# Diverging Stories of Son Preference in South Asia: A Comparison of India and Bangladesh

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# Abstract

In Bangladesh, overall sex ratio has declined from 109.6 (males/females) in the 1950s to 100.3 in 2011. Unlike countries with female deficits, the improvement in sex ratio has extended to the under-5 age group. This has happened in a context where per-capita income has grown modestly but poverty continues to be widespread. Thus the story of "missing women" is evolving differently in Bangladesh than from India where decline in overall sex ratios has been accompanied by worsening of child sex ratios. In this paper we explore the hypothesis that improvement in child sex ratios in Bangladesh is due to a shift in parental preferences about sex composition of families in a society undergoing rapid socio-economic change. Using a combination of quantitative and qualitative data, we find that parents are less likely to discriminate between sons and daughters than in the past with respect to survival and investments in human capital. These changes indicate a weakening of patriarchal structures and cultural norms around fertility intentions and sex composition of families. In comparison to India, it is speculated that the diverging story of sex preference in Bangladesh could be related to the timing of introduction of sex selection technology and the role of the state and civil society in the two contexts.

**Key words:** Bangladesh; missing women; female deficit; child sex ratios; fertility; son preference; sex preference; investment in daughters; sex selective abortion; gender discrimination; patriarchy; NGOs

# 1. Introduction: `watering the neighbor's tree'

Variations in gender stratification systems across the world have given rise to marked regional patterns in both the form and severity of gender inequalities. This 'geography of gender' is graphically illustrated by regional variations in the ratio of men to women in the overall population, 'a geography of sex ratios'. Sex ratios at birth converge to a norm of around 105 boys to every 100 girls almost everywhere in the world (UNDP 2010). However, the greater biological vulnerability of infant males means that, with equal care and feeding, more girls tend to survive than boys in most regions of the world, leading to a lower ratio of men to women in the overall populations of countries as varying as the US (97 men to 100 women), UK (97), Ghana (100) and Brazil (97). In certain regions, however, the opposite has been true. The severity of gender discrimination leading to excess levels of female mortality has given rise to masculine sex ratios that average 105 men to 100 women and to the phenomenon of 'missing women' viz. the additional number of women there might have been in the population of these countries had mortality rates been less skewed.

These adverse sex ratios are largely concentrated in what has been characterized as a belt of 'strong' or 'classic' patriarchy which stretches from North Africa and the Middle East to South Asia but also includes countries in the East Asia region, including China (Caldwell 1982; Kandiyoti 1988; Cain 1984; Dyson and Moore 1983). While varying in terms of religion and culture, these countries share certain commonalities in their organization of family and kinship systems. Inheritance is patrilineal so that property and descent is traced through the male line. The household is organized along patriarchal lines giving older members authority over young and male over females. There are strict controls over women's mobility in the public domain, confining them to their reproductive roles and activities that can be carried out within the shelter of the home. Post-marital residence patterns are general patrilocal, requiring daughters to leave the parental home to live with their husband and his kin after marriage. The loss this represents to parents has been widely referred to as 'watering the neighbor's tree' (Kabeer 1985; Kaur 2007). These practices have interlocked to produce extreme forms of female dependency in this region and a strong culture of son preference.

These older norms and practices have, of course, been considerably altered by the recent histories and development trajectories of different countries within

this belt but their sex ratios have not necessarily moved in the same direction. Sex ratios fell, though by a varying extent, in most these countries in the 1990s reflecting an improvement in female life expectancy relative to men (Klasen and Wink 2002 and 2003). However, this decline in overall sex ratios has been accompanied in a number of countries by a worrying new trend: an increase in sex ratios at birth attributed to the growing prevalence of sex-selective abortions. The availability of amniocentesis and ultrasound scanning has made pre-natal sex determination possible allowing parents to use sex-selective abortion to manipulate the sex composition of live births. The utilization of this technology is evident in growing masculinity of sex ratios at birth in a number of countries, mainly in East Asia (SRB of 116) and South Asia (SRB of 107.5) compared to 105.6 in Central Asia and Europe, 104.3 in the Arab region, 104.2 in LAC and 101.9 in SSA (UNDP 2010). Certain countries in Asia stand out for their abnormally high sex ratios: India, China and South Korea and, more recently, in Vietnam and a number of Caucasian countries (Attane and Guilmoto 2007). The phenomenon of 'missing women' is being increasingly replaced in these countries by the phenomenon of 'missing daughters'.

It has been suggested that the resort to sex-selective abortion in these countries represent efforts on the part of parents to reconcile their desire for smaller families with their preference for sons (Sudha and Rajan 1998 and 1999; John *et al.* 2008). Yet the desire for smaller families in societies characterized by son preference has not always been accompanied by deterioration in child sex ratios. Other countries with strongly patriarchal cultures have undergone fertility decline without apparently resorting to such means. Bangladesh, the main focus of this paper, is one of them.

It is unlikely that any single set of factors can help to explain these varying trends in sex ratios in countries which share a common history of son preference. Instead this paper will attempt to cast light on a more localized version of this puzzle: the deterioration in child sex ratios in India and its apparent improvement in neighboring Bangladesh. While we will draw widely on the secondary literature in our analysis, we will also be relying heavily on primary research into this phenomenon that has been funded by IDRC/Action Aid in India and by IDRC/DFID in Bangladesh. The Indian findings have been published in John *et al.* (2008) and Kaur (2007). This paper represents a summary of the Bangladesh findings and an attempt to make a comparison with those reported by the India study[1].

[1] The Bangladesh research, funded by IDRC, was carried out as part of a larger DFID-funded research program on Pathways of Women's Empowerment by a team based at BRAC Development Institute and the School of Oriental and African Studies, London.

# 2. Changing sex ratios in the context of fertility decline in India

The phenomenon of adverse sex ratios is not new in India. It goes back as far as the turn of the twentieth century. In addition, as a number of researchers have pointed out, the distribution of sex ratios across the country has been characterized by a distinct north/south divide. They are generally higher northern states, particularly in those in the north-west of India, than in the south states. Eastern states occupied an intermediate status. Expressions of son preference appear to mirror this distribution (Dyson and Moore 1983).

Dyson and Moore suggested that these north-south variations reflected variations in underlying kinship and family structures. The kinship system of the 'Sanskritic north' of India (Palriwala 1999)had a great deal in common with the 'ideal-typical' arrangements which characterize other countries in the belt of classic patriarchy – patriarchy, patriliny, patrilocality and *purdah* – , but also reflected some of the specificities of a predominantly Hindu culture, including a strong caste system. Marriage was characterized by village and linage exogamy, caste endogamy and, particularly among the upper castes, the practice of hypergamy, the idea that the bride's family are socially and ritually inferior to the groom's: 'the bride's family members have to bow their heads to the latter and continuously give the groom's family gifts' (John *et al.* 2008). It is among the landed upper castes in the northern plains of India that the practice of dowry originated. It was also the landed upper castes that reported the worst juvenile sex ratios (Miller 1981; Agnihotri 2000)[2].

The kinship system of the 'Dravidian south' of India (Palriwala 1999) was by contrast characterized by lineage endogamy, with cross-cousin marriage fairly common, social and ritual equality between families related through marriage, bride wealth more common than dowry and greater public mobility allowed to women. As Dyson and Moore pointed out, it had a great deal in common with those associated with the more gender-egalitarian kinship systems which characterized South-east Asian countries, including more balanced sex ratios and a greater indifference to the sex of the child.

[2] For a variety of reasons, including the impact of sex-specific migration patterns, sex ratios in younger age groups are often used to ascertain the presence of gender discrimination. Juvenile sex ratios refer to the 0-14 age group while child sex ratios can vary from 0 to 4, 5 or 6 years.

Indian censuses have documented a steady deterioration in its overall sex ratio (m/f) from around 103 in 1901 to a peak of 108 in 1991, but there have been signs of improvement with sex ratios of 107 in 2001, further declining to 106 in 2011 (Census of India 2011). This trend towards the 'normalization' of sex ratios was largely attributed to a decline in adult female mortality relative to men. This in turn reflected a steady decline in fertility rates and the concomitant decline in maternal mortality (Das Gupta *et al.* 2009). However, the overall decline has been accompanied by a worsening of child sex ratios [3] (John ME 2011; Klasen and Wink 2001). An examination of past censuses reveals that while there has been a consistent increase in child sex ratios (m/f) since 1961, the rate of increase has been sharper since the 1980s: from 106 in the 1991 census, to 108 in 2001 and 109 in 2011 (Census of India 2011).

This deterioration in child sex ratios appears to reflect a combination of earlier practices such as female infanticide, active gender discrimination in access to health and nutrition and the 'malign neglect' of daughter as well as new forms of discrimination such as female-selective abortion. The growing resort to female-selective abortion is evident from the steady rise in sex ratios at birth. Available data suggests that, between 1998 and 2005, sex ratios (m/f) at birth rose from 111 to 114 at the national level (John ME *et al.* 2008).

At the same time, under-five mortality rates continue to show considerable female disadvantage, even allowing for the increase of female selective abortion. Age disaggregated data shows that in fact excess female mortality is higher in the 1-4 age group than in the 0-1 age group[4] ( 1992-1993: 1.43; 1998-99: 1.47; 2005: 1.61). This is without taking into account the deaths of girls who die soon after birth or cases of infanticide that are likely to be under-reported (Das Gupta *et al.* 2009). This suggests that, along with female-selective abortion, post-natal gender discrimination persists.

The other worrying trend evident in the 2001 and 2011 census data is that adverse child sex ratios are now spreading beyond the north western states to other states in western, central and eastern India. They are also spreading beyond the landed upper castes, where adverse sex ratios tended to be concentrated, to other castes and to other social groups.

Given our focus in this paper on Bangladesh, a Muslim majority country, there is one finding emerging from the Indian data that is worth noting. Sex ratio in the

[3] Defined in India as the 0-6 age group.

[4] The ratio of female to male mortality in the 1-4 age group was 1.43 in 1992-93, 1.47 in 1998-99 and 1.61 in 2005 (Das Gupta *et al.* 2009)

overall Muslim population has been more favorable to women since 1981 and while child sex ratios have been deteriorating for other groups since the 1980s, it appeared to be improving among Muslims. By the end of the 1990s, Muslims had more favorable sex ratios than the rest of the population, including the Scheduled Castes/Scheduled Tribes who generally have more favorable sex ratios than the upper castes (Sachar *et al.* 2006). It should be noted that since fertility rates are higher among Muslims compared to Hindus the pressure to resort to sex-selective abortion to ensure at least one son may be less.

