-0.1388*
_constant	-3.246	-949.82	***	

Pseudo r-squared	0.095	Number of obs	170530.000
Chi-square	6816310.208	Prob > chi2	0.000

*** p<0.01, ** p<0.05, * p<0.1

dy/dx is marginal effect, (*) dy/dx is for discrete change of dummy variable from 0 to 1

Source : Estimated from unit record data of LFS 2017

Table A4.1: Dropout rate at Secondary Level, 2016

Grade	Dropout Rate		
	Both	Boys	Girls
VI	7.06	8.41	5.94
VII	5.83	4.68	6.79
VIII	9.91	5.90	13.34
IX	8.91	8.40	9.40
X	12.79	10.99	14.00

Source BANBEIS, 2016.

Table A4.2: Percentage of Girls' Student by Level, 2016

Level of Education	% of girls' Student
Junior Secondary (Grade 6-8)	54.75%
Secondary (Grade 9-10)	51.22%
Total Secondary(Grade 6-10)	53.60%
Higher Secondary (Grade 11-12)	46.47%
Post-Secondary Non- Tertiary	21.75%
Tertiary	40.00%

Source BANBEIS, 2016

Table A4.3: Dropout rate in Primary Education, 2012 – 2016

Year	Girls	Boys
2012	24.20	28.30
2013	17.90	24.90
2014	17.50	24.30
2015	17.00	23.90
2016	16.10	22.30

Source: Compiled data from BANBEIS, various years.

Table A4.4: Dropout rate from upper secondary education 2011 – 2016

Year	Female	Male	Both
2011	25.07	26.34	25.77
2012	23.29	20.31	21.80
2013	23.29	20.31	21.80
2014	17.05	25.32	21.37
2015	24.60	16.83	20.70
2016	na	na	20.80

Source: Bangladesh Education Statistics, BANBEIS various years

Table A4. 5: Educational Attainment Male and Female Labour Force, 2010 and 2017

Education	2010			2017 *		
	M	F	All	M	F	All
No Education	39.9	40.6	40.1	29.8	36.4	31.9
Primary	22.9	22.7	22.8	26.5	24.2	25.8
SSC	28.6	31.4	39.5	30.4	31.7	30.8
HSC	4.0	3.0	3.7	6.7	4.3	6.0
Tertiary	4.4	2.1	3.7	6.1	3.4	5.3
Others	0	0	0	0.4	0.1	0.3
All education	100.0	0	0	100.0	100.0	100.0

Note: *For 2017, the distribution is for employed labour force, for 2010 the distribution is for labour force

Source: LFS report, various years

Table A4. 6: Can You Read & Write (literacy rate) by Age, Sex and Marital Status

	Age of wom en (years)				Age of male (years)			
	15-1 7	18-24	25+	All	15-1 7	18-24	25+	All
Can you read & write	Unmarried				Unmarried			
Yes	97.3	95.8	77.9	95.4	94.4	94.3	91.0	93.8
No	2.7	4.2	22.1	4.6	5.6	5.7	9.0	6.2
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Can you read & write	Ever married				Ever married			
Yes	94.6	92.0	55.4	61.3	87.6	85.7	64.2	65.1
No	5.4	8.0	44.6	38.7	12.4	14.3	35.8	34.9
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Estimated from unit records of LFS 2017 data

**Table A4. 7: Factors Influencing Whether A Woman (aged 15 to 29 years) Is Studying:
Results of Logistic Regression**

Independent variables	Coef.	z-value	Sig.	dy/dx
Woman's_age15_18	0.129	835.73	***	0.0103
Womn's_age19_24	0.061	510.71	***	0.0049
Head age	-0.440	-160.43	***	-0.0349
Head_education	0.907	159.77	***	0.0720
Married	-3.000	-1706.85	***	-0.3930*
Rural	-0.305	-185.51	***	-0.0254*
Remittance_income (yes)	0.722	263.70	***	0.0730*
Islam	-0.171	-66.33	***	-0.0144*
Dhaka	-0.442	-166.16	***	-0.0334*
Rangpur	-0.293	-90.62	***	-0.0212*
Sythet	-1.166	-318.63	***	-0.0622*
Chittagong	-0.853	-291.68	***	-0.0555*
Rajshahi	-0.057	-18.51	***	-0.0045*
Barisal	-0.207	-51.66	***	-0.0152*
Landownership(decimal)	0.260	401.03	***	0.0206
Household size	0.099	219.89	***	0.0079
Number of children	-0.630	-439.61	***	-0.0500
constant	-0.656	-148.16	***	
ssssPseudo r-squared	0.496	Number of obs	67923.000	
Chi-square	11910128.174	Prob> chi2	0.000	

(*) dy/dx is for discrete change of dummy variable from 0 to1

(*) dy/dx is for discrete change of dummy variable from 0 to1

Source: Estimated from unit records of the LFS 2017 data

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