James Heintz, Naila Kabeer & Simeen Mahmud

Cultural norms, economic incentives and women's Labour market behaviour: Empirical insights from Bangladesh

Article (Accepted version)
(Refereed)

http://eprints.lse.ac.uk

Cultural Norms, Economic Incentives and Women's Labour Market Behaviour: Empirical Insights from Bangladesh

James Heintz[1], Naila Kabeer (corresponding author) [2] and Simeen Mahmud[3]

NOTE: This is an Accepted Manuscript of an article published by Taylor & Francis in Oxford Development Studies on [date of publication], available online: http://www.tndfonline.com/[Article DOI]

Disclosure Statement

The authors disclose that our employers have no potential conflicts of interest in relation to the publication of this manuscript.

[1] **James Heintz**, Andrew Glyn Professor, Department of Economics/ Political Economy Research Institute, 418 N. Pleasant Street Suite A, University of Massachusetts, Amherst, MA 01002 USA. Email: jheintz@econs.umass.edu

[2] **Naila Kabeer**, Professor in Gender and International Development, Gender Institute/Department of International Development, London School of Economics and Political Science, Houghton Street, London WC2A2AE, Email: N.Kabeer@lse.ac.uk

[3] **Simeen Mahmud,** Lead Researcher, BRAC Institute of Governance and Development, SK Center, GP. Ja-4, TB Gate, Mohakhali, Dhaka 1212 Email: simeen.mahmud@gmail.com.

Abstract: *This paper sets out to explore a seeming puzzle in the context of Bangladesh. There is a considerable body of evidence from the country pointing to the positive impact of paid work on women's position within family and community. Yet, according to official statistics, not only has women's labour force participation risen very slowly over the years, but also a sizeable majority of women in the labour force are in unpaid family labour. We draw on an original survey of over 5000 women from eight different districts in Bangladesh to explore some of the factors that lead to women's selection into the labour force, and into different categories of labour market activity, with a view to gaining a better understanding of the combination of cultural norms and economic considerations that explain these findings.*

1. Introduction: The puzzle of women's labour market behaviour in Bangladesh

The literature on Bangladesh in the aftermath of its emergence as an independent nation in 1971 depicted a country characterised by negative per capita growth rates, partly the result of high and apparently intransigent rates of population growth; widespread poverty; growing landlessness; and an extreme form of patriarchy (Arthur and McNicoll, 1978). This gloomy picture has been replaced over time by more positive assessments in the light of a rapid decline in fertility rates, increasing rates of per capita growth, a moderate but steady decline in poverty rates, and remarkable progress on the social front (Asadullah et al., 2014). Women as a group have shared in this progress. Overall improvements in life expectancy, child mortality, education, health, and nutrition have been accompanied by declining gender inequalities on all these indicators.

However, progress in terms of women's engagement in the economy has been slow. Women's labour force participation rate was around 4% according to the 1974 Bangladesh Census, 8% according to the 1984 Labour Force Survey, and rose slowly but steadily until it reached 36% in 2010 (Mahmud and Mahmud, 1991; Bridges et al. 2011). Moreover, most of the women who entered the labour force are concentrated in a very limited range of economic activities. Indeed, recent estimates show an 'inexplicable' rise in unpaid family labour[1] – from 18.6% of female labour force participation in 1995 to 48% in 2003 – accompanied by a decline in every other occupational category (World Bank, 2008, p. 60). The fact that male labour force participation rates have remained uniformly high throughout this period suggests that it is not the overall dearth of employment opportunities per se that explains women's restricted engagement with the labour market, but a more gender-specific set of factors.

These patterns of female labour market behaviour constitute a puzzle in the light of findings reported by the DFID-funded Pathways of Women's Empowerment research programme (Kabeer et al., 2011). The analysis of survey data collected in Bangladesh for the programme suggested that women's engagement in paid work, particularly in formal waged work outside

the home, had various positive impacts on their lives. These included: increasing their sense of self-worth and agency, recognition from family members, decision-making power within the household, mobility in the public domain, and enhanced status in the community. Qualitative interviews with some of these women reinforced this finding in that the majority of those interviewed believed that having some earning power of their own enhanced women's agency within the family and their standing in the community.

If participation in *paid work,* and in *formal waged work* in particular, improves women's positions within the family and the wider community, and if this is something that women themselves believe to be the case, then along with the question about low rates of female labour force participation posed earlier, we also need to ask why the majority of women who have joined the labour force are concentrated in unpaid family labour within the home. Does this represent choice on their part or are women constrained by factors outside their control? We will draw on the Pathways survey to explore these questions in the rest of the paper.

The next section of the paper reviews the main explanations put forward for women's labour market behaviour in Bangladesh. Section three describes the methodology used for the Pathways survey and provides some descriptive statistics on the survey population. Section four outlines the estimation procedure that will be used to carry out multivariate analysis. Section five reports on the findings of the multivariate analysis with regard to the likely social and economic determinants of women's selection into the labour market and into different categories of work. While these findings are useful in signalling the nature of constraints and opportunities that appear to shape women's labour market behaviour, they do not tell us a great deal about how women themselves viewed their labour market options. Section six therefore draws further on the survey data to take a closer look at the women's labour market preferences and the relative importance of economic motivations and cultural norms in explaining these preferences.

The paper will make a number of contributions to the existing literature. First of all, while there has been a great deal of qualitative sociological discussion of women's labour market behaviour in Bangladesh, quantitative studies have generally focused on women's labour force participation rates (for examples, see Khandker, 1987; Hossain et al. 2004; Rahman and Islam, 2013; Mahmud, 2003). Very few explore women's selection into different categories of labour market activity (for exceptions see Bridges et al 2011; Rahman and Islam, 2013). Secondly, since most quantitative studies rely on official surveys, they confine themselves to the standard explanatory variables such as age, marital status, number of children, education and so on that are included in such surveys. By contrast, the Pathways survey on which we draw, was purposively designed to include a range of sociological variables and therefore allows us to incorporate a broader set of explanations into our analysis.

2. Explanations for women's labour market behaviour in Bangladesh: a brief overview

Early explanations for women's absence from the labour market in Bangladesh focused on the structures of patriarchy prevailing in the country (Cain, Khanam & Nahar, 1979; Feldman & McCarthy, 1983; Adnan, 1993). They pointed out that the practice of patrilineal

inheritance – the transmission of descent and property through the male line – left women without productive assets of their own, while purdah norms restricted their mobility in the public domain. As a result, they were confined to reproductive roles and to those productive activities that could be carried out within the home, most often subsistence activities for which they received no remuneration. The practice of marrying daughters outside their kinship system, and usually outside their natal village, meant that any economic contribution that they could make was effectively lost to the natal family after marriage.

On various grounds, therefore, women were regarded as economic liabilities within the family, dependent on male family members for much of their lives, passing from the responsibility of father to husband to son. Cain et al., (1979) coined the concept of 'patriarchal risk' to capture the implications of women's lifelong dependence on men: the precipitous decline in their material condition and social status that followed the loss of their primary breadwinner through widowhood, divorce or desertion. Female household headship became a synonym for economic destitution in the context of Bangladesh.

With the growing monetisation of the economy, one obvious way for women to have secured themselves against patriarchal risk would have been through paid employment so that they had some resources of their own to fall back on should such risk materialise. However, the resilience of purdah norms appeared to preclude this as a realistic option. The only exceptions to this were women from very poor households, particularly those who were casualties of patriarchal risk, who were forced to venture outside the home in search of work. The vast majority of these women were crowded into domestic wage labour, which entailed cooking, cleaning and the manual post-harvest processing of crops in the homes of wealthier families within their neighbourhood. There were few other alternatives.

A second set of explanations drew on choice-theoretic models to challenge cultural explanations of the kind put forward by Cain et al. Informed by a neo-classical understanding of household behaviour, Khandker (1987) used a 1983-84 survey data of 500 rural households to explore whether women's labour market behaviour was 'preordained by society' (p. 539) or influenced by standard economic considerations. He found that female education and wage rates increased the likelihood that women would participate in paid work, a 'substitution' effect reflecting the higher costs of foregoing income-earning opportunities, while husband's education, household landholding and male wage rates appeared to have an 'income' effect, reducing the need for women's earnings. Khandker concluded that women's allocation of their time between paid and unpaid work appeared to reflect their individual and household characteristics in the manner predicted by neo-classical economists rather than being 'inflexibly fixed by local customs' (1987, p. 541).

Other economists have questioned the relevance of the standard neo-classical model to contexts in which 'socio-economic factors affect tastes and preferences with respect to women's work' (Hossain et al., 2004: p. 10). Most, however, did not have the data to take account of these socio-economic factors. For instance, a study by Bridges et al (2011) sought to use the 2000 Household Income and Expenditure to explore the impact of cultural norms on women's labour market behaviour. The absence of direct measures of cultural norms meant that Bridges et al were forced to infer the influence of these norms from their interpretation of a set of findings that were based on a standard set of economic/demographic variables.