An NCAER study based on large scale data from 16 states in India found that, among women who had completed their fertility, the more favorable child sex ratios among Muslim women compared to Hindus reflected both lower sex ratios at birth as well as among currently living children, While similar percentages of Hindu and Muslim women had completed their fertility without any daughters, a much higher percentage of Muslims than Hindus had completed their fertility without any sons. What this suggests is equivalent levels of son preference among the two groups but statistically higher degree of what Borooah and Iyer (2004) term 'daughter aversion' (reluctance to have a daughter) among the Hindu community (see also Borooah *et al.* 2009).

The IDRC/Action Aid study focused on selected districts in five Indian states (Madhya Pradesh, Rajasthan, Himachal Pradesh, Haryana and Punjab) which reported particularly high child sex ratios according to the 2001 census. Many of the traditional aspects of family and kinship relations that have featured in past explanations for son preference remain relevant in explaining its persistence. Under patrilineal kinship systems, sons inherited ancestral property and continued the family line. They continued to be relied on to look after their parents in their old age and to perform important death and ancestral rituals. Daughters, on the other hand, left their parents' home on marriage to live with, and become absorbed into, their husband's lineage.

At the same time, John *et al.* argued that current trends in adverse sex ratios could not be explained simply in terms of continuity with the past. They suggested that the intensification of son preference was not the major factor driving the deterioration in child sex ratios. Indeed there were many reasons to expect son preference to weaken. Questions were being raised by parents in their research sites as to whether sons could be relied on to look after their parents and perform their other obligations. Many had failed to find jobs or fallen into bad habits and there were loud criticisms of 'worthless sons' in a number of study sites.

Instead the deterioration of sex ratios was seen to reflect the emergence and strengthening of 'daughter aversion' as emotion and practice, the product of the interplay of various forces. In a context where marriage was a 'social compulsion', especially for women, it reflected the increasing investment of time and money that parents had to make to ensure the best possible marriage for daughters within what they characterized as a 'class-caste differentiated marriage market'. This investment had increased for most parents of daughters because of the spread of the upper caste practice of dowry and expensive weddings to other castes and social groups seeking to signal social status.

The rising age of marriage for both men and women was lengthening the period when daughters had to be supported by parents, with investments in their education – now considered essential to secure a 'good match' - added to the other costs of bringing them up and hence to the losses incurred when daughters left home after marriage. There was also a widespread perception that marriages had become increasingly unstable so that the possibility that parents would be required to support separated or divorced daughters returning to the natal l home a constant source of anxiety.

Other factors giving rise to daughter aversion were linked to changes in the structure of the economy which added to the perceived burden of daughters in the study locations. The growing scarcity of land had put pressure on families to diversify their occupations and find work outside the agricultural sector, particular in coveted but scarce white collar service and public sector jobs. Parents' future expectations from the male child in terms of the continued economic viability of the family unit and support in their old age had led to increasing concentration of resources, including quantity and quality of education, in sons (Kaur 2007). This is despite the fact that the demand for female labor is increasing due to a declining gender gap in education and skill development and the opening up of new areas of employment. Indeed, national data show a faster rate of expansion in the employment of women relative to men.

The story of sex ratios in India therefore represents the paradoxical outcome that 'lower increases in the demand for males in employment and a greater expansion of opportunities for female employment put additional pressure on families to improve the life chances of males, reinforcing behavior patterns associated with son preference' (Kaur 2007). It reflects unchanged ideologies of men as primary breadwinners combined with the universal necessity of marriage, rigid gender roles and the loss of daughters to their parents after marriage so that investment in girls are regarded as a drain of family resources, `'with dowry remaining the

most visible face of the burden associated with daughters'. The possibility of using dowry to improve the economic prospects of young men has made the demand for it more insistent. The strength of the growing preference for sons - or growing aversion to daughters – is illustrated by the fact that, given the widespread move to smaller family size, the IDRC/Action Aid study found most families in their study locations expressed preferences for either just one son, two sons or, in some sites, two sons and a daughter. Hardly anyone expressed a preference for, *or had,* only daughters (John *et al.* 2008).

# 3. Changing sex ratios in the context of fertility decline in Bangladesh

The story of sex ratios in Bangladesh is a very different one. It represents an example of a country where a culture of strong son preference appears to be giving way to a growing indifference to the sex of a child. When the country achieved independence in 1971, it had extremely high rates of fertility and population growth was identified as its number one problem. Its fertility rates were believed to be rooted in a highly pro-natalist and patriarchal culture, where the strong preference for sons was driving parents to have more children than they might otherwise have preferred (Maloney *et al.* 1981; Cain *et al.* 1979).

Strong son preference in turn reflected the subordinate status of women. Bangladesh was described as occupying 'an extreme position among developing countries with respect to strength of patriarchal structure' (Cain 1984). Women's dependence on men for protection and provision at different stages of their lives gave them a strong stake in producing sons – both to ensure their own place within their husband's kinship group and as a form of security for their old age. Cain *et al.* coined the concept of 'patriarchal risk' to capture the abrupt decline in women's social status and material well being that was likely to accompany the loss of the male breadwinner and guardian through widowhood, divorce or desertion. Although engaging in some form of paid work might have served to mitigate patriarchal risk to some extent, the strict controls exercised over women's mobility in the public domain ensured that they remained confined to largely unpaid work in the domestic domain.

Given the strength of its patriarchal norms, it is not surprising that Bangladesh was characterized by marked gender differentials in mortality rates. This was studied in considerable detail in Matlab, a rural area in Comilla district which has had an excellent demographic surveillance system in place since the early 1960s and a mother-and-child health and family planning program since 1977[5]. Using data from the 1970s, D'Souza and Chen (1980) showed that, while male mortality exceeded female mortality in the neonatal period (the first month of the child's life), reflecting the greater biological vulnerability of male infants relative to female in infancy, the gap had been reversed in the post neonatal period (from 1-

[5] Indeed the Matlab data provided early insights into the possible mechanisms explaining excess female child mortality in India (Chen 1982).

11 months). The differential treatment of boys and girls thus began to have effect within the first year of children's lives. Female mortality exceeded that of males throughout childhood and into the reproductive years. In addition, similarly to rural Punjab (Das Gupta 1987), Amin (1990) found that girls with older sisters had significantly higher mortality rates than those with only surviving older brothers or no older siblings, suggesting that discrimination against daughters increased after the birth of the first daughter.

Further insights into the differential treatment of boys and girls came from Chen *et al.* (1981). They found that discrimination in intra-family food distribution, feeding practices and utilization of health services was practiced against female family members in all age group but that gender bias was most marked among children and the elderly. Levels of malnutrition were substantially higher among girls than boys. There was also some evidence to suggest that discrimination against daughters may have had an economic rationale that was exacerbated by situations of crisis or scarcity. The female to male mortality ratio among children aged 1-4 was 1.3 in the 'normal' period 1966-69 but rose to 1.6 in 1971-72, a period marked by major economic dislocations due to war (Chen and Chowdhury 1977). During the Bangladesh famine of 1974-75, the ratio rose to 1.8 (Bairagi 1980).

Exploring the effects of the famine on child nutrition (weight for age) in greater detail, Bairagi (1986) found that while it worsened nutritional levels across the economic spectrum, the negative effects on female children was significantly greater than on male. He also found that the male to female ratio among children classified as severely malnourished was worse among better off families (Bairagi 1986). "When asked directly regarding distributional biases between children of different sexes, women tended to deny unequal treatment. Invariably, however, if the inquiry presented a situation of marked overall family shortages, male child preference was expressed by a majority of women (Bairagi 1986). This suggests that people were not comfortable about discriminating allocation of food among children on the basis of sex, but found it acceptable as a temporary measure in times of scarcity. Other studies found that that low income together with lack of maternal education, inadequate use of health care and large family size were all associated with higher mortality risks for girls than boys (Muhuri and Preston 1991; D'Souza and Chen 1980) but education of the household head (likely to be male) and asset holdings had little impact (D'Souza and Bhuiya 1982).

Despite widespread views about the intransigence of fertility behavior in Bangladesh, fertility began to decline in the late 1970s, gathering momentum in subsequent years. The decline in TFRs from around 7 children at the start of the

1970s to 2.6 in 2011 (Index Mundi) is considered to be one of the most dramatic in demographic history. As the Indian experience suggests, one way for parents to reconcile their desire for sons with the move to smaller families would have been to resort to further manipulation of the sex composition of children ever-born. Ultra-sound technology to detect the sex of the fetus was not yet available but there were other older methods, including female infanticide as well as the practices of active discrimination and 'malign neglect' which had underpinned excess levels of female mortality among children in Bangladesh in the past. An examination of gender differentials in mortality rates over time suggests that this did not happen.

Table 1 reports on neonatal and post neonatal mortality rates by sex since 1981 using BBS data while Table 2 reports on these rates for the ten years preceding successive DHS survey. They show that infant and child mortality rates have been declining since the 1980s. They show also that while the male risk of dying in the neonatal period remained higher than female while female risk of dying in the post neonatal period remained higher than male, gender differentials in mortality levels have gradually diminished. This is evident in Tables 3 and 4 which report on trends in infant and child mortality using the same data sets.

The national level decline in excess female mortality was also supported by micro-level data from Matlab. Alam *et al.* (2005) found that female life expectancy in the Matlab area of Bangladesh has been rising more rapidly than male since 1985, overtaking male rates by 1989. They also found that declines in under-five mortality had been faster for children than for infants and for girls than boys. This had led to a disappearance in excess female mortality by 1989. In addition, they found a decline in excess levels of female mortality, albeit at a slower pace, among children in 'control' villages which were characterized by a more nationally typical combination of government and private health services. The sex ratio at birth in Matlab which had near-complete birth registration had hovered around 103 with very little change during the period 1974-1999 (Alam *et al.* 2005).

The greater relative decline in female to male mortality rates helped to close the gender gap in life expectancy and by early 2000, female life expectancy had overtaken male. These changes are reflected in the trend in the national *de facto* population sex ratio[6] which began to decline slowly from the middle of the last century (Table 5). The sex ratio of *de facto* population in Demographic and Health Surveys (DHS) are lower compared to the national sex ratio, suggesting under-

[6] The *de jure* population is the population of usual residents, while the *de facto* population is the population of those who were found at the time of the enumeration.

enumeration of females in the population censuses[7]. This means that national sex ratios could actually be lower than estimated by the decadal censuses[8]. Sex ratios in urban areas are generally higher than in rural areas because of relatively greater male migration rates out of rural areas.

The DHS data show that the population sex ratio of the sample was balanced in the early 1990s, when these surveys were initiated, and has been declining since, reflecting an increase in the proportion of females in the overall population. The child sex ratio (0-4 years) also began to decline from the early 1990s. In the Matlab area overall sex ratio reflected the trend in the DHS sample. The child sex ratio was recorded as relatively higher during the first half of the 1980s (106/107) compared to both earlier and later years, but has since declined and remained stable around 103/104.

There is also some direct evidence to suggest that these improvements in female child mortality relative to male reflected a decline in gender discrimination in the treatment of children. Analysis of data on the nutritional status of children from the 1996 Matlab Health and Socioeconomic Survey by Trapp *et al.* (2004) found sharp declines in severe wasting accompanied by near disappearance of previously reported sex disparities. Remaining gender disparities appeared to be based primarily on available household resources and competition for those resources. Sex-bias in nutrition documented in the past was greatly reduced, and differences largely were the product of educated mothers, higher household resources, and mothers who contribute to household finances (Trapp *et al.* 2004).

DHS data also provides evidence of declining gender discrimination with respect to health seeking behavior particularly with respect to use of oral rehydration therapy (ORT) and immunization. Table 6 present trends (1993-94 to 2007) in the proportion of children under two who had received full vaccination. While immunization rates had reached fairly levels by the early 1990s, boys continued to be more likely to receive life saving vaccination than girls. But since early 2000 this pattern has begun to alter and currently boys and girls are equally likely to be vaccinated. While some discrimination remains, it appears to be related to expensive tertiary health care (inpatient care) or to specialist care, and hence to resource constraints.

[7] This possibility of female under enumeration in early censuses has been raised by others (Klasen and Wink 2001).

[8] In the Matlab HDSS area the sex ratio in the *de jure* population was 103.1 in 1974, 102.5 in 1982 and 97.3 in 1996 (N Alam *et al.* 2005).

However, gender discrimination has by no means disappeared. Using national 2004 DHS data, Dancer *et al.* (2007) found lower infant mortality rates for girls than boys, suggesting the female biological advantage in infancy was now showing up in their chances of survival. However, nutritional status was higher among those male children who survived the first year of life. Socio-economic factors, including parental education and women's economic activity, played a role in influencing these variations.

While abortion per se is illegal in Bangladesh, it is possible to have menstrual regulation which can very often be used to the same effect. MR has been available in Bangladesh since the late 1970s and is generally referred to as abortion. There are very few studies on the possible use of abortion to achieve desired sex composition of children. Bairagi explored this question using data from Matlab between 1983 and 1993 – well before ultrasound technology became available – and suggested that while son preference did not affect use of contraception, it did seem to influence the likelihood of abortion. However, a later study which used econometric methods to control for other possible influences on the likelihood of abortion did not support this conclusion. Gipson and Hindin (2008), using cross section and longitudinal survey data from rural Jessore covering the years 1998-2003, found little evidence that the sex composition of surviving children affected the likelihood of abortion. Instead the most important influence on the likelihood of abortion was whether parents had expressed a desire for more children or not at the start of the study period.

Since the advent of sex-determination technology has been a major factor in driving the rising sex ratios at birth in the Indian context, we sought information on its introduction and spread in Bangladesh but were not able to find a great deal of published material. However, we were able to interview two key informants with a long history of working in the health sector in Bangladesh. According to them, ultrasound technology was first introduced in the early 1980s for use in government hospitals for general health purposes. It subsequently began to be used for screening pregnant women. The first ultrasound machines were imported privately in 1985 again for general uses. By the early 1990s, it was available in district hospitals and later spread to *upazila* levels in both public and private clinics. However, mobile services are not common and most people must go to *upazila* or district headquarters for an ultrasound scan. The study by Gipson and Hindin suggests that it is not being widely used for sex-determination.

# 4. Analyzing sex preference in Bangladesh: the secondary literature

It has been argued that the views that parents express about their sex preference cannot be taken at face value since they may often express views that they consider to be in line with changing attitudes rather than those that they will actually act on. In both India and south Korea, studies have found that stated son preference declined during a period when child sex ratios were rising (M Das Gupta *et al.* 2009).[9] In other words, stated preference and 'revealed' preferences may not always move in the same direction. However, this conclusion is based on one-off questions about sex preferences obtained from survey data where it is not possible to probe responses in greater depth. More qualitative approaches which permit the exploration of the values, views and motivations that different actors use to explain their actions provides important insights that survey data cannot. In this section, we draw on the secondary literature, both quantitative and qualitative, to explore the extent to which improvements in the survival chances of girls, relative to boys, may have been driven, or at least accompanied by, attitudinal change, in particular, by change in the value given to daughters, relative to sons.

That Bangladesh was a society characterized by son preference is evident from some of the early studies into this question In 1975, the Bangladesh Fertility Survey found that among ever-married women wanting another child, 62 percent wanted a boy, 8 percent wanted a girl, the rest were undecided (Government of Bangladesh 1978). Two smaller scale studies confirmed the strength of son preference using I-scale measures[10] rather than the one off question used in the BFS. Ahmed (1981) carried out her analysis in the mid-seventies using data from Matlab. She found that 75 percent of currently married women expressed strong son preferences, 5 percent expressed a preference for a balanced sex

[9] In S Korea stated son preference (proportion saying "must have a son") declined visibly during 1985-1995 when sex ratio at birth showed the steepest rise (Chung and Das Gupta 2007). Similar findings were reported for India (Retherford and Roy 2003).

[10] The I scale measures attempt to capture the order of preferences with respect to number and sex composition of children beyond a single valued statement of preference and provide independents sources of information. The IN scale measures number preference ranges from small family bias (IN1) to large family bias (IN7). The IS scale does the same with regard to sex preferences with IS1 indicating a strong bias towards daughters and IS7 indicating a strong bias towards daughters. IS4 reflects a preference for a balanced sex composition.

composition and just 3 percent expressed any daughter preference. Age and education influenced sex preference with older women expressing somewhat weaker son preference than younger women as did women with 6 or more years of education. The study concluded that son preference was stronger than number preference and likely to be more resilient in the face of change. In other words, women were likely to have more children than they wanted in order to achieve their strongly held desire for sons.

However, there was some variation in the strength of son preference across the country. Using the same scale measures used by Ahmed, a village study carried out in Faridpur in 1979 by Kabeer (1984) found that between 44 percent and 53 percent (depending on age) of her sample of ever-married women expressed a preference for sons. Women's education also made a difference: women with secondary or more education were less biased towards sons. Son preference thus did not appear to be as strong as it was in the Matlab area, although it was influenced by similar influences. One possible explanation for this was that Kabeer's study was carried out in a village very close to the district capital while Ahmed's study was carried on in a very rural area in one of the more conservative districts in Bangladesh.

Quantitative evidence on changing sex preference is thus fairly scattered and piecemeal. The same is true of direct qualitative evidence, but by the 1980s, there was indirect qualitative evidence that some kind of change was occurring in attitudes towards both number and sex preferences with regard to children. One study carried out in Matlab in the early 1980s on fertility behavior offered few insights to offer on sex preference but did note an emerging preference for smaller families as the perceived costs associated with large numbers of children began to outweigh the perceived benefits. Along with the costs of feeding and clothing children, parents had to also consider their growing educational aspirations for their children as well as the costs of marrying off daughters, given that the previous practice of bride-wealth was being replaced by dowry demands of escalating proportions. In addition, parents were becoming less certain that they could count on their sons for support in old age, an important 'insurance' motive for high fertility.

A 1988 study on the qualitative dimensions of fertility decline, also based on data from Matlab, offered much clearer evidence that gender relations were undergoing change. Simmons (1996) noted references to benefits of having just one boy and one girl ('they could be given proper care and love …') as well as to the value that women attached to educating their daughters, whether to improve their marriage prospects or to take advantage of new employment opportunities

and hence stand on their own feet. In some cases, parents appeared to hope that educating their daughters might reduce the magnitude of dowry demands.

In addition, the study noted that there was a widespread perception that conjugal bonds had become stronger while the authority and influence exercised in the past by parents and parents in law had weakened. Young wives appeared to have a degree of independence from their in-laws that defied tradition – including with regard to reproductive decisions. As a result, parents were increasingly afraid that they could no longer rely on their son's loyalty and support in their old age. At the same time, 'the possibility of financial support from daughters has become a realistic expectation in a few rural families', particularly in the light of new employment opportunities that were becoming available through the government and NGO community development efforts.

These findings were not unique to Matlab. Reviewing various changes that had taken place in Bangladesh in recent years, including changes in the economic position of women, Adnan (1998) came to the following cautious conclusion:

> 'These changes in women's position still remain far from universal in Bangladesh, but the emergent trends were sufficiently recognizable by the 1980s. Insofar as these have had an impact on prevalent social norms and cultural perceptions, it is possible that a reassessment of the value of female children might well have begun, even if it is not always consciously articulated. Since many of the factors which made girls less preferable than boys are ceasing to hold, it is likely that parents have also begun to find female children less undesirable than before. While they might still prefer to have sons, having a daughter is no longer the liability that it was. Parents might reconcile themselves to viewing a daughter, once she is born, as being one of their desired number of children, rather than looking only at sons. It thus seems reasonable to postulate the hypothesis that the preference for sons is on the decline, given increasing value of female children to parents'.

# 5. Analyzing sex preference in Bangladesh: quantitative insights

We use Adnan's speculative comments as the point of departure for our analysis of the primary data on sex preferences that we collected as a part of the IDRC/Pathways research program. Two sets of data were collected. The first was a survey of 5000 women carried out in 2008 in 8 villages in 8 different districts in Bangladesh. The survey was part of the larger Pathways study on women's work and empowerment and hence collected information on various aspects of women's lives. We took advantage of the survey to include a question about sex preference: "If you had only one child, what would you like to have: a son, a daughter or you do not have any preference?" One of the villages included in the survey was in Faridpur and had been the site of the 1979 study by Kabeer cited earlier. The survey for this village had an additional component which asked questions about sex and number preference using the I scale measures used in her earlier study. This allowed a comparison of changes that had taken place between 1979 and 2009 in sex and number preferences expressed by women in the village.

In addition to the survey data, qualitative interviews were also carried out in four of the 8 study villages. These interviews sought to make sense of some the quantitative findings generated by analysis of survey data, including views expressed about sex preference. While 15 interviews were carried out in 3 of the villages, a more detailed qualitative study was conducted in the Faridpur village. In this report we will not be drawing in particular detail on the qualitative data from Faridpur – this will be the focus of a separate paper - but will be offering a more general analysis based on findings from all four villages.

However, we do report on the changes evident in sex and number preferences in the Faridpur village to explore the extent to which there has indeed been a weakening of son preference as suggested by the secondary data. Tables 7a to h suggests that there has been a dramatic decline in number preferences and a somewhat less dramatic decline in son preference, bearing out Ahmed's conclusion that son preference was likely to be more resilient in the face of change than the preference for large families. We focus our discussion here on changes in sex preference. First of all, it is clear that the main shift has been from a bias in favor of sons to a bias in favor of daughters. While age had made a difference to sex preferences in 1979, with older women expressing stronger son

preference, it was no longer relevant in 2009 when women older and younger than 34 expressed similar sex preference. Landowning status made little difference in either 1979 or 2009 in the distribution of sex preferences but education was an important influence in both years: women with less than primary education had stronger son preference than those with primary + education in both 1979 and 2009 although the differential had narrowed over time.