Thus, they inferred the continued influence of purdah norms and patriarchal risk from the much higher labour market participation by poor, divorced, separated and widowed women relative to married and better off women. They noted also that marital status and presence of young children had independent negative effects on women's labour force participation, suggesting that the cultural norms governing married women's behaviour operated independently from potential conflict between their childcare responsibilities and earning opportunities.   In addition, the study found evidence of the U-shaped relationship between female education and labour force participation that had been reported in other studies from Bangladesh and elsewhere in South Asia (World Bank, 2008; Neff et al., 2012): higher participation rates among women with no education and those with post-secondary levels, and lower levels among those with primary/secondary education. The key evidence of change reported by the study was the significantly higher rates of labour force participation among young single women, relative to married ones. This suggested that economic considerations were taking on increasing significance among a cohort of women who had previously been kept at home to protect their reputations and future marriage prospects.

3. Methodology and description of study population

This paper will attempt to explore these different explanations of women's labour market behaviour in greater detail, drawing on the Pathways survey mentioned earlier. The survey was carried out in 2008 and included 5198 women in 8 districts selected to represent different socio-economic conditions: urban (Narayanganj) and peri-urban (Faridpur); poor rural locations (Kurigram and Bagerhat), socially conservative locations (Maulvibazar, Comilla and Chapainababganj) and a dynamic rural area (Tangail). For three of the districts, one or more villages were selected purposively on the basis of having been sites of previous research while for the remaining districts, villages were selected randomly. In all, 69 villages were selected, of which 60 were randomly selected. A census of all women aged 15+ was carried out in each of these villages, giving a Pathways village census sample of 35,494 women.

We used the ILO's definition of economic activity to estimate labour force participation rates for women in our survey (see Footnote 1). This is also the definition used by the Bangladesh Bureau of Statistics (BBS) in its periodic Labour Force Surveys. Mahmud and Tasneem (2011) compare the estimates generated by the Pathways village census with those of the BBS's 2005-06 Labour Force Survey. It is important to note that this survey had restricted itself to a 7-day reference period rather than also including the usual 12 months.[2] The Pathways village census for the study districts also used the same definition as the BBS but estimated women's labour force rates using two different questions. The first asked women in the village census about engagement in any form of economic activity in the previous 7 days, the same reference period as the LFS 2005-6 Labour Survey. The second question asked about their involvement in paid work outside the home, paid work within the home and unpaid subsistence/expenditure saving work in the previous 12 months. Their findings are presented in Table 1.

TABLE 1 HERE

Column 1 reports on estimates from the BBS Labour Force Survey for the study districts and for the national level. Column 2 reports on estimates from the Pathways village census for the study districts, using the same reference period as the BBS. This gives an overall female labour force participation rate of 67%, which is double that of 30% estimated by the Bureau of Statistics. This increases to 73% when we used the second question in the Pathways survey which extended the reference period to 12 months. The fact that there is not much difference between the 7-day reference period (67%) and the 12-month period (73%) suggests that these activities are spread out across the year.

These are extremely high estimates of women's economic activity rates by South Asian standards, but it should be noted that 48% of the participation is accounted for by home-based income-generation and 15% by unpaid economic activity. In fact, the national estimate of 9% for outside paid work reported by the 2005-06 Labour Force Survey, using the 7-day reference period, converges with the 10% estimate based on the Pathways village census, using a 12-month reference period[3]. It would appear, therefore, that the higher rates of female participation reported by the Pathways survey reflected its better coverage of various forms of home-based employment. It is, therefore, not so much that women's labour force participation rates in Bangladesh are low, as suggested by the official data, but that economically active women are crowded into home-based economic activities that are harder to measure.

For the purposes of a more detailed household survey, we divided the village census sample of women into economically active and inactive categories based on their primary occupation. Economically active women were then further subdivided into those who undertook paid work outside the home, those who undertook paid work within the home, and those in 'expenditure-saving' activities, viz. the production of primary goods contributing directly to household consumption or use. Stratified random samples of 625 women were drawn from each location so as to reflect the distribution of these four categories within that location. The household survey was carried out on the resulting sample of 5,198 women aged 15+.

The preliminary analysis of household survey data made it clear that women working outside the home were a very heterogeneous category. We therefore further subdivided this category into formal or semi-formal wage employment, informal wage employment and informal self-employment outside the home. Table 2 reports on the individual and household characteristics of women in these different categories of work.

TABLE 2 HERE

Only 3.5% of our sample was classified as formal or semi-formal waged workers. Around a third of these were garment workers, the rest were made up of NGO employees, community health workers, and insurance agents (often working on a subcontracted basis). These women worked for formal organisations, but not necessarily on a formal basis. They had some predictability in their employment but most did not enjoy the benefits normally associated with formal employment.

Informal wage workers made up 5.9% of our sample and worked mainly as domestic servants or in daily wage labour within and outside agriculture. Women in informal self-employment outside the home made up just 4% of our sample. They were found in various forms of petty trade as well as private tuition. Women in income-generating self-employment within the home accounted for 47% of our sample, the single largest category. They were largely engaged in rearing livestock and poultry, but also tailoring, homestead cultivation or making handicrafts, some or all of which might be sold. The 18% of the sample in the 'expenditure-saving work' category were engaged in similar activities, but primarily for household consumption, although some reported occasional sales. Finally, 22% of our sample were classified as economically inactive.

It is clear from the results reported in Table 2 that women in the different employment categories were from distinct socio-demographic groups but with some overlapping characteristics. P-values for pairwise tests of the differences between the means of variables for women in these categories supported this conclusion: they are reported in brackets where relevant. Women in formal wage work were younger than the rest of the sample (p values < 0.01), and mostly married, although there was still a high percentage of unmarried women. They had fewer children on average (p values <0.05), but with no statistically significant difference in numbers of children under 5. They were more likely than the rest to be educated to post-secondary level (p values (<0.01).

Women in informal waged work were the poorest in our sample by all criteria. They came overwhelmingly from the poorest third of households (p values <0.01); around 80% had no education; 80% of their household heads had no education; they had less cultivable land than any other group (p values <0.01); and over 90% reported food shortages in the previous year. They were also more likely to be divorced/separated (p values < 0.01) than other categories in the sample, and more likely to head their own households (p values< 0.01). Informal wage labour clearly represented the distress sale of labour, a response to household poverty and patriarchal risk.

Women in self-employment outside the home were a somewhat mixed group: they were less well off by some criteria (such as cultivable land) than women in home-based, self-employment, however, they were similar by other criteria (percentages without education, head of household's education), and somewhat better off by still others (percentages in post-secondary education). What made them different from other groups was that they had the highest estimated percentages of unmarried women in their ranks (27%), and a higher percentage of women with post-secondary education than any other group except those in formal wage labour (p values <0.01). It is possible that many of these women were involved in giving private tuition.

Women in home-based self-employment and those in expenditure-saving work had very similar demographic and educational profiles. The main difference between them was that those in expenditure-saving work had more cultivable land (p values <0.01) than those in home-based self-employment, and were likely to come from the upper tercile of the wealth distribution (p values < 0.01).

Finally, economically inactive women stood out on a number of characteristics. They were more likely to come from the wealthiest tercile than other groups in the sample. They were

also more likely to be food secure, educated, and have educated household heads than any other group with the exception of women in formal employment. However they were older than women in formal employment were (p-value <0.01), more likely to be widowed (p-values<0.01), and less likely to have secondary education (p values <.01).

Comparing across categories, we can make a number of additional points. First, 90% of our sample were Muslims, the rest were Hindu. There did not appear to be any systematic variation in economic activity by religion, but women who routinely wore burkah/hijab outside the home (99% of whom were Muslims), and presumably conformed more strongly to social/religious norms, were much more likely to be found in home-based activity or among the economically inactive (p values <.000). The same was true of those who conformed to traditional gender norms[4].

Secondly, 37% of the sample belonged to an NGO, with BRAC, ASA and Grameen, the three largest NGOs in the country accounting for around 70% of NGO membership in the sample. What is worth noting is that while NGO membership was somewhat higher among women in paid activity, it was not discernibly higher among those in self-employment rather than waged work, despite the purported goal of microfinance NGOs to promote women's entrepreneurship. This is further confirmed by the information on loans. 47% of women had taken loans, mainly from NGOs, varying from 61% of those in informal waged work to just 27% of the economically inactive. Access to credit through NGO lending seems to have become widespread across working women rather than being narrowly focused on female entrepreneurship. The high proportion of women working at home who owned livestock and poultry (a common use of NGO loans), suggests an important role for microfinance in facilitating income-generating opportunities within the home.

Finally, it is clear from the table that location matters in the distribution of women's economic activity. We will explore this finding in greater detail when we discuss the results of our regression analysis.