The data on sex preferences by the sex composition of living children is interesting. The 1979 version of this table did not include any women who did not have a surviving child while the 2009 table does. However, focusing on women with surviving children, we find that while the majority of women had favored sons in 1979, regardless of the sex composition of living children, by 2009, there was a general shift in favor of daughters. Nevertheless, 33 percent of those with more daughters than sons expressed a bias in favor of sons compared 24 percent of those with more sons than daughters and 14 percent of those with equal numbers of sons and daughters. Thus despite the shift towards more neutral sex preferences, son preference has not vanished.

As we noted in the preceding section, sex preferences are not uniform across Bangladesh. In this paper, we focus on the larger survey conducted in 2007, which covers a number of different districts and therefore provides a more representative picture of variations in sex preference by location. The measure of sex preference here was a single valued response but the correlation between this measure and the IS scale in Faridpur suggests that it does provide a plausible measure of women's preferences (Table 8). A preliminary review of the data shows that this measure varies considerably by district, with a high of 64 percent of women in Chandina reporting son preference and a low of 22 percent in Kurigram (Table 9). It confirms once again that son preference remains a factor in Bangladesh but with varying degrees of strength in different locations, suggesting that the forces behind changing preferences have varied considerably by location.

Clearly some of this spatial variation will reflect community-level factors that we do not have information on. Table 9 does summarize some variations in individual characteristics by district but no clear cut pattern emerges. However, a number of preliminary observations can be made. First of all, Chandina which reported the highest levels of son preference is known to be among the more religiously conservative districts in the country. This shows up in the high percentages of women wearing *purdah/hijab* when they went out of the house. It also reported the lowest percentages of women in paid work. At the other end of the spectrum, Kurigram with the weakest son preference is among the poorest districts in

Bangladesh, had among the highest percentages of women in paid work and the lowest percentages of women in *purdah/hijab*. Clearly individual and household characteristics play a role in explaining variations in son preference along with unobserved locational characteristics.

In this section of the paper, we explore the extent to which the variations in sex preference reported in our survey can be explained by variations in the characteristics of women and their households and the extent to which this reduces the impact of community-level variation. We use multivariate analysis in order to isolate the independent effects of some of these characteristics, using the stated sex preference measure as our dependent variable (son preference =1; daughter preference/neutral preference=0) (see Tables 10a to 10c). In order to allow for the possibility that the factors that shape stated sex preference varied across different cohorts of women, we have carried out our multivariate analysis separately for women aged 15-29 and women aged 30+.

The absence of an age effect for either cohort suggests that once differences in education and other characteristics have been controlled for, age does not exercise any independent effect[11] on son preference. Among the older age group, we find that widowhood is associated with son preference, indicating perhaps a greater sense of vulnerability among this group of women and the continued relevance of patriarchal risk. Women with primary education are significantly less likely to report son preference than those without any education. The effect of secondary education is similar but only weakly significant, perhaps because so few older women had secondary education Women from wealthier households are also less likely to express son preference than those from poorer households. While women's involvement in paid work does not appear to have any impact on their sex preference, it is worth noting that those who felt valued by their families for their work, whether paid or unpaid, were less likely to express son preference. This is an interesting finding. There is a strong correlation between this variable and paid work: what our results seem to be suggesting is that it is not paid work per se but the extent to which a woman's work is given value by her family that impacts on her own values and attitudes.

[11] Our decision to collapse daughter preference and sex indifference into one category also conceals some of the effects of age on sex preference. It is worth noting that 9 percent of women aged 15-29 expressed a preference for daughters compared to 5 percent of women aged 30-45 and just 3 percent of women aged 45+. Education strengthened daughter preference particularly among the youngest age group. Thus among 15-29 year olds, 5 percent of women with no education expressed daughter preference compared to 10 percent of women with at least secondary education. The figures were 5 percent and 6 percent among women aged 30-45 and 2 and 3 percent among women aged 45+.

Consistent with our earlier discussion about religious differences, we find that Hindus are more likely to express son preference than Muslims. Finally, locational variables continue to matter, with women from Chandina continuing to be more likely to express son preference relative to women from the other villages, even after various individual and household influences have been controlled for, while women from Kurigram continuing to be least likely to express son preference.

We turn next to the younger cohort of women where we find evidence of both continuity and change in relation to the older age cohort. Age continues to play little role in shaping sex preferences as with the older cohort while location continues to be important. Widowhood is no longer significant, perhaps because there are fewer widows in this age group. Instead we find that never married women are less likely than others to express son preference – this may reflect the fact that they experience less pressure from husbands or in-laws or it may be that women still not married in this age cohort are somewhat different – less conservative – than the rest. We also find that, with the spread of female primary education in Bangladesh, it no longer serves to differentiate attitudes among the younger cohort of women but secondary education is now significantly associated with the likelihood of expressing indifference to the sex of the child. Interestingly, secondary level of education among household heads, generally women's husbands, is also associated with the likelihood that women will express indifference to the sex of the child. As with the older age cohort, women's involvement in paid work has little significance for their sex preferences but those whose work is valued by the family are less likely to express son preference. The significance of household wealth disappears among the younger age group.

The impact of religion among younger age groups is worth comment. The wearing of *burkah/hijab* when moving outside the household appears to differentiate Muslim women into more and less conservative groups. Our results suggest that Muslim women who adhere more closely to a conservative version of Islam are more likely to express son preference than those who do not. But Muslim women more generally are less likely to express son preference than Hindu women.

These results support our argument based on the secondary literature that there has been a weakening of son preference and a positive re-valuations of daughters. The result has not been so much a shift from son to daughter preference as a growing indifference to the sex of the child. The results also point to certain forces that are likely to have been particularly influential in weakening son preference. Rising levels of education among women and, among the younger cohort, the education of husbands are both associated with a weakening of son preference. Higher levels of household wealth, and the associated

diminution of scarcity; also appears to have had the same impact. While women's access to paid work per se does not appear to influence their sex preferences, women who are engaged in forms of work that is valued by their family, most often their husbands, have weaker son preferences. As we noted, the lower levels of son preference evident among Muslim women, in both older and younger cohorts, compared to Hindu women echoes the Indian findings and we will return to it later in the paper. At the same time, rising religious conservatism among younger women appears to be contributing to a revival in son preference among particular sections of the population. Finally, we find that location-wise variations in sex preference remain significant, suggesting the importance of variations in the local-level economy, culture and attitudes that we have not been able to capture in our data.

# 6. Analyzing sex preferences in Bangladesh: qualitative insights

### 6.1 The persistence of son preference

Our qualitative interviews with women from 4 of the 8 study villages helped us to explore the factors behind both continuity and change with regard to sex preference. They confirm that the unequivocal preference for sons that had been reported in some of the earlier literature has been replaced by a far more differentiated range of views and preferences. Fertility decline clearly provides a backdrop to these shifting preferences. The idea of continuing to have children till the desired number of sons had been achieved, believed to be the case in the past, is no longer considered feasible by most of the women in our sample because of the wide spread desire to limit family size. In this section, we start out be examining the rationale behind the continued son preference evident in our survey before turning to the factors that appear to explain change.

Most of the women interviewed in the qualitative sample expressed a desire for both sons and daughters – consistent with the large proportions expressing neutral preferences in the quantitative sample – but it was clear that for many, sons took priority and they hoped that their first born would be a boy. Sumitra (36 years, Narayanganj) spoke of her joy that this had happened in her case – although she also wanted a daughter:

> *I was happy that I had a son first. Generally people are happy when they have a son first. I had hoped for a daughter the second time. But it was not in my fate. Yes, I had hoped for a son and a daughter. It is not about an advantage or disadvantage to have a son first. There is no problem whether you have a son or a daughter (at first). For my first born it did not matter whether I had a son or a daughter. Even if I had a daughter I would have educated her and even if I had a son I would have been happy." (Sumitra, 36 years, Narayanganj).*

Khadeja (24 years, Chandina) spoke of her desire for a son: *I have no brother, so truth be told, I wanted a son. I was happy with a daughter since Allah gave me a daughter. Those who have a son, hope for a daughter and those who don't have a son hope for one. But a lot of people hope for a son.* She was one of the few women in our sample who found out through ultrasonogram that she was having a daughter. Her disappointment was clear: *We wanted to know because we wanted to celebrate beforehand. When I did find out, I had to be satisfied with whatever Allah gave me.*

Minara Begum (50 years, Chandina) had 4 sons. She told us:

> *I hoped for a son the first time I was pregnant. We say Alhamdullilah to whatever Allah gives us. There is no point in wishing for something. Of course, I had hoped that I would have a daughter next but Allah gave me another son….But if I was told I could have only one child, I would want a son.* According to her, son preference was still the norm in society: *Most people want sons even in this day. People in the past also preferred sons. Most wanted sons and some also wanted daughters to fulfill a wish. There have been no changes in people's preferences, they are still the same.*

For some, the continuity of the lineage is an important factor in explaining son preference. As Sona Rani (41 years, Faridpur) said:

> *"Some people have five or six daughters but they have no son. But still they try again for a son. A son bears the torch for his lineage, the family expands when he gets married. But if you have a daughter, she leaves once she is married. If a son stays in the household, with the family, then people will say that he is bearing the torch of the family for his parents...That is why people, whether from your community or ours, want a son."*

For most, however, there are various economic considerations to son preference, both the value given to sons as well as the costs associated with daughters. While there is no expectation on the part of parents that daughter will contribute to them financially (although some may hope that this will be the case), there are such expectations in relation to sons. It is taken for granted that sons will take up employment on reaching adulthood. Indeed, in poorer families, they may be expected to start working at a younger age. Furthermore, it is also expected that sons will remain with their parents after their marriage and continue to look after them. A daughter, by contrast, would marry outside her natal village, move to live with her husband and in-laws and become absorbed into his family and lineage group:

> *People want sons to brighten up their household. They harbor a hope that they will have a son, they hope for a son for their future. By future I meant that they will think about who will eventually look after them, look after the household. …Can girls look after the household? If it is in your fate, then girls too can look after a household. But how many look after their parents once they are married and living elsewhere? (Minara Begum, 50 years, Chandina)*

> *"Parents are happier when they have a son. They are also happy with a daughter but one needs a son, and one needs a daughter as well. They are happier because their son stays with them, at home. You don't have to spend on his marriage. He will earn some income and bring it home. I have married off my daughters. They are gone, but my son is at home."(Jamirun, 53 years, Faridpur)*

'*I have raised my daughter to go and live in someone else's house, she will not be able to come from her husband's house to live with me…Most people prefer sons This is because girls get married and go to someone else's house. So who will inherit my money and property?....Sons always remain by your side. When I get my son married, his wife and children will stay with me. If he lives in Comilla town or Dhaka, he will come every month. If he lives abroad, he will call and get my news. My daughter can get my news from my husband's house but she cannot come and stay and take care of me (Nasreen Akhter, 38 years, Chandina).*

*Yes, Allah gave me a son after two daughters. Two girls will not do. A boy is needed for a household. Every household needs a son. Everyone wants both sons and daughters in their family. There is a benefit in a daughter as well as a son. Sons are needed to support the father's work. Daughters will get married and they will not be able to provide support to the father's household. But daughters can look after their mother and can come from their in-laws' house to do so." (Bina Begum, 28 years, Narayanganj)*

The costs associated with daughters were frequently the other side of the coin to the value given to sons. Not only are they lost to their parents once they get married, but the expenses incurred in marrying them off have risen dramatically with the emergence of dowry. While dowry is a long-established practice within the Hindu community, many of the older Muslim women in our sample recall a time when there was no dowry among Muslims in Bangladesh. The practice emerged at some time in the last 50 years[12], but it seems to have taken on the status of an established tradition. Furthermore, what began out as an *expectation* on the part of parents of sons that they would receive cash or gifts of various kinds from the family of the bride has increasingly becoming a *demand* on their part – so much so that the English word 'demand' has become a colloquial term for dowry . The value of dowry demanded has risen steeply over time with higher amounts reported by prosperous households and by the Hindu community (Amin Mahmud and Huq 2002). [13]

[12] According to Nilu, a 50 year old woman from Chandina, her parents had not had to pay dowry when she got married: `There was no dowry at that time. Dowry began six months after I got married!' In fact, according to Blei (1990), dowry emerged some time in the 1950s, began to spread in the 1960s and had become non-negotiable by the 1970s.

[13] According to a household survey carried out in 2001, dowry payments for women in food surplus households was 13, 654 takas compared to 5394 in food deficit households. It was an average of 25, 086 takas for the 74 Hindu women in the sample compared to an average of 7457 among the Muslims.

Dowry has become a constant source of anxiety for parents of daughters, threatening to impoverish them if the demands are too large:

> *"If you have a daughter then you have to educate them and then give a dowry when she gets married. One has to give one lakh, fifty thousand, one and a half lakh, two lakhs, whatever one can afford to give. Is this not difficult for parents? Take our situation, my husband is working. I am also working. If we have to give fifty thousand for our daughter, is that not a problem? If this one was also a son, then I wouldn't have had to give dowry. How will I save so much money, where will I get it from? Is this not a cause for tension? I am wasting away with tension. This is why everyone wants a son." (Rahela, 43 years, Faridpur )*

> *I think both sons and daughters are good….but say for example I married off my daughter, I needed a lot of money for the wedding. That is why daughters may be a problem. It takes so much money to get her married that people do not think that it is good to have a daughter. I prefer sons because sons can earn an income and feed their parents. But if they do have a daughter, nothing can be done; they cannot throw her away (Shahana Begum, approx. 46 years, Chandina)*.

By adding to the costs of having daughters and to the benefits of having a son, the rise of dowry has further tilted the balance in favor of sons and against daughters for many parents. As Srimoti Burman (40 years, Kurigram) put it: *People want sons more. They want sons because then they can get 'demand' (dowry). But for daughters, you have to give 'demand', it is very difficult. People in society say they want sons, not daughters. If you have a daughter then people say that you have earned a problem, because you have to get her married, you have to pay demand.'*

### 6.2 The weakening of daughter devaluation

This persistence of son preference among many of our respondents was, as our quantitative data showed, co-existed with a weakening in the preference for sons among many others along with a revaluation of daughters. While the previous section reports on women, particularly the older ones, who believed that son preference had remained the norm, there were others who were more attuned to the fact that change was taking place. As Farah (48 years, Faridpur) said:

> *"I hear from a lot of people now that they prefer daughters. Earlier their faces would fall if they had a daughter… My aunt had a daughter – she tried to smother her with her hand, but if Allah decides to make her breathe, who can stop Him? They were happy with sons because they would be able to bring their earnings home. People don't feel like that anymore… now they think girls are better."*

Indifference to the sex of the child was very explicitly expressed by a number of women in our qualitative sample, with most of them wanting at least one child of each sex. As Khadeja (22 years, Chandina) put it: *"Those who have a son, hope for a daughter and those who don't have a son, hope for one."* This was supported by the sentiments articulated by some of the other women. Dipa (27 years, Faridpur) had wanted a daughter first and when she got her wish, she prayed for a son:

> *"I had wanted a daughter first. I like girls. You can dress up a little girl, do all sorts of things. But I prayed to Allah for a son the next time. And I had a son. My husband didn't express any particular preference. He wanted whatever Allah gave."*

Keya (39 years, Faridpur), on the other hand, had wanted her first born to be a son – though her husband was indifferent – but then tried for a daughter:

> *"When I first became pregnant I thought it would be good if I had a son. But my husband said that...either boy or girl would be good. When I was going to have my second child, I thought that since I already have a son, it would be good to have a daughter."*

She ended up having four sons in her attempt to have a daughter. This was not, however, common practice. For most respondents, the over-riding concern was to limit family size, irrespective of whether they had only sons or only daughters. As Fawzia's comments suggest, this preference for smaller families was closely bound up with the desire to give children a proper upbringing.

> *"No, I don't want any more children. With the little income that my husband earns, if I cannot bring up my one daughter properly, then there is no point in having more children. It's not a question of simply deciding to have more children, there is a question of bringing them up."(Fawzia, 28 years, Faridpur)*

These concerns with small family size did, however, go hand in hand with greater appreciation of daughters among many of the women in our survey. While they did not necessarily subscribe to Farah's view that 'girls are better', they did appreciate that there were aspects to having a daughter which they valued. Some expressed it in emotional terms:

> *"If you have no daughter then you have no affection (maya). A house is brightened and filled with love if there is a daughter. Yes, of course there are expenses. But even though there are expenses daughters bring a lot of joy."(Purnima Rani, 35 years, Chandina)*

Nasreen Akhter (38 years, Chandina) had expressed a clear preference for sons but was nevertheless happy that she had also had a daughter: *I wanted a daughter after two sons because there is a need for a daughter. If I don't have a daughter, who will understand my pain? Daughters can understand a mother's pain, sons cannot..I had a headache yesterday, I asked my daughter to rub some balm on my forehead, she rubbed balm, she bathed my head. There was no electricity so she fanned me. She brought me food. Boys would not do that.*

Latifa Akter (21 years, Chandina) expressed similar views: *For my first child, I was happy with whatever Allah gave me. I didn't wish for a boy or a girl. I don't know what my family wanted. I like both, but nowadays girls are better. They understand their mothers' pain and hardship better. Boys don't understand so well.*

Many believed that the special attachment that daughters felt for their parents meant that they would continue to show care and concern, even after they have got married and left their parents' home. This belief had taken on increasing significance in a context where sons were seen as gradually moving outside the parental sphere of influence. Whereas before, sons remained with, or close, to their parents after marriage, there was now a greater tendency for them to set up their own nuclear households and to become more oriented towards their wives and children to the neglect of their parents. Daughters however continued to care.

> *"If I had one child I would want a daughter. Nowadays girls are better than boys. Daughters have more affinity with their mothers. No, sons don't have that. As soon as boys grow up all they are interested in is finding a beautiful girl and if they find one then he takes no notice of either his mother or his father. Nowadays I think girls are better. They are pulled by the feelings for their mother...Daughters want to know whether you have eaten, how you are doing, what you are doing. Yes, they can keep a look out for you even after marriage, if they want to. They can do so even when they get old." (Farah, 48 year, Faridpur).*

While some women continued to stress the caring aspect of daughters, material forms of support have also begun to feature as more women have begun to take up paid work. Rahela hoped that by educating her daughter, she would enable her to get a reasonably paid jobs and sufficient bargaining power within marriage to persuade her husband to let her help out her parents:

> *"...if I can bring up my daughter properly, if she can get a job and earn five thousand taka, then she can give some to her parents. But if I can't help her along to that level, then how will she give anything? If she can stand on her own feet, if she can work independently, then she can tell her husband. She can say that,*

*'look my parents have given me an education, they have spent money to educate me and now they are suffering so much. I want to give them something now.' If the boy is good, then she will be able to. Even if the boy is bad, and my daughter has something of her own, she may use different strategies to give some money." (Rahela, 43 years Faridpur)*

The shift in sex preferences also reflected the perception on the part of some women that sons were – or had become - less responsible about their obligation to parents. It was believed that sons were increasingly moving out of the sphere of influence of their parents and becoming more oriented towards their own wives and children. Mahfuza (38 years, Narayanganj) spoke about this change:

*"People want sons, but in the past they wanted sons more. Now it does not matter whether you have a son or a daughter. People in the past did not understand this. They used to think of boys as the torch of the lineage; that they continue the line of descent. They did not like girls so much because they leave once they get married. They used to prefer boys. There has been some change in this, though not that much. The change has occurred because once married, sons and daughters are the same. Sons do not do that much for their parents any more. They are busy with their households. They do not feel that their parents have become old and they need to feed and look after them."*

She herself had had 3 daughters and had decided not to try for a son: *We will get by on our own in our old age. Even if girls can't look after their parents, I don't see boys looking after them. I don't see them doing much for their parents. They are busy with their own households just like girls. There is no point in needlessly increasing the size of the family.*

The increasing disaffection with sons also reflected the view on the part of some women that boys mixing with the 'wrong' crowd, taking drugs, being less in the control of parents that lead to problems within the community. In a scenario where boys are becoming less reliable, it was towards earning daughters, whose affective ties with her parents were considered to be stronger, that a number of women are now pinning their hopes for support in their old age.