TABLE 3 HERE

Table 3 highlights some differences in the working conditions associated with the different economic activities. It suggests that while most economic activities were carried out throughout the year, paid work outside the home involved longer hours of work per day than economic activities within the home (p-values < 0.01), which were more likely to be combined with care and household responsibilities. As might be expected, formal/semi-formal work carried more benefits than informal economic activity (p-values < 0.01), but the benefits were clearly unevenly distributed. Many women in formal work did not enjoy any benefits at all.

Women working in waged work were more likely to report harassment and abuse at work than those in self-employment (p-values < 0.02), while women in informal employment, particularly those in informal waged employment, were most likely to report adverse effects of work on their health (p-values < 0.01). Finally, women in informal waged work were less likely than any other group to report satisfaction with their current activity (p-values < 0.01). Only 27% of women in informal waged work reported themselves satisfied with the work

they did compared with 52-66% of women in other categories while only 15% expressed satisfaction with their work environment compared with 26-43% of women in other categories. It is not surprising, therefore, that informal waged work was largely undertaken by women from the poorest households in our sample.

4. Multivariate analysis: estimation procedure

These basic statistics provide us with a 'thick' description of the differences between women in different categories of work. We now turn to multivariate analysis to explore the extent to which these differences proved significant in predicting variations in their labour market behaviour (Appendix 1). We follow a research strategy in which we estimate two empirical models. The first model examines the determinants of women's labour force participation – which factors explain whether women are economically active or not. The second model uses a two-step approach, with the first step being the choice to be economically active, and the second being the decision to specialise in one of our five categories of economic activity, conditional on being economically active. This two-step procedure is based on the technique used elsewhere to examine labour market outcomes in developing countries (Heintz and Pickbourn, 2012).

In the first model, the determinants of labour force participation – whether the women are economically active or not – are modelled using the standard probit specification:

$$(1)\ P\ (v_i = 1 \mid X) = P(v_i^* > 0 \mid X) = P(\omega_i > -X\beta \mid X)$$

where v_i is the 0/1 outcome with 1 corresponding to an individual being economically active and 0 otherwise, v_i^* is the latent variable modelled under linear model assumptions, ω_i is the normally distributed error term, X is the matrix of the observed values of the explanatory variables, and β is the vector of parameters to be estimated.

This basic model is then extended to explore the selection into various categories of employment through a two-step approach. If the estimates of the factors that determine selection into distinct types of employment exclude the economically inactive, there is a potential problem of selection bias if the results are applied to the entire population. To address these issues, we use a modified probit estimation technique that allows us to model the selection into being economically active along with the factors that determine specialisation in a particular category of employment. The technique is based on Heckman's original two-step selection model (e.g. Heckman, 1979), but uses a maximum likelihood estimator to jointly estimate labour force participation and specialisation in selected categories of employment (see, for example, van de Ven and van Praag, 1981). Specialisation in a particular category of employment is thus only estimated for those individuals who are employed. Therefore, we complement the standard probit model already described by estimating selection into being economically active. Specifically, the dependent variable in the probit estimation is observed if:

$$(2)\qquad y_{i,j} = (\mu_{i,j} > -z_{i,j}\alpha)\quad \text{(i.e., the selection equation)}$$

in which $z_{i,j}$ are observations on the explanatory variables in the selection equation, $\mu_{i,j}$ is a normally distributed error term, and α represent a vector of parameters for the selection equation. That is, $y_{i,j}$ is only observed if the condition on the right-hand side of (1) holds. A separate selection equation is estimated for each employment category, 'j'.

We jointly estimate the likelihood that an individual will specialise in a particular form of employment as a function of her personal characteristics as well as the characteristics of their household and location. We follow the standard approach for estimating the determinants of a discrete dependent variable in which the probability of selection into a particular category of employment is defined as follows:

(3) $P(y_{i,j} = 1 \,|\, X) = P(y_{i,j}{}^* > 0 \,|\, X) = P(\varepsilon_{i,j} > -X\beta_j \,|\, X)$

where $y_{i,j}$ is the 0/1 outcome with 1 corresponding to an individual working in employment type 'j' and 0 otherwise, $y_{i,j}{}^*$ is the latent variable modelled under linear model assumptions, $\varepsilon_{i,j}$ is the normally distributed error term, and β_j is the vector of parameters to be estimated for employment category 'j'. If the error term from the probit model in equation (1) - ε_i - is uncorrelated with the error term in the selection equation - μ_i - then the two processes operate independently. However, if the error terms are correlated, then running the probit regression alone may yield biased results. We perform a series of probit estimations using the Heckman selection model and unweighted survey data, considering our five employment categories.

5. Findings of multivariate analysis

The results of the simple probit model of the determinants of women's economic activity status are presented in Table 4. The coefficients on age and age-squared were statistically significant and positive and negative respectively. This is a fairly typical pattern in most studies and characterises male activity rates as well (eg. Bridges et al, 2011).

Marital status per se did not appear to make any difference to the likelihood of economic activity but women who described themselves as households heads, the majority of whom were divorced or separated, were more likely to be economically active than women in male-headed households. While women with children under five were less likely to be economically active, those with primary responsibility for care and domestic chores within the household reported a higher likelihood of economic activity. It is possible that women in larger households or those with more dependents were under greater pressure to engage in productive work of some kind. We find a weak version of the U-shaped relationship between women's education and economic activity reported in other South Asian studies in that women with secondary education reported significantly lower rates of economic activity than those with primary or less education and those with post-secondary education.

Muslim women do not appear to differ in their labour participation rates from Hindu women, unlike the usual pattern in South Asia where they generally have lower rates (Neff et al., 2012), but similar to that reported elsewhere in Bangladesh (Hossain et al, 2004). This may reflect the fact that our measure of economic activity includes many forms of home-based activities that are compatible with purdah norms. Those who appeared to subscribe to purdah norms in their behaviour (routinely wearing burkah/hijab) were less likely to report

economic activity but the result was not significant. By contrast, those who expressed support for traditional gender norms were significantly less likely to be economically active.

Household wealth and education of the household head, both indicative of household socio-economic status in Bangladesh, had negative associations with women's activity rates, a finding reported by other studies (Bridges et al, 2011; Hossain et al., 2004). This may reflect an income effect, as suggested by Khandker (1987), in that better-off households did not require their women to engage in economic activity. Alternatively, it may reflect the efforts of better-off households to signal their social status through adherence to gender norms.

At the same time, certain forms of productive wealth did have a bearing on the likelihood of economic activity. In particular, ownership of livestock and poultry had a positive impact on women's economic activity. As noted earlier, livestock and poultry-raising can be carried out within, or near the home, and women have traditionally been associated with this work.

The employment of the household head, regardless of occupation, had a significant positive association with women's economic activity relative to economically inactive household heads. Other variables that might be thought to have an impact on activity rates (NGO membership, access to loans and distance to road), were all found to have an insignificant association, once again perhaps reflecting the broad range of economic activities captured by our survey and the consequent inclusion of various activities that did not require access to finance or physical mobility.

The results for locational variables have been estimated with rural and socially conservative Comilla as our reference location. It will be seen that most of the location variables report lower rates of economic activity than Comilla, some significantly so. The only exception to this pattern is Kurigram, the poorest district in our sample.

We now turn to the estimates of the determinants of selection into type of employment. The Heckman selection model required the inclusion of exclusion restrictions – that is, variables that appeared in the selection equation, but were not included as explanatory variables for the probit estimation. Without exclusion restrictions, the model can still be estimated, but the identification of the estimated model would depend entirely on the underlying function form. Incorporating inclusion restrictions therefore improves model identification. When deciding on which variables are appropriate to use as inclusion restrictions, theory is considered to provide the most important guide (Heckman et al., 1999).

For the estimates presented here, the age, age squared, presence of children under five, religion, and female household head variables were used as exclusion restrictions. We used these variables as exclusion restrictions because we theorise that the primary impact of these variables is in determining women's economic activity status, but not the form of employment in which they work. For example, the presence of children under five could cause women to withdraw from the labour force, despite the type of employment they are engaged in. Similarly, we expect that female headship will increase the likelihood of being economically active, without having a significant impact, by itself, on the type of employment. As a further robustness check, we estimated alternative specifications with different combinations of these exclusion restrictions (i.e. using a subset of the variables as

exclusion restrictions). In these alternative specifications, the signs and statistical significance of the estimated coefficients did not differ in ways that would alter the discussion of the results.

The results of the probit selection estimations are presented in Table 5. Each of the columns corresponds to one of our five categories of economic activity. The results of the probit estimates, corrected for selection dynamics, appear in the first part of the table. The estimates of the selection model are presented in the second part of the table.

The results of the selection model are, not surprisingly, similar across the estimates for each of the five employment categories and are, in general, similar to the results of the simple one-step probit described above. The female headship and marital status variables represent a slight exception. In the Heckman selection estimates, female headship had a consistent positive effect on being economically active, while being widowed had a negative, but now significant, effect. The correlation between headship and marital status may explain these variations between the one-step probit and the Heckman selection models.

We next turn to a consideration of the estimation results for the probit models for each of our five work categories. It is evident from these results that variations in individual and household characteristics had a greater effect on *patterns* of economic activity among those in the labour force than they had on the *likelihood* of being in the labour force. Starting with marital status, we find that economically active women who were separated/divorced, widowed or single were all significantly more likely than married women to be involved in work outside the home, primarily informal wage and self-employment. While divorced, separated and widowed women – the casualties of patriarchal risk – have traditionally worked outside the home in the absence of a male breadwinner, the participation of unmarried women in outside work is, as we noted, a departure from traditional norms. These groups were also significantly less likely than married women to be involved in self-employment within the home.

While Table 4 suggested that women who had primary responsibility for care and domestic chores were more likely to be economically active, perhaps because they were under greater pressure to generate income, Table 5 suggests that they were more likely to be restricted to self-employment within the home.

Educated women were significantly more likely than those with no education to engage in formal/semi-formal wage employment, regardless of level of education, and were generally less likely to be engaged in informal waged work although women with post-secondary education were more likely than the rest to be engaged in self-employment outside the home (probably giving tuition). Predictably, women who migrated for employment reasons, who are generally from poorer households, were more likely than non-migrants to work in informal wage employment and less likely to be engaged in activities within the home.

Religion per se did not differentiate the likelihood of paid activity, but conformity to religious/cultural norms did make a difference. Women who routinely wore burkah/hijab, and hence were apparently more compliant with such norms were less likely to be engaged in outside work, particularly in informal waged work, and significantly more likely to be

engaged in self-employment within the home. Women who expressed support for traditional gender norms were not only less likely to be economically active, but those who were active were less likely to be involved in outside work and significantly more likely to be involved in work within the home.

Household wealth and education of household head, both indicators of household socio-economic status, had very similar results: they reduced the likelihood of work outside the home, significantly in the case of informal wage work, and increased the likelihood of expenditure-saving activity. By contrast, women from food insecure households were significantly more likely than the food secure to report informal waged work and less likely to be engaged in other forms of paid work outside the home.

Household head's occupation had a significant bearing on the kind of work that women took up. Women from households whose heads were self-employed, in either agricultural or non-agricultural activities, were generally less likely to work outside the home and more likely to be engaged in self-employment, particularly within the home, although not necessarily in expenditure-saving activity. Women in these households may have been involved in some extension of the head's activity. On the other hand, women from households whose heads were in wage employment were more likely to be in wage employment themselves – an indication perhaps of the restricted set of choices available to men and women from poorer households who are likely to make up the bulk of wage labour.

NGO membership did not appear to increase the likelihood of either labour force participation or of selection into different categories of work but those who had taken loans were more likely to be found in informal wage work. We had suggested that the main effect of loans for productive uses was captured by household ownership of livestock and poultry, a key form of investment associated with microfinance. Table 5 suggests that ownership of livestock and poultry reduced the likelihood of economic activity outside the home, and wage employment in particular, while it increased the likelihood of economic activity within the home. Ownership of cultivable land reduced the likelihood of waged employment but increased the expenditure-saving work, probably in the form of cultivation for own consumption.

Of the variables measuring 'connectivity' of various kinds, women's ownership of mobile phones and household electricity both increased the likelihood of formal paid work. It is possible, of course, that those in formal work came from better-off households that were more likely to report such characteristics or it may be, as some of the literature has shown, that greater connectivity enhances knowledge of, and access to, better work opportunities (Buvinic et al. 2014).

Finally, our multivariate results generally reinforce the relevance of location with respect to the variations in women's economic activity noted in Table 2. Most locations report significantly lower economic activity rates than Comilla, the reference district, with the exception of Kurigram, the poorest district in our sample, which not only reported the highest percentage of women in economic activity but also the highest percentage in informal wage employment. Urban Narayanganj and peri-urban Faridpur both reported

higher rates of formal employment. Narayanganj has a large concentration of garment factories while Faridpur's proximity to the district capital provided access to jobs in government and NGO services. Their urban locations also explained why women in formal waged work were more likely to report proximity to roads, household electricity and ownership of mobile phones than other categories of women (Table 2). The significance of formal wage work in Maulvibazar reflects the availability of semi-formal jobs for women in its tea processing units. One additional point to note is the lower involvement in expenditure-saving work in the two urban/semi-urban locations. Such work, which requires land or other productive assets, is more likely to found in more conservative rural areas (such as Chapainababganj and Moulvibazar), and among higher-status households and households owning cultivable land.

6. Norms, preferences and labour market behaviour

Our analysis has identified the broad factors associated with women's participation in economic activity and their distribution across different categories of paid and unpaid work. It has highlighted a number of continuities with the past, such as the impact of women's education and marital status, household wealth and assets. It has also highlighted certain changes in context, such as higher rates of economic activity among single women and the opening up of new economic opportunities through migration, the spread of microfinance and access to technology in the form of electricity and mobile phones.

What it has not been able to do so far is to throw light on whether the observed patterns of economic activity reflect an economic calculus on the part of women and their households or the influence of cultural norms. It seems reasonable to assume that educated women from better-off households who took up formal employment were responding to economic opportunities. It also seems reasonable to assume that poor and uneducated women, particularly those who were divorced/separated or widowed and head their own households, were compelled by survival imperatives to take up informal waged work outside the home – from which, as we saw, they gained very little satisfaction. The question that remains relates to the motivation of the large majority of women who opted for various forms of home-based economic activity, many of which did not generate an income for them: were they influenced by practical considerations, such as their domestic responsibilities, or did the decision reflect deference to cultural norms? And, if it was in deference to cultural norms, to what extent were these norms internalised as part of women's own preferences and to what extent did they reflect external pressures to conform? We explore this question further by drawing on other information collected by the survey.

The survey asked respondents a number of open-ended questions about their employment preferences: what were their most and least preferred occupations, and what were the reasons for this ranking? Table 6.1 shows the occupations most preferred by women by work category, while Table 6.2 reports the main reason given for their preference. Table 6.1 indicates that the most preferred occupations (in order of their frequency in responses) were rearing livestock and poultry (53%), followed by tailoring (18%), teaching (8%) and handicrafts/quilt making (6%). With the exception of teaching, these are all activities that can be carried out within the home.

There is some variation in stated preference by occupational category. For instance, higher percentages of women in formal wage employment expressed preferences for teaching and tailoring than other economically active women. They were also less likely to express a preference for rearing livestock/poultry than any other category. This would presumably be seen as a step down the occupational hierarchy for better-off women. By contrast, women in informal waged employment were more likely than other categories to express a preference for rearing livestock and poultry, presumably a step up from labouring in the fields, while none of them expressed a preference for teaching, possibly because they considered it beyond their reach.

The two most important reasons given by women for their preferences were ability to earn while staying at home (37%) and the ability to meet other needs (such as consumption, sale of fuel) while earning (38%). These accounted for over 70% of the responses, and were the most frequently given reasons for their choices by each category of women, although to varying degrees. Other less frequently mentioned reasons were that work was considered honourable (7%) and that the work was not too demanding (4%). Disaggregating by category, it is worth noting that concern with honour was mentioned by 17% of women in formal waged work, 13% of those in outside self-employment and 12% of the economically inactive[5]. These are among the more educated women in our sample. Less than 1% of women in informal waged work and only 4% of those in home-based activities mentioned honour as their reason for preferring an occupation.

Table 7.1 reports on the least preferred occupations, while Table 7.2 reports on the reasons for the low ranking. The least preferred occupations, in order of frequency, were paid domestic work (32%), daily wage labour (23%), begging (14%), and garment factory work (12%). Once again, there were telling variations in preferences by work category. While women in most categories reported domestic service as their least preferred category (between 27-34%), with far fewer mentioning begging (12-14%), women in informal wage labour – the very poorest group of workers – were most likely to report begging as their least preferred occupation (36%). The likelihood of being reduced to begging was probably perceived to have a higher probability by women in informal wage labour than among better off women in other categories of work.

Turning to the reasons given for the low ranking given to these occupations, it is striking that only 23% mentioned the location of the work outside the home, in other people's homes or in the fields or by the roadside as their main reason. In other words, aversion to working outside the home did not appear to have the same degree of prominence in explaining the occupations that women *did not* desire, as the ability to work within the home had in explaining the jobs that they *did* desire. Instead, women's aversion to particular jobs reflected two main sets of considerations: how the work was perceived by others , and the adverse conditions associated with the work. 37% mentioned negative community perceptions about the work in question: people say bad things (14%); people do not honour the work (12%); and the work is considered bad (*kharab*) (9%). Most of the rest mentioned working conditions: hard nature of the work (23%); working alongside men in public (3%); having to work in the sun and rain (3%); and a range of other conditions mentioned far less frequently, such as hours of work, physical stress, the humiliation of begging and so on.[6] Levels of pay were rarely mentioned.