*"Nowadays people say that daughters are better. They say this because now boys go out and become spoilt. And girls remain within their control. The boys get spoilt in the sense that they take different kinds of things, like they smoke...and things like that. They do not look after their parents. Girls fear their parents. But boys do not fear them. That is why people nowadays say that girls are better."(Rubina, 60 years, Faridpur)*

*"It is good to have both daughters and sons. There is no 'loss' in either. Both sons and daughters are beneficial for parents. If girls can be brought as proper human*

*beings, then they will look after their parents. Whereas sometimes you see that after getting educated, sons do not even recognize their parents. You need both a son and a daughter."(Bina Begum, 25 years, Narayanganj)*

Lucky (Narayanganj, 27 years) hoped for a daughter as she considered sons – and men more generally - to be the less responsible sex. *I will be happy with whatever Allah gives me…I don't know whether it is better to have a son or daughter. I will be happy with a son, I will be happy with a daughter. But daughters are better than sons. If you are a girl, you can work and feed your parents. Boys don't do that. Look at my brother, he doesn't do any work. Look at my husband. I do everything. Boys generally sit around, they are irresponsible. Boys wander the streets with their friends and get into fights. Now girls prefer to stay with their mother's house. They take care of both parents and their husband's parents.*

**6.3 A note on sex-selective abortion**

While technology which allowed the sex identification of the fetus has been available in Bangladesh at least since the early 1990s, there appears to be very use of it for sex-selective abortions. We explored this question in greatest depth in our Faridpur. A number of women had, of course, heard of it. Public service announcements on Indian TV cautioning people against this practice were a frequent source of information. One woman, chair of her local party branch, was most forceful in declaring that it happened frequently: *People from the villages go to the town to have an abortion. They only keep the sons. They find out from the ultra-sonogram if it is going to be a boy or girl. Even if they have five sons, they will keep it if it is a boy. And even if they have two daughters, they will abort it if it is a girl. This happens everywhere. I know a gynecologist where it is a daily affair.*

However, as we have seen, most other women did not share these views either about family size or sex preference. Many had ultrasound scanning but largely to check the health and position of the fetus. In any case, most seem to go too late into the pregnancy for abortion to be considered feasible. None of the women we interviewed actually knew of anyone in their village who had had an abortion on sex selection grounds, although the desire to space or limit family was a frequent motive. Safura, a 50 year old health worker in our Faridpur village, who had 300 households under her supervision, told us that while people were curious to know about the sex of their child, and saddened when it was not of their desired sex, she had not come across any cases when they decided to abort the child. Only one woman in our sample knew of a case in her family where there had been some discussion about abortion when it was found that fetus was female – but it was not clear whether the abortion had actually been carried out.

# 7. Gender relations in flux: contextualizing the shift in sex preferences

As Adnan (1998) cited earlier, had pointed out, there had been some major changes in Bangladesh in the decades since its independence, many of which have impacted directly and indirectly on the position of women in society and on the value given to daughters. Some of these changes were rooted in the destabilizing events of the earlier decade. The 1970s is considered one of the most crisis-prone decades in Bangladesh's recent history, punctuated by cyclones, war, famine, political assassinations and military coups. The poverty and insecurity generated by these events, accompanied by growing landlessness and declining farm sizes, were among the earliest drivers of change in patriarchal relations, forcing women from poorer households into the labour market in search of a living. While this was largely a distress sale of labor, and carried little emancipatory potential, it served to challenge pre-existing stereotypes about men as sole breadwinners. As a report by Chen and Ghuznavi (1979) noted, many women were being turned away by local officials managing the Food-for Work programmes set up in the aftermath of the 1974 famine, on the basis that women did not work. While some of these women came from households where they were the sole breadwinner, others were seeking to compensate for inadequate male earnings. Many had come in the face of considerable resistance from family and community. The report led to the setting up of special provisions for women on the Food for Work projects and later to a larger road maintenance program which provided employment to destitute women.

Subsequent decades were more positive. Some of the social and economic changes of this period featured in Simmons (1996) and Adnan (1998) including the emergence of emergence of 'new mental outlook, new ideas and orientations' (Simmons 1996; Adnan 1998). The rising prevalence of contraceptive use and the associated decline in fertility has meant that by the 1990s, economic growth had outstripped population growth. Since then has been a gradual but steady decline in poverty rates so that poverty has gone down from 80 percent in the 1970s to 40 percent by the mid-2000s (Table 11). Increasing integration into the global economy, expansion of physical infrastructure, including roads and bridges, investments in community development infrastructure, such as health centers and schools, rural electrification, the expansion of marketing outlets, the growth of media and new forms of communication, the diversification of livelihoods, increasing migration out of the

countryside and urbanization have all helped to transform the socio-economic landscape of Bangladesh.

The qualitative explanations given for shifting sex preferences discussed in the previous section touch on many of these changes. In response to a question along these lines, most women believed that there had been an increase in the value of women in society, an increase that reflected changes in female education, increased opportunities for work, greater mobility, a public discourse about rights[14]. Sometimes these themes featured as part of a casual explanation for women's changing value, sometimes as manifestation of that change. Together these changes combined to characterize what both women and men identify as the 'current era' or '*bortoman joog*' – an era that was distinguished from the past most strongly in terms of the changing position of women.

Female education, more than male, has been a major driving force behind fertility decline, the decline in under-five mortality and the closing of the gender gap in child mortality rates (refs). As our survey suggest, it has also been a key factor in explaining the weakening of son preference. Fifty years ago, with the exception of a negligible urban elite, little value was attached to education by a population that relied largely on labour-intensive agriculture for a living. This had begun to change by the 1980s and qualitative research carried out at the time noted the growing demand for education, although it was still largely demanded in relation to boys. School enrollment rates, very low up to the late 1970s, began to rise slowly and unsteadily during the 1980s.

Since the early 1990s that primary school attendance began to spread rapidly and consistently with the expansion of primary schools since the enactment of the 1990 Compulsory Primary Education Act, the goal was to put one school per village. Expansion in secondary school came after 1995 coinciding in 1994 with countrywide female secondary school stipend programme.

The closing of the gender gap at primary level and doubling of enrollment occurred during the 1990s. The rise in secondary school enrollment was even faster, increasing more than three-fold in the decade since the mid 1990s. Moreover, with the exception of grades 11-12 girls' gross enrollment exceeded that of boys for all grades in secondary school and the female advantage was seen in both poor and non-poor households (WB and ADB 2003).

[14] It is worth noting that 'girls' education' was the overwhelming response to a question in our survey asking women what they considered to be the significant source of change in women's lives more generally. In response to a question about what the most significant sources of change in their *own* lives, responses were divided between 'education' and 'credit'. Access to family planning etc also featured but these two were the more frequently given responses.

While rising female enrolment rates partly reflect the strong incentives provided by various government and NGO interventions, there is also evidence from our interviews and elsewhere that the value given to girls' education was also changing. Giving children a proper upbringing has been, as we noted earlier, an important factor in the move to smaller families. Educating children, whether boys or girls, is now regarded as an important aspect of a 'proper upbringing' or what people call '*bhalo bhabe manush kora*' (to bring up as proper human being):

> *"Nowadays people like both sons and daughters. They want both. One son and one daughter is enough. Then those who have two of the same are accepting that fact. What I see is that even when people have two daughters, they are accepting that and they are bringing up their daughters like sons. 'Like a son' means educating her properly." (Amina, 43 year, Faridpur)*

> *"It will be enough if my son grows into a proper human being, even if he does not feed me, let him be a proper man and lead his own life. I don't hope to be fed by my children but I just want my son and daughter to become proper human beings." (Srabonti Rani, 27 years, Chandina)*

The greater value given to girls' education thus appears to be part and parcel of greater egalitarianism in the treatment of children. For some women, education had an intrinsic value: *I see the differences between my grandmother's generation and girls who study now. Now girls are studying, they are able to do good things….I think the value of girls has risen in the last twenty years. Education is itself of value*. (Lucky, 27 years, Narayanganj). Srimoti Burman (Kurigram, 40 years) linked the increasing value of women to education: *I know women's value has increased because I see women going up and talking to men on an equal footing. Women speak the same way as men do, they show the same intelligence. Not all women, there are differences. Those who have studied, who have educational qualifications, they can speak like that. Women who are illiterate like me...cannot…If women are educated, they have a different status in society, they can talk to people, they can read the names that appear on the mobile. They know who is calling …*

For others, there were more instrumental considerations at stake. One consideration related to marriage prospects. Although the female age of marriage is still low and rising very gradually, there is a widespread perception among parents that educated daughters are likely to secure more qualified 'job-holding' grooms. Reflecting on her own qualification as a matriculate, Keya, 39 years, Faridpur, said: *"If I were not a matriculate, I would not have been brought as a wife for an educated man with a government job. A job-holding man would never marry an illiterate girl. He needs an educated bride."*

Nasreen Akhter (38 years, Chandina) wanted to educate her daughter to become a doctor: …*though she will live elsewhere, people will speak highly of us that we have educated our daughter so much. I will be able to get her married to a good family..Boys who are doctors as well or big officers in jobs will be eager to marry my daughter. But if my daughter does not have any education, then the boy will be an agricultural laborer, like me, someone with no education. That will not be a good marriage.*

But the desire to educate daughters is also motivated by the desire to improve the daughter's own employment prospects. Many of the women we spoke to saw access to paid work as a means by which their daughters could avoid the degree of economic dependence that they themselves had been forced to accept[15]. When women who were now mothers had been growing up in the 1970s and 1980s, female labor force participation in Bangladesh had been extremely low. The vast majority of women were either economically inactive or else engaged in unpaid family labor caring for livestock and poultry, tending the homestead plot or working in the post-harvest processing of rice which could be carried out within the home. Work for pay was largely confined to a few educated women from urban middle-class households at one end of the economic spectrum who took up salaried jobs in the government sector and extremely poor and illiterate women at the other end who engaged in agricultural wage labor or domestic service.

This has been changing with the gradual but steady expansion in economic opportunities for women. The government's family planning program, with its reliance on the door step delivery of contraception by a network of village based female family planning workers was one of the first opportunities for rural women with some education to find relatively 'respectable' forms of paid work. The expansion of health and education provision – both by government and the NGO sector - over the years means that community-level work in this sector remains a major source of employment for women in the countryside (World Bank). In addition, there were various social protection schemes intended to promote women's employment, including BRAC's Income Generation for Vulnerable Group Development and CARE's Rural Maintenance Program

The emergence of the export garment sector, while largely urban based, has attracted large numbers of women from the countryside, often migrating on their own or with others like themselves in search of jobs. While the sector itself employs just around 3 million women, it has opened up the possibility of many

[15] Analysis of the survey data by Kabeer *et al.* (2011) supported their views.

more women engaging in economic migration including an unknown number who migrate outside the country.

However, it is probably the steady expansion of microfinance services targeted primarily at women that has represented the most important breakthrough for those rural women with little or no education who sought to earn an income. Around 9 percent of women in our household survey were working in informal paid work outside the house while 46 percent of women worked in informal paid work within the home. In addition, women with some secondary education could aspire to jobs working with some of these microfinance (and other) NGOs.

Paid work emerged in our interviews as one of the most important factors in increasing women's value, but women also emphasized the importance of earning ' a good income', work that was under your own control rather than controlled by others and work that commanded respect from others. For instance, Srabonti Rani (27 years, Chandina) who did agricultural wage work, did not feel that her job had increased her value either with her husband or in-laws: *'There is no value for women's work. But if she can earn a good income, she may have some value. If you work and you still live like a beggar, you have no value. But if you can live like others, and you can spend like them, you have value'.*

Khadeja (24 years, Chandina), on the other hand, who worked as a community health worker, was more positive about her work experience: *I like doing my job, I like everything about it. People in the village like me because I give them vitamins which may help them…I believe all girls should earn an income. Perhaps you have not noticed, but all women are neglected by their husbands. If a girl has some capital of her own, if she has the capacity to stand on her own feet, then in future if a man causes any harm to her, she will be able to survive on her own and feed herself. She will not have to look to a man to do that.*

Not only did paid work give women the ability to stand up for themselves, but it also enhanced their value in the eyes of others. According to Khadeja: *The difference between those who work and those who don't is that those who don't only wash dishes and cook food, that is all. Those who work don't pay too much attention to the cooking and household work, she concentrates on her job. If she earns an income, it is an income for her household and her work is valued. And those who are not married and live in their parents' house, they are valued by their parents. You can understand that they are valued because their parents say, 'My daughter is earning an income and giving it to me, it is a source of support for us'.*

Nurjahan Begum (20 years, Narayanganj) believed that access to paid work was the biggest change in women's lives: *The biggest change for women is that now there is work for women. They can get jobs and stand on their own feet. They can move about on their own. Now even small children can take out books and read them. There was no such 'system' earlier.*

We have already noted some of the implications of this expansion in economic opportunities for attitudes towards daughters. It means that daughters are no longer regarded as the onerous liabilities that they once were. They are able to contribute to their parental household before they get married and some actually work in order to save up for their dowries, thus lightening the burden on parents. They are better able to stand up for themselves within their marriages or in relation to their in-laws. And, of course, as we saw from the previous section, there is the hope on the part of many parents that some of the continuing care that they could expect from married daughters might also include financial support in their old age.

The other major change with positive implications for women's position has been the emergence of a public discourse about women's rights and gender equality. This discourse has been carried right down to the grassroots through a number of mechanisms: the media, civil society, particularly development NGOs, establishment of family courts at local level to expedite cases most often relating to the violation of women's rights and finally, the increased mobility experienced by women with the improvement in transport and communications.

The idea of equal rights was not necessarily understood in its formal legalistic sense but rather as an expansion of women's agency and opportunities in various ways: greater freedom of movement, access to education, a greater capacity to exercise voice and above all, the ability to work.

According to Morjina (33 years, Faridpur):

> *"I mean now men and women both have equal rights. This right enables us to walk the streets. We have the same rights as men do in this world, in this society. So, you have the right to have a job, and I have the right to have a job too. I have heard this, and I am sure you have too! But earlier women did not have this freedom. If a girl wanted to take up a job, she would have to have to consider so many things – whether her parents-in-law would allow her to work, whether her parents would allow her to work, whether they would agree to accept a daughter's income – there were many problems. Now these problems no longer exist. Now parents-in-law encourage daughters-in-law to work."*

Nurjahan Begum (20 years, Narayanganj) interpreted equal rights to refer to relationships within marriage: *I have heard of equal rights between husbands and wives. I have heard it from people in the family. Then you hear it on TV and waz mehfils. 'Equal rights' means for husband and wives to will have equal rights. They will have equal rights in the household and in their work. I want equal rights in everything…*

According to Chumki (22 years, Kurigram):

> *Men and women have equal rights in society. Since men and women both work now and establish themselves in society, they must have equal rights. It is good for women to get equal rights with men. It allows them to do whatever men do, to move around freely.*

Bahar Akhter (40 years, Kurigram):

> *Our men cannot stand women going out for work. It is now time for equal rights. Go out and feed yourselves. There are jobs available. What will you do sitting at home? Work to feed yourselves. But men don't understand this. All they understand is that who knows what women will get up to if they are allowed to go out! It is there weakness. I have heard people talk about equal rights. I have heard it on TV too. …I think equal rights is good for women..I want equal rights at work and in the working environment….*

Many of the women we interviewed believed that the government had played a role in the promotion of equal rights and pointed to various actions on the part of government to this effect. There have been a number of high profile laws passed in favor of women's rights and while these are not necessarily enforced, they serve to strength public perceptions that the government is in favor of greater gender equality. They have also pointed to various development interventions made by the government in terms of girls' education and promotion of employment opportunities.

> *"The way I see it that girls are now more valued than boys. I find that girls get jobs sooner than boys do. I have been a seeing a lot of that in this village. It is the government which is giving more value to women. … they give girls money* [for education] *but not to boys. So it is the government which is doing this. This is good. Yes, it is sad that boys are not getting the money but it is good for girls." (Amina, 43 years, Faridpur)*

Bhairavi (41 years, Faridpur) refers to the various government projects that engage women in development work and views this opportunity as an indication of equal rights.

*"Yes, I have heard that men and women have equal rights. Earlier women went to five different places but couldn't get any work. They had to look to their husbands for everything. They never held a five taka note that they had earned. Only if the men earned and brought home five taka, could the women use it. It is in that place that there is now equal rights. Now it is the women who can work and earn equal to men. This is equal rights. It wasn't like this before. This is better. The government has done a good thing."*

Some believe that it gives women power to voice their opinion.

*"Yes women's value in society has increased. If it didn't, women would not have been able to talk back to their husbands. The government has increased the value of women. If the government did not do it, it would not have gone up. They have given rights, they have given equal rights to men and women. I have heard that the government has said this. I have heard the government say it on TV. But whatever rights they give us, we still obey our husbands." Julekha, 55 years, Fardipur*

Julekha's final comment is a reminder that patriarchal norms continue to govern some aspects of women's lives. As Khushi, 41 years, Faridpur, reminds us, access to paid work has not necessarily led to a change in the domestic division of unpaid labour:

*"Nowadays boys and girls have equal rights. But no matter how much right one has, girls always have somewhat less than boys. `Equal rights' is only written in pages. Is that truly possible? Suppose a boy has a job, so has the girl. Both husband and wife work. But the boy will come back home and rest. But the girl will never be able to come back home and not do anything. She will come and quickly see to what her husband wants to eat, what her children will eat. If she has parents-in-law, then she will prepare their meals and serve them food. She will not be able to come home and rest."*

# 8. Speculating on diverging sex ratios in India and Bangladesh

In this section, we want to take a step back from these two case studies and speculate on possible explanations for the diverging stories of sex preferences and sex ratios reported in India and Bangladesh. Many of the changes put forward to explain the deterioration in sex ratios in India do not seem to have had the same outcomes in Bangladesh. These include contextual factors such as declining fertility rates in the face of strong state policies for family planning as well as aspects of kinship and marriage (patrilineal-patrilocal-patriarchal family structures), the spread of dowry and growing inflation of dowry demands, the increasing importance of off-farm livelihoods, the need to educate daughters to improve their marriage prospects and the need to invest in sons to secure desired forms of employment.. These changes are common to both contexts. What we need to know therefore is what differentiates the two contexts so that these similarities in state policies, kinships systems and economic trends notwithstanding, they have had such diverging trends in their sex ratios and sex preferences. We explore a number of explanations: timing and pace in the introduction and spread of sex identification technology; state society relations and the ease of social change; and religious/cultural norms, values and practices.

It is possible that the divergence in sex ratios is simply **a matter of timing**. It reflects the earlier introduction in India of technologies that made pre-natal sex determination possible and gave rise to the demand for sex-selective abortions. The ability to carry out sex-selective abortions allows families to reconcile son preferences with their desire for smaller families, an ability that was made available in India earlier than in Bangladesh. If this is the case, then expressions of indifference to the sex of the child in the Bangladesh context may simply reflect the ex post rationalization. Just as in the 1970s, the common response to questions about desired family size in Bangladesh was that it was up to Allah is likely to have reflected the view that it was outside their control, so too the common response today that both sons and daughters were sent by Allah and should be equally loved may reflect a similar lack of agency.

There are, however, a number of reasons why this explanation is not fully satisfactory. First of all, ultra-sound technologies have been available in Bangladesh for at least the last 10-15 years but there were very few references either in our interviews or in the wider literature to their use to detect the sex of

the fetus and even fewer to sex-selective abortions. It may be that ultrasound scanning tends to be done too late in the pregnancy to allow for abortion but this still begs the question as to why it is not used – or demanded – earlier.

The second reason is that earlier methods of discriminating against daughters seem to be on the decline in Bangladesh. Excess female mortality in the under-five age group has all but disappeared and overall sex ratio is now balanced at 100. By contrast, overall life expectancy of women relative to men has improved in India but excess female mortality persists in the under-five age group. In other words, even in the absence of sex selective abortion, the India data shows continuing evidence of daughter elimination.

Assuming then that divergence in sex ratios reflects a real divergence in sex preferences in the two contexts, we examine other possible explanations. One might related to **differences in the roles of the state and civil society in the two contexts**. India is, of course, known as the world's largest democracy with near-uninterrupted democratic rule since independence in 1947 while Bangladesh has spent as many years under military rule as it has under civilian during this period. While the Bangladesh state has put in place a number of laws and policies that have directly or indirectly benefited women, particularly since the 1990s, it is highly unlikely that it is its greater progressiveness on gender issues that helps to explain the perceived increase in the value of women reported in our study. A more plausible explanation might lie in the ease with which new policies and laws translate into their intended outcomes.

As Sobhan (2000) has noted, while class inequalities have widened in Bangladesh in the course of economic growth, they are not as closely bound up with the deep-rooted inequalities based on the ascribed identities that characterize the semi-feudal or caste-based social structures which characterize India, Pakistan and Nepal. Bangladesh society remains more fluid with considerable scope for upward mobility. Its hierarchies are more exposed to challenges from below because their legitimacy is not deep rooted.

It is this question of fluidity in a society and the ease with which new norms, values and ideas can travel and permeate a society that may distinguish Bangladesh from the contexts studied by John *et al.* Indirect evidence for this hypothesis relates to the remarkable progress that Bangladesh has made on a number of human development indicators, relative to India, despite its much higher levels of poverty. These improvements have relied not only on purposive policy interventions on the part of government but also on behavioral responses on the part of ordinary people. These changes do not only include rapid fertility

decline from much higher rates of fertility but also more comprehensive immunization coverage, greater access by households to safe drinking water and the availability of sanitary toilets (Osmani and Sen 2011). Progressive discourses about women's rights and gender equality may be easier to disseminate in the smaller and more homogenous social context of Bangladesh than it is within the more caste stratified context of India. It is possible that in Bangladesh peoples' behavioral responses to policy despite poverty have been stronger due to the simultaneity of policies that have succeeded in promoting a higher value for women.