What these findings suggest is that, while a focus on the reasons that make women prefer certain jobs would suggest an active desire to stay within the home (whether in conformity to purdah norms or to better balance their domestic responsibilities –both of which proved significant in the regression analysis), the analysis becomes more complicated once the reasons that make them averse to certain outside jobs are taken into account. It appears that rather than simply an active preference on the part of women, the desire to work within the home is also a response to community denigration of outside work for women and to the adverse conditions characterising these forms of work.

That the views of others are an important consideration in dictating women's labour market preferences is evident when we consider that the main reason for giving a high rank to teaching, despite its outside location, is that it was honoured within the community. Similarly, while the main reason for giving a low rank to domestic service, despite the fact that it closely resembled the work women did within the home, was the awareness of its low status within the community. It thus appears that the social prestige attached to an occupation could offset some of the concerns associated with working outside the home, just as the social opprobrium attached to an occupation could offset the advantages of working within the domestic domain.

7. Conclusion

This paper set out to explore the role of cultural norms and economic considerations in explaining patterns of female labour market behaviour in Bangladesh. In this concluding section, we pull together our various findings to make a number of general points about the labour market behaviour of the women in our survey.

The first point to note is that a number of the factors that shaped the extent and kind of work undertaken by women in our survey (eg. women's age, education and domestic responsibilities) are not specific to Bangladesh; they have featured in studies of women's work in other countries as well. Secondly, we noted that a number of changes in recent years, including rising levels of female education, access to electricity and mobile phones, the emergence of the garment industry, and the possibility for migration, appear to have increased younger women's participation in wage work and self-employment outside the home. Economic factors clearly play a role here.

At the same time, the fact that 65% of the women in our sample were in home-based economic activity, while 22% were not economically active, suggests considerable continuity with the past. In a society in which strong cultural norms regarding men's role as family breadwinners have gone hand in hand with severe restrictions on women's mobility in the public domain, it was traditionally very poor women, particularly those without male breadwinners, who left the shelter of the home to seek paid work.

This continues to be true. Moreover, the fact that the married women were more likely to be found in home-based activity than single/divorced/separated/widowed women, and that this effect was independent of their child care and domestic responsibilities, suggests that married women continue to face greater pressure to adhere to cultural norms, which restrict their labour market options. The persistence of these cultural norms may also explain why women from higher-status households were more likely to be found in home-based work, an

important means by which they differentiate themselves from those who cannot afford conformity. Routine wearing of purdah/hijab and support for traditional gender norms, both more direct measures of the influence of culture, were associated with the greater likelihood of work within the home.

However, our analysis suggests that other factors may also explain the pattern of women's preferences with regard to work within and outside the home. One is the distribution of work opportunities available to them. Public sector employment, one of the few sources of socially acceptable wage employment for women, has been declining steadily in recent decades as part of economic reforms. Community-based service jobs with government and NGOs are considered respectable and have been on the rise, but there is considerable competition among women with the necessary educational qualifications for what are still a limited set of wage opportunities. Garment factories have emerged as the other major new source of wage opportunities for women but they are considered less socially acceptable ('people say bad things'), seen to involve very hard work and are, moreover, highly geographically concentrated. Not all women are willing or able to migrate in order to take up these opportunities.

Consequently, the main wage employment opportunities available to women, particularly the less educated, are informal wage labour and paid domestic work. These were precisely the forms of work that featured among the least preferred by the women in our sample who testified to the social disapproval and low status associated with these forms of work, the harassment faced, the negative effects on health, and general dissatisfaction with the work and working conditions. Not surprisingly, both forms of work have long been associated with the distress sale of labour by women in extreme poverty. The overwhelming preference for work within the home could thus be interpreted as much a response to the tangible and intangible costs associated with the main wage opportunities available to women, as it is an active preference for work within the home.

Reinforcing this tendency to opt for work within the home is the emergence of new opportunities for home-based income generating activity made possible by the steady growth of microfinance services that specifically target women. By providing forms of income generation that are compatible with purdah norms, the spread of microfinance in Bangladesh has effectively served to subsidise the withdrawal from wage labour on the part of some women and to reinforce the decision on the part of others to opt for home-based work. While home-based employment may not have the transformative potential of more regular forms of waged work, it does allow them to earn an income of their own without incurring community disapproval. For many women, this may be an acceptable trade-off.

References

Adnan, S. (1993). 'Birds in a cage': institutional change and women's position in Bangladesh. In N. Fedirici, K. O.Mason and S. Sogner (Eds), *Women's position and demographic change* Oxford: Clarendon Press : pp. 285-381

Arthur, W. and McNicholl, G. (1978) 'An analytical survey of population and development in Bangladesh'. Population and Development Review 4, pp. 23–80.

Asadullah, M.N., Savoia, A. and Mahmud. W. (2014). Paths to development: is there a Bangladesh surprise, *World Development,* 62, pp. 138-154.

Bridges, S., Lawson, D. and Begum, S. (2011) Labour market outcomes in Bangladesh. The role of poverty and gender norms *European Journal of Development Research*, 23, pp. 1-29

Buvinic, M., R. Furst-Nichols and Courey Pryor, E. (2014) *A roadmap for promoting women's economic empowerment* United Nations Foundations/Exxon MobileNewy York:

Cain, M., Khanam, S.R. and Nahar, S. (1979) Class, patriarchy and women's work in Bangladesh, *Population and Development Review,* 5, pp 405-438

Feldman,S. and McCarthy, F.E. (1983) Purdah and Changing Patterns of Social Control among Rural Women in Bangladesh *Journal of Marriage and the Family* 45, pp. 949-959

Heckman JJ (1979) Sample selection bias as a specification error. *Econometrica* 4, pp. 153–161

Heckman, James, Robert LaLonde, and Jeffrey Smith (1999). The economics and econometrics of active labor market programs. In Ashenfelter and Card (eds) *Handbook of Labor Economics*, vol 3A. North-Holland, Amsterdam ,pp 1865–2097.

Heintz, James and Lynda Pickbourn. 2012. The Determinants of Selection into Non-agricultural Self-employment in Ghana. *Margin: the Journal of Applied Economic Research*. 6(2): 181-209.

Hossain, M., Bose, L.M and Ahmad, A. (2004) *Nature and impact of women's participation in economic activities in rural Bangladesh: insights from household surveys* Centre for Policy Dialogue Occasional Paper Series No. 41. Centre for Policy Dialogue, Dhaka

Kabeer, N. S. Mahmud and S. Tasneem (2011) *Does paid work provide a pathway to women's empowerment? empirical findings from Bangladesh* IDS Working Paper 2011/375 Brighton: IDS

Khandker, S. (1987) Labour market participation of married women in Bangladesh *The Review of Economics and Statistics*, 69, pp. 536-541

Mahmud, S. (2003) 'Is Bangladesh experiencing a 'feminization' of the labour force?' Bangladesh Development Studies 29, pp. 1-37

Mahmud, S., and Mahmud, W. (1991) *Women and Structural Adjustment: The case of Bangladesh*. Commonwealth Economic Papers Number 22, Commonwealth Secretariat: London

Mahmud, S. and S. Tasneem (2011) *The under-reporting of women's economic activity in Bangladesh: an examination of official statistics* BDI Working Paper 1. BRAC Development Institute, Dhaka

Neff, D., K. Sen and V.Kling (2012) *The puzzling decline of rural women's labour force participation in India: a re-examination* Working Paper 196. Hamberg: German Institute of Global and Area Studies

Rahman, R. I. and R. Islam (2013) *Female labour force participation in Bangladesh: trends, drivers and barriers* ILO Asia-Pacific Working Paper Series. New Dehli: ILO

Van de Ven, W. and B. van Praag (1981) 'The demand for deductibles in private health insurance: A probit model with sample selection *Journal of Econometrics*, 17(2), pp. 229-252

World Bank (2008) *From whispers to voices. Gender and social transformation in Bangladesh* Bangladesh Development Series Paper No. 22. Dhaka: World Bank

Table 1. Labour force participation rates according to various definitions and reference periods by district: BBS and Pathways village census (%)

	BBS LFPR 2005/06	Pathways LFPR (1)	Pathways LFPR (2)	Pathways LFPR (3)	Pathways LFPR (4)
	(1)	(2)	(3)	(4)	(5)
Faridpur	21	52	55	52	13
Comilla	34	78	81	63	4
Tangail	19	76	81	62	12
Chapainawabganj	22	69	80	64	4
Moulovibazar	39	62	70	37	9
Bagerhat	33	68	70	58	9
Kurigram	10	80	82	74	14
Narayanganj	9	51	58	44	16
All areas	30**	67	73	58	10

Source: Mahmud and Tasneem (2011)

TABLE 2. Socio-economic profile of respondents by work category (% unless otherwise specified)

	Formal /semi formal waged work	Informal waged work	Informal self-employment (outside)	Informal self-employment (inside)	Expenditure saving	Inactive	All
Number of cases	181	306	187	2456	909	1159	5198
% of total	3.5	5.9	3.6	47.3	17.5	22.3	100.0
Mean age in years	30.5	39.9	35.7	35.2	35.5	36.4	35.6
Never married	17.1	3.9	29.4	7.2	7.9	17.3	10.5
Married	70.2	59.5	47.1	83.2	80.1	63.2	75.1
Widow	7.2	24.2	17.7	8.2	10.6	18.2	12.1
Separated/Divorced	5.5	12.4	5.9	1.3	1.4	1.3	2.3

Household headed by respondent	14.9	33.0	19.8	8.1	9.2	9.0	10.6
Mean no. of respondent children	1.9	2.8	2.9	3.0	3.2	2.9	3.0
Mean no. of children <5	0.3	0.2	0.1	0.4	0.4	0.3	0.3
Primary responsibility for care	55.3	61.1	37.4	69.8	69.6	49.4	63.0
Primary responsibility for household chores	78.5	79.7	72.7	86.2	83.3	69.5	80.8
Respondent's education							
No education	17.1	80.4	41.2	44.2	42.2	34.7	42.8
Primary	29.8	17.7	13.9	29.6	28.7	23.6	26.9
Secondary	22.7	2.0	25.1	23.1	24.3	31.6	24.0
Post-secondary	30.4	0.0	19.8	3.1	4.7	10.1	6.3
Muslim	91.7	88.6	87.2	91.3	91.1	88.5	90.4
Wears burkah/hijab	44.2	25.5	47.1	56.9	59.3	56.5	54.6
Gender norm index:							

0	1.7	1.0	0.0	0.9	1.2	0.8	0.9
1	50.8	44.1	48.1	42.6	38.6	41.3	42.2
2	35.9	39.9	38.5	37.8	40.4	37.9	38.3
3	10.5	13.4	12.3	18.3	19.3	19.3	17.9
4	1.1	1.6	1.1	0.5	0.6	0.7	0.6
Migrated for work	12.2	6.5	0	0.5	0.1	0.5	1.2
NGO membership	40.9	39.9	36.9	42.6	33.4	26.8	37.1
Loan	47.5	61.1	41.7	52.2	45.5	34.6	47.1
Loan from NGOs (of who took out loans)	81.4	80.2	88.5	83.4	76.1	77.6	81.0
Household head's education							
None	36.5	82.4	48.7	50.7	44.9	36.8	47.9
Primary	24.9	15.0	21.9	24.6	25.7	27.3	24.7
Secondary	21.6	2.6	18.7	16.0	17.5	19.2	16.5
SSC and above	17.1	0.0	10.7	8.8	11.9	16.8	11.0

Household head's occupation							
Agricultural self-employed	11.6	6.9	28.3	36.5	33.0	18.1	28.9
Wage/salaried	56.4	78.4	26.2	30.5	28.2	30.7	33.7
Non-agricultural self-employment							
Inactive							
Wealth terciles							
Lowest tercile	26.5	81.4	33.7	34.0	26.1	25.9	33.3
Middle tercile	33.7	16.0	31.0	38.2	32.6	28.7	33.3
Highest tercile	39.8	2.6	35.3	27.9	41.4	45.5	33.3
Cultivable land (mean decimals)	40.6	3.2	39.3	58.6	87.0	73.9	62.4
Cattle owned by hh	13.8	11.4	28.9	44.6	38.4	20.8	34.6
Goats owned by hh	10.5	10.5	21.9	30.7	29.8	15.0	24.9
Poultry owned by hh	35.4	50.0	49.7	77.7	71.8	35.8	63.2
Food insecurity	35.9	92.5	49.2	55.5	51.7	46.8	54.2

Owns phone	24.3	0.0	6.4	4.2	6.7	7.9	6.0
Distance from road (in minutes)	8.1	16.1	11.4	17.3	15.5	13.1	15.4
Household has electricity	12.2	2.0	1.1	0.1	0.0	1.7	1.0
Faridpur	21.6	9.5	17.7	10.4	3.3	21.3	12.2
Comilla	3.3	7.8	2.1	16.3	12.2	7.1	12.1
Tangail	6.6	17.0	17.1	13.7	13.2	8.6	12.6
Chapanababganj	2.2	5.9	7.0	11.2	23.7	9.4	12.2
Maulvibazar	9.9	10.8	8.6	8.6	22.8	13.6	12.4
Bagerhat	5.0	8.5	13.4	13.0	9.2	14.0	12.0
Kurigram	5.5	35.0	12.8	18.5	6.2	3.4	13.3
Narayanganj Urban	42.0	4.3	15.5	4.0	3.6	18.6	9.0
Narayanganj Rural	3.9	1.3	5.9	4.3	5.8	4.0	4.4

TABLE 3: Conditions and perceptions of work by work category (% unless otherwise stated)

Occupation	Formal waged work	Informal waged work	Informal self-employment (outside)	Informal self-employment (inside)	Expenditure saving
Total numbers	181	306	187	2456	909
Mean no. of months worked last year	10.6	8.8	9.7	11.3	10.7
Mean no. of hours worked per day	7.6	7.0	4.1	1.5	1.1
Does overtime work	38.7	-	-	-	-
Of whom, receives overtime pay	97.1	-	-		--
Entitled to maternity leave	41.4	0.7	1.1		
Entitled to paid annual leave	55.3	3.6	2.7	-	-
Negative work-related health effect	29.8	70.6	35.3	11.3	6.7

	22.7	31.4	6.4	8.8	6.2
Faced harassment at work	22.7	31.4	6.4	8.8	6.2
Satisfied with work environment	59.1	18.0	56.2	66.5	64.1
Satisfied with work	35.4	9.5	30.0	43.6	35.8
Total numbers	181	306	187	2456	909

Table 4. Determinants of being economically active: probit estimation (standard errors in parentheses)

VARIABLES	(1) Participation Model
Age	0.102***
	(0.00917)
Age squared	-0.122***
	(0.0105)
Separated/divorced	0.0275
	(0.165)
Widowed	-0.136
	(0.0963)
Never married	0.136

	(0.0969)
Respondent head	0.400***
	(0.0930)
Number of respondents children<5	-0.109**
	(0.0517)
Care	0.214***
	(0.0620)
Chores	0.297***
	(0.0650)
Primary	-0.0245
	(0.0667)
Secondary	-0.173**
	(0.0793)
Post-secondary	-0.0645
	(0.117)
Migrated	0.791***
	(0.249)
Muslim	0.0525
	(0.0876)
Wears burkha	-0.0380
	(0.0555)
Traditional norms	-0.0951***
	(0.0305)
NGO	0.0965
	(0.0659)
Loans	0.117*
	(0.0640)
Head's education	-0.0168**
	(0.00685)
Head in wage employment	0.504***
	(0.0796)

Head in agri self -employment	0.515***
	(0.0816)
Head in non-agri self-employment	0.459***
	(0.0800)
Food insecure	0.0371
	(0.0550)
Wealth	-0.156***
	(0.0257)
Cultivable land	-0.00144
	(0.0560)
Livestock	0.515***
	(0.0531)
Poultry	0.882***
	(0.0511)
Owns phone	0.138
	(0.0972)
Hh electricity	-0.0103
	(0.205)
Distance to road (minutes)	-0.000240
	(0.000581)
Faridpur	-0.892***
	(0.0997)
Tangail	-0.334***
	(0.104)
Chapainababganj	-0.172
	(0.109)
Moulovibazar	-0.444***
	(0.101)
Bagerhat	-0.565***
	(0.101)
Kurigram	0.332***

	(0.124)
Urban Narayanganj	-0.314**
	(0.129)
Rural Narayanganj	-0.203
	(0.133)
Constant	-1.959***
	(0.243)
Observations	5,198

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

Table 5. Determinants of type of employment, Heckman probit with selection (standard errors in parentheses).

	(1) Formal wage	(2) Informal wage	(3) Self-emp outside	(4) Self-emp inside	(5) Expenditure-saving
Selection into type of employment					
Marital status (reference category: married)					
Sep/divorce	0.312	0.890***	0.694***	-0.679***	-0.464*

	(0.190)	(0.172)	(0.191)	(0.140)	(0.181)
Widow	0.0350	0.415***	0.409***	-0.273***	-0.0715
	(0.144)	(0.111)	(0.123)	(0.0761)	(0.0863)
Never married	-0.0435	0.394*	0.576***	-0.114	-0.198
	(0.134)	(0.190)	(0.145)	(0.0935)	(0.103)
Care	-0.163	-0.0273	-0.243*	0.0709	0.0435
	(0.0900)	(0.0927)	(0.0963)	(0.0549)	(0.0605)
Chores	-0.506***	-0.401***	0.0109	0.157*	0.0527
	(0.100)	(0.106)	(0.113)	(0.0673)	(0.0726)
Respondent's education (reference category: no education)					
Primary	0.481***	-0.234*	-0.236*	0.0680	0.0128
	(0.112)	(0.0987)	(0.114)	(0.0557)	(0.0603)
Secondary	0.777***	-0.758***	0.0332	0.0172	0.0262
	(0.127)	(0.192)	(0.128)	(0.0706)	(0.0752)
Post-secondary	1.491***	-6.686	0.748***	-0.623***	-0.195
	(0.210)	(583639.2)	(0.176)	(0.118)	(0.131)
Burkha	-0.115	-0.176*	-0.105	0.121*	0.0605
	(0.0768)	(0.0859)	(0.0854)	(0.0483)	(0.0526)
Norms index	-0.0477	-0.0887	-0.0432	0.0696*	-0.00376
	(0.0534)	(0.0484)	(0.0532)	(0.0288)	(0.0314)

Migrated	0.360	0.673**	-5.215	-0.581**	-1.001*
	(0.219)	(0.239)	(1027.0)	(0.219)	(0.446)
NGO membership	0.132	-0.187	0.196	0.0962	-0.0927
	(0.0942)	(0.0975)	(0.109)	(0.0568)	(0.0619)
Loan	-0.0581	0.289**	-0.0442	0.0263	-0.0635
	(0.0929)	(0.101)	(0.108)	(0.0564)	(0.0610)
Head education	-0.00137	-0.0467**	-0.00941	-0.00367	0.0293***
	(0.0114)	(0.0173)	(0.0125)	(0.00677)	(0.00724)
Head's occupation (reference category: inactive)					
Head wage emp	0.0224	0.571***	-0.382*	0.222*	-0.498***
	(0.151)	(0.165)	(0.153)	(0.0876)	(0.0896)
Head ag. self-emp	-0.195	-0.319	-0.127	0.583***	-0.563***
	(0.157)	(0.177)	(0.151)	(0.0874)	(0.0893)
Head non-ag self emp	-0.232	-0.136	-0.188	0.605***	-0.525***
	(0.141)	(0.170)	(0.148)	(0.0883)	(0.0907)
Wealth	-0.0274	-0.552**	-0.122	-0.0407	0.0684*
	(0.0550)	(0.185)	(0.0639)	(0.0304)	(0.0317)
Food insecure	-0.181*	0.311**	-0.228*	-0.0169	0.0281
	(0.0857)	(0.117)	(0.0940)	(0.0519)	(0.0561)

Cultivable land	-0.134	-0.253[*]	0.00269	-0.0471	0.155[**]
	(0.0871)	(0.103)	(0.0929)	(0.0512)	(0.0548)
Livestock	-0.477[***]	-0.658[***]	-0.0272	0.362[***]	-0.0600
	(0.0871)	(0.0860)	(0.0941)	(0.0516)	(0.0540)
Poultry	-0.751[***]	-0.540[***]	-0.382[**]	0.359[***]	0.121
	(0.0880)	(0.0871)	(0.120)	(0.0661)	(0.0656)
Phone	0.383[**]	-6.191	-0.279	-0.152	-0.0178
	(0.117)	(771382.6)	(0.179)	(0.100)	(0.107)
HH electricity	0.755[***]	0.117	-0.256	-1.036[**]	-5.203
	(0.226)	(0.318)	(0.429)	(0.368)	(1343.4)
Road distance	-0.000414	-0.00318	-0.00406	0.00126	-0.000455
	(0.00231)	(0.00246)	(0.00289)	(0.000837)	(0.000749)
Faridpur	0.983[***]	0.530[**]	0.857[***]	-0.0733	-0.651[***]
	(0.169)	(0.185)	(0.241)	(0.107)	(0.121)
Tangail	0.345	0.346[*]	0.903[***]	-0.407[***]	0.144
	(0.186)	(0.154)	(0.220)	(0.0862)	(0.0910)
Chapainababganj	-0.0128	-0.340	0.415	-0.574[***]	0.721[***]
	(0.216)	(0.188)	(0.239)	(0.0901)	(0.0933)
Moulovibazar	0.710[***]	0.227	0.562[*]	-0.840[***]	0.644[***]
	(0.177)	(0.167)	(0.233)	(0.0894)	(0.0917)
Bagerhat	0.224	0.300	0.862[***]	-0.128	-0.120

	(0.199)	(0.172)	(0.233)	(0.0937)	(0.0978)
Kurigram	-0.0837	0.402**	0.735***	-0.0139	-0.426***
	(0.195)	(0.152)	(0.223)	(0.0878)	(0.101)
Urban Narayanganj	0.821***	0.100	0.179	-0.138	-0.524***
	(0.205)	(0.304)	(0.217)	(0.141)	(0.154)
Rural Narayanganj	0.349	-0.235	0.751**	-0.311**	0.227
	(0.228)	(0.263)	(0.258)	(0.119)	(0.123)
Constant	-0.726*	-0.794*	-1.801***	-0.591***	-0.691***
	(0.332)	(0.319)	(0.331)	(0.177)	(0.173)

Selection into labour force

Age	0.107***	0.113***	0.109***	0.108***	0.110***
	(0.00895)	(0.00895)	(0.00898)	(0.00902)	(0.00896)
Age squared	-0.130***	-0.135***	-0.131***	-0.129***	-0.132***
	(0.0102)	(0.0102)	(0.0103)	(0.0103)	(0.0103)
Separated/divorced	0.0528	-0.00692	0.00290	0.0107	0.000430
	(0.163)	(0.162)	(0.163)	(0.164)	(0.164)
Widow	-0.121	-0.166	-0.152	-0.162	-0.167
	(0.0952)	(0.0943)	(0.0955)	(0.0955)	(0.0954)
Never married	0.0782	0.134	0.104	0.105	0.111
	(0.0952)	(0.0957)	(0.0955)	(0.0958)	(0.0955)
Respondent head	0.358***	0.418***	0.404***	0.431***	0.425***

	(0.0908)	(0.0901)	(0.0939)	(0.0932)	(0.0915)
Respondent child<5	-0.128**	-0.107*	-0.106*	-0.107*	-0.120*
	(0.0483)	(0.0511)	(0.0514)	(0.0516)	(0.0514)
Care	0.229***	0.236***	0.228***	0.231***	0.235***
	(0.0610)	(0.0613)	(0.0616)	(0.0616)	(0.0615)
Chores	0.295***	0.304***	0.299***	0.302***	0.292***
	(0.0642)	(0.0643)	(0.0647)	(0.0647)	(0.0646)
Primary	-0.0198	-0.00206	-0.0210	-0.0133	-0.0159
	(0.0661)	(0.0662)	(0.0664)	(0.0665)	(0.0662)
secondary	-0.194*	-0.157*	-0.177*	-0.171*	-0.164*
	(0.0781)	(0.0782)	(0.0783)	(0.0783)	(0.0783)
Post-secondary	-0.0834	-0.0420	-0.0620	-0.0467	-0.0370
	(0.114)	(0.115)	(0.115)	(0.115)	(0.115)
Muslim	0.0256	0.00528	0.00509	0.00651	0.00459
	(0.0755)	(0.0779)	(0.0793)	(0.0793)	(0.0789)
Norm index	-0.0878**	-0.101***	-0.0919**	-0.0931**	-0.0954**
	(0.0302)	(0.0303)	(0.0303)	(0.0303)	(0.0303)
Migrated	0.841***	0.725**	0.784**	0.782**	0.781**
	(0.244)	(0.242)	(0.247)	(0.247)	(0.247)
Head education	-0.0193**	-0.0192**	-0.0196**	-0.0196**	-0.0202**
	(0.00663)	(0.00665)	(0.00664)	(0.00666)	(0.00664)

Head wage emp	0.510***	0.512***	0.530***	0.536***	0.531***
	(0.0782)	(0.0778)	(0.0782)	(0.0781)	(0.0776)
Head agricultural self-emp	0.497***	0.515***	0.510***	0.518***	0.507***
	(0.0810)	(0.0807)	(0.0811)	(0.0812)	(0.0806)
Head non-ag self-employment	0.468***	0.480***	0.482***	0.492***	0.481***
	(0.0787)	(0.0785)	(0.0792)	(0.0789)	(0.0784)
Wealth	-0.159***	-0.162***	-0.160***	-0.161***	-0.159***
	(0.0239)	(0.0241)	(0.0241)	(0.0241)	(0.0239)
Livestock	0.495***	0.501***	0.506***	0.504***	0.503***
	(0.0522)	(0.0522)	(0.0524)	(0.0524)	(0.0523)
Poultry	0.869***	0.874***	0.874***	0.878***	0.868***
	(0.0506)	(0.0505)	(0.0509)	(0.0507)	(0.0509)
Faridpur	-0.826***	-0.817***	-0.828***	-0.825***	-0.820***
	(0.0951)	(0.0954)	(0.0956)	(0.0956)	(0.0954)
Tangail	-0.292**	-0.272**	-0.281**	-0.284**	-0.271**
	(0.102)	(0.103)	(0.103)	(0.103)	(0.103)
Chapainababganj	-0.138	-0.134	-0.139	-0.139	-0.133
	(0.103)	(0.104)	(0.104)	(0.104)	(0.104)
Moulovibazar	-0.412***	-0.410***	-0.416***	-0.413***	-0.403***
	(0.0984)	(0.0985)	(0.0988)	(0.0988)	(0.0986)

Bagerhat	-0.547***	-0.543***	-0.546***	-0.550***	-0.547***
	(0.0988)	(0.0989)	(0.0992)	(0.0992)	(0.0990)
Kurigram	0.351**	0.343**	0.352**	0.351**	0.360**
	(0.118)	(0.118)	(0.119)	(0.119)	(0.119)
Urban Narayanganj	-0.332**	-0.318*	-0.332**	-0.328**	-0.321*
	(0.125)	(0.126)	(0.126)	(0.126)	(0.126)
Rural Narayanganj	-0.179	-0.177	-0.176	-0.179	-0.176
	(0.132)	(0.132)	(0.132)	(0.132)	(0.132)
Constant	-1.917***	-2.077***	-1.982***	-1.993***	-2.012***
	(0.237)	(0.236)	(0.238)	(0.238)	(0.236)
Rho (atanh)					
	-1.255***	-0.728***	0.353	0.0636	0.318*
	(0.309)	(0.185)	(0.341)	(0.152)	(0.144)
N	5198	5198	5198	5198	5198
adj. R^2					

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6.1: Most preferred occupation by work category (%)

	Formal wage	Informal wage	Self-employment (outside)	Self-employment (inside)	Expenditure-saving	Inactive	Total
Number	181	306	187	2456	909	1159	5198
Livestock/poultry rearing	22	71	39	58	54	39	53
Tailoring	22	9	10	19	18	22	18
Teaching	22	0	19	6	7	14	8
Handicrafts	1	3	8	6	7	7	6
Others	33	17	24	11	14	18	15
Total	100	100	100	100	100	100	100

Table 6.2: Main reason for high ranking (%)

	Formal wage	Informal wage	Self-employment (outside)	Self-employment (inside)	Expenditure-saving	Inactive	Total
N	181	306	187	2456	909	1159	5198
Can work at home	29	43	28	38	34	39	37
Multiple benefits	18	43	29	41	48	27	38
Educate children	2	0	1	1	2	2	1
Work is not hard	6	6	2	5	3	4	4
Honourable work	17	1	13	4	5	12	7
Can serve patients	7	1	6	2	-	2	2
Can work independently	6	2	5	2	1	3	2
Satisfying	3	2	4	2	2	2	2
Pays more	4	1	3	1	0	0	1

Given recognition	0	0	0	0	0	0	0
Job security	0	0	0	0	0	0	0
Pension	0	0	0	0	0	0	0
Proper salary	2	0	0	0	0	0	0
Other	6	1	9	4	5	9	6
Total	100	100	100	100	100	100	100

Table 7.1: Least preferred occupations (%)

	Formal wage	Informal wage	Self-employment (outside)	Self-employment (inside)	Expenditure-saving	Inactive	Total
N	181	306	187	2456	909	1159	5198
Daily wage labour	23	22	22	27	18	19	23
Garment worker	11	6	18	11	12	16	12
Domestic service	34	20	27	33	37	27	32
Begging	12	36	12	11	12	14	14
Other	20	16	21	18	21	24	19
Total	100	100	100	100	100	100	100

Table 7.2: Main reasons for low ranking (%)

	Formal wage employment	Informal wage employment	Self-employment (outside)	Self-employment (inside)	Expenditure-saving	Inactive	Total

N	181	306	187	2456	909	1159	5198
Outside own home/in others' homes	8	10	8	21	21	16	18
Violates purdah	0	0	0	1	1	1	1
Working in fields/roadside	0	2	1	3	2	-	2
Feel shame	1	2	2	2	1	2	2
No honour	20	9	16	11	13	15	12
Shame of working along men/in field	1	3	5	3	2	2	2
The work is bad	6	16	4	11	7	6	9
People say bad things	17	14	16	12	14	15	14
Having to beg from others	1	1	1	1	1	1	1
The work is hard	35	25	28	21	22	24	23
Exposure to sun and rain	4	5	3	4	3	2	3
Physical stress	0	2	2	1	1	0	1
Work long hours/night	0	0	1	0	1	1	1
Low pay	1	2	1	1	1	2	1
Eye problem	0	3	1	1	2	1	1
Disease	0	0	0	0	0	0	0
No independence	0	1	2	2	2	1	2
Other	6	5	7	5	6	11	7
Total	100	100	100	100	100	100	100

APPENDIX 1

Table A.1 Variable descriptions

Variable	Description	Selection	Probit
Age	Individual's age	X	-
Agesq	Individual's age squared (divided by 100)	X	-
Sepdiv	Individual is separated or divorced	X	X
Widow	Individual is a widow	X	X
nevmar	Individual has never been married	X	X
Child	Number of children	X	X
Chores	Individual does chores around the house	X	X
Care	Individual provides care within the household	X	X
prim	Primary school education	X	X
second	Secondary school education	X	X
possec	Post-secondary school education	X	X
muslim	Individual identifies as muslim	X	X
burkha	Individual usually or sometimes wears a burkha	X	X
Norm index	Individual subscribes to traditional gender norms	X	X
migrt	Individual has migrated for work	X	X
loan	Individual has or has had a loan	X	X
assoc	Individual belongs to an NGO	X	X
phone	Individual owns a phone (including mobile phone)	-	X
workdc	The decision to work was the individual's own	-	X
femhh	The household head is female	-	X
edhh	Education of the household head	-	X
agcrhh	Household head works producing agricultural crops	-	X
agothh	Household head works in other agricultural activity	-	X
aglbhh	Household head is an agricultural labourer	-	X
nalbhh	Household head is a non-agricultural labourer	-	X
bushh	Household head operates own business	-	X
skilhh	Household head is a skilled worker	-	X

salhh	Household head is a salaried worker	-	X
unemhh	Household head is economically inactive	-	X
wealth	Index of asset ownership	-	X
land	Household member owns land	-	X
foodin	Household is food insecure	-	X
roadis	Distance from nearest road	-	X
electr	Residence has electricity	-	X
Farid	Faridpur	-	X
Tang	Tangail	-	X
Chapai	Chapai Nawabganj	-	X
Moulov	Moulovibazar	-	X
Bager	Bagerhat	-	X
Kurig	Kurigram	-	X
Naray	Narayanganj	-	X

Table A.2 Means and standard deviations of variables.

Variable	Mean	St. Dev.
Age	35.65	14.93
age squared/100	14.94	12.57
separated/divorced	0.02	0.15
widowed	0.12	0.33
never married	0.11	0.31
children under 5	0.25	0.43
chores	0.81	0.39
care	0.63	0.48
primary	0.27	0.44
secondary	0.24	0.43
above secondary	0.06	0.24

burkha	0.55	0.50
migrate	0.01	0.11
Norm index	1.75	0.78
loan	0.47	0.50
association	0.37	0.48
own phone	0.06	0.24
work own decision	0.48	0.50
female household head	0.13	0.34
household head education	3.61	4.19
household head, employed in agric	0.38	0.49
household head, employed non-ag	0.34	0.47
household head, runs business	0.17	0.37
wealth index	0.00	1.00
cultivatable land	3.26	21.46
Cattle	0.17	0.69
goats/sheep	0.24	0.88
Electricity	0.01	0.10
Faridpur	0.12	0.33
Tangail	0.13	0.33
Chapainababganj	0.12	0.33
Moulovibazar	0.12	0.33
Bagerhat	0.12	0.33
Kurigram	0.13	0.34
Narayanganj	0.13	0.34

[1]The Bangladesh Bureau of Statistics uses the ILO definition of the labour force as all persons aged 15+ who had worked for one or more hours within a reference period of a) the last 7 days and b) the last 12 months for pay or profit or had worked without pay in a family farm or enterprise or else had a job or business from which they were temporarily absent during this period. Those who worked without pay in a family farm or enterprise are classified as 'unpaid family labour', a sub-category of the self-employed.

[2] Table 1 is taken from Mahmud and Tasneem, (2011).

[3]A more direct comparison was not possible because the 7 day reference period was used by the Pathway village census did not distinguish between work within and outside the home.

[4] The gender norms variable classified agreement with the following statements as 0: women need an income of their own to be self-sufficient, women's work outside the home does not have a negative effect on their marriage; husbands should help wives working outside the home with housework. Disagreement was classified as 1. The higher the value of the variable therefore, the greater the agreement with traditional norms.

[5] It was mainly teaching that was mentioned in connection with honour: 70% of those who opted for teaching as their preferred occupation gave this reason along with 27% of those who chose private tuition.

[6] Reasons relating to the perceived social status of the job were most often expressed in relation to begging and domestic work. The conditions associated with the work, including having to work outside the home, having to work in the fields and the hard labour involved were most often mentioned in relation to daily wage labour and garment work while the shame of having to work alongside men was mentioned primarily in relation to garment work.