The NGO sector in Bangladesh has played a significant role in this process of dissemination. Bangladesh has been described as having more NGOs per capita than any other developing country. Whatever the truth of this claim, it is the case that there is an NGO presence in practically every village in Bangladesh. The NGO contribution to expanding service delivery has been an important dimension of social change but NGOs have also acted as conduits for new norms and values which go right down to the grassroots. Many of the human development outcomes mentioned earlier were the product of behavioral changes promoted by NGO interventions, such as popularizing the use of ORT to prevent deaths from diarrhea and the expansion of public services through the Expanded Programme of Immunization (EPI) since the late 1980s. However, unlike NGOs in Bangladesh, in India NGO functions vis-à-vis the state is much smaller both in terms of coverage and size.

While NGO membership does not seem a major influence on the sex preferences expressed by the women in our survey, NGO membership was strongly associated with various indicators of women's empowerment in an earlier study (Kabeer *et al.* 2011). And of course, NGOs have played an important role in promoting women's economic activity in the villages of Bangladesh, helping to shift perceptions of women as liabilities to a growing perception of women as assets.

Finally, **religion is another obvious source of difference** between the two countries. As we have seen, it is emerging as a relevant factor in the sex ratio literature because of recent evidence that child sex ratios, and sex ratios at birth, in India are more adverse among the Hindu relative to the Muslim population. One explanation for this in the Indian literature is that fertility rates are higher among Muslims and hence the resort to sex-selective abortion to ensure at least one son has not so far been necessary. However, such an explanation does not hold in Bangladesh where fertility has declined dramatically for both Muslims and Hindus.

Another explanation, and one that fits in with our findings, is that Muslims within the South Asian region do not display as strong a daughter aversion as Hindus[16]. This could be interpreted in terms of the value given to women within the two religions. As Borooah *et al.* (2009) point out, while both religions embody clear biases against women, the nature of these biases are qualitatively different. Within Islam, women are assigned a subordinate status to men so that sons inherit twice as large an inheritance as daughters and a man's testimony in court is worth twice that of women. However, this is a very different form of inequality to that found in Hinduism, where women along with the 'untouchable' castes are defined as inferior to men and the upper castes. [17]As a result, sons are given an important role in death and ancestral rituals, including lighting the funeral pyre for parents so that they may secure a good rebirth in the afterlife[18]. This has featured in some of the literature as an explanation for strong son preference. However, given the increasing unreliability of sons commented on in the Indian study, it is not clear whether this constitutes a sufficiently strong explanation for the persistence of son preference.

A more relevant aspect of religious difference highlighted by the analysis in the two studies relates to the rules, norms and values governing marriage within the two communities and what this implies for the value of daughters relative to sons. In other words, they draw attention to religion as an aspect of social organization. What is striking in the Indian study is complexity of the rules, norms and values that govern marriage within what it describes as a 'caste-class differentiated marriage market' (John *et al.*). Many of these restrictive rules, norms and practices used to be confined to the upper castes. Srinivas (1962) used the term 'Sanskritization' to describe the process by which lower caste groups adopt the values and practices of higher caste groups to signal their upward mobility - '..as caste rises in the hierarchy and its ways become more sanscritized, it adopts the sex and marriage codes of the Brahmins' - but significantly, he added: 'Sanskritization results in harshness towards women' (p 46). In other

[16] 40 percent of Muslims in our sample expressed son preference compared to 48 percent of Hindus; 53 percent expressed indifference compared to 48 percent of Hindus; and 6 percent expressed daughter preference compared to 4 percent of Hindus.

[17] As Kapadia (2003) puts it, '"Upper castes" Hinduism states that women are an inferior species of being to men, both spiritually and intrinsically, because they are fundamentally impure beings…This hegemonic form of Hinduism states that a woman cannot attain spiritual salvation as long as she inhabits an 'impure' female body – she can only attain salvation if she is reborn as a man'.

[18] It is worth noting that the other major religious system associated with persisting son preference – Confucianism – also places a special religious significance on sons in relation to the after life as only sons are permitted to worship and care for the family's ancestors – not having a son means not having any posterity (Croll 2000).

words, while the practice of lower status groups emulating the norms and practices of those higher than them in status is common in many societies, in the Indian context, it has meant that dominant role models are shaped by caste groups who are most conservative with regard to women.

As a result, while the marriage market may be highly differentiated by social status in both contexts, caste adds a whole new dimension of complexity in the Indian context. For instance, village exogamy and patrilocal residence is practiced among Muslims and Hindus in both contexts. Dowry which was initially confined to upper caste Hindus has now emerged among Bangladeshi Muslims as well. However, Bangladeshi Muslims do not appear to have strict norms either dictating lineage exogamy or ruling out cross cousin marriage. Women may marry 'up' as well as 'down' as well as into families of similar status. Caste endogamy is largely irrelevant among its Muslim population. Divorce is also easier among Muslims and, provided they are young enough, both widows and divorced women often remarry in Bangladesh.

As a result, while parents of daughters in both countries may remain preoccupied with the expenses of marrying off their daughters, parents in the Indian context will be constrained by considerations of caste in addition to the concerns with occupation and social status that is likely to preoccupy parents in Bangladesh. A daughter that is widowed or divorced is less of a burden among Bangladeshi Muslims because, while parents may suffer the same loss of face referred to in the Indian study, for a number of reasons: under Muslim law, a divorced woman has the right to maintenance from her husband, and legal provisions have been made to make claims easier; she can be remarried; and increasingly, she does not have to be drain on household resources, because of the possibility of earning.

Economic rationality, it has been pointed out, is culturally specific (Jeffery and Jeffery 1997). It is only by appreciating the different ways in which religion and culture mediates economic forces in the South Asian context that we can make sense of the conclusion coming out of the Indian study that declining demand for male employment and a greater expansion of opportunities for female employment put additional pressure on families to invest scarce resource in improving the employment prospects of their sons at the expense of their daughters whereas in Bangladesh it was associated with a move towards the more egalitarian treatment of sons and daughters.

However, if religion is indeed a factor in explaining sex ratio differentials, it is not Islam alone that explains why the Bangladesh story of sex ratios is so different to the India. Religion does not operate in a vacuum but in specific social contexts

which help to mediate its interpretation and impact. For instance, despite sharing Islam as the majority religion, Bangladesh and Pakistan have generally been located somewhat differently in the geography of sex ratios in the South Asia region. While it has generally been assumed that Pakistan shared a great deal in common with the 'north Indian kinship system', there has been less agreement about Bangladesh. Dyson and Moore (1983) expressed uncertainty on this matter while Miller (1984) used census data to show that juvenile sex ratios were consistently and considerably higher in the districts of Pakistan, suggesting close affinity with the high sex ratio belt of north west India, while juvenile sex ratios in Bangladesh suggested a closer affinity to the 'intermediate' eastern regions. While overall sex ratios have declined in Pakistan as elsewhere in South Asia, the decline has been considerably slower in Pakistan than in Bangladesh (Klasen and Wink 2003).

# 9. Conclusion

There are considerable grounds for cautious optimism with respect to some of the more extreme forms of gender discrimination in Bangladesh. Excess female mortality has declined at all ages, including the younger age groups, where a great deal of this discrimination used to be concentrated. This improvement in female survival rates relative to male in the context has occurred in the context of an overall improvement in survival rates. Other indicators of gender discrimination with regard to health, education and nutrition also indicate a lessening of gender discrimination as do our data on stated sex preference.

There is, however, very little grounds for complacency. Vietnam provides an example of a society that has long been characterized by gender equality in the treatment of children but has, with the recent introduction of ultrasound technology, begun to report rising sex ratios at birth since the early 2000s. While this technology has been available in Bangladesh since the 1990s, it does not appear to have spread as rapidly. It may be that in Bangladesh, most women do not practice sex-selective abortion because they cannot access it or it may be because they believe sex cannot be ascertained by ultra sound scan before 5 months when it is too late to have an abortion. We cannot be sure how they would respond if they could. But it does suggest the need for pre-emptive action to ensure that it does not lead to the depressing outcomes reported in these other countries. On the other hand, South Korea offers the heartening example of a country that experienced rising child sex ratios since the early 1980s but managed to turn it around in the mid-1990s through firm policy action. Its sex ratios now converge to the 'normal'. The message of hope here is that there is nothing inevitable about these trends.

A recent workshop in Bangladesh brought together participants from India, Bangladesh, Vietnam and China to discuss what forms of action could be taken to address the problem of sex ratios. The possibilities discussed fell into a number of categories:

*Legal approaches:* Both India and China have adopted a number of laws intended to discourage the sex identification of the fetus and the practice of sex selective abortion but it is not clear how effective this has been. China also has laws that prohibit the abuse or abandonment of girls or abuse women who bear girls. Korea

had also made it illegal to inform parents of the sex of the fetus and it took further steps to restrict abortions except on health grounds. However, it has been argued that legal restrictions were not sufficient to explain the turnaround in Korea since so few doctors have been apprehended and even fewer have been prosecuted or penalized.

*Program approaches:* Both India and China has been experimenting with interventions intended to reduce daughter disadvantage. India has introduced conditional cash transfer schemes in several states. One in Haryana, a state with one of the worst sex ratios in the country, offers cash incentives to families with daughters also offers incentives conditional on girls' immunization and school enrolment. It has reformed inheritance practices among the majority Hindu community to allow daughters to inherit ancestral and joint family property equally with sons – but this does not apply to agricultural land. China provides retirement payments to families who abide by one child/two girls policy. Its Rural Minimum Living Protection Ordinance offers a larger minimum subsistence allowance to couples with only one child. There are plans to universalize its pension scheme which might reduce the pension motive for having sons.

*Advocacy approaches:* India has launched several advocacy campaigns to educate the public on sex selective abortions. The effects of these are difficult to evaluate. However, in the Indian context, active media outreach has been found to contribute to more progressive attitudes to a variety of gender-related issues, including son preference. (Jensen and Oster 2008). Nevertheless there are several critiques about advocacy efforts, particularly in relation to how appropriate their messages and imagery has been. For instance medical imagery tends to distance the audience about what is going on, the use of rhetoric can alienate the intended audience, the idea that sex selective abortion is a sin did not appear to have much purchase in the Indian context. The importance of reaching out to men is being increasingly emphasized given that they are important decision-makers.

What is striking about some of these efforts is their piecemeal nature. Policies are formulated to address one aspect of the problem in isolation from others. Yet it is clear that the problem of son preference – and daughter aversion – is rooted in both cultural and material structures and must be addressed simultaneously on a number of different fronts. It is not simply the laws making sex selective practices illegal in Korea that helped it achieve its turnaround – although these helped – but also other laws aimed at promoting gender equality more generally. In addition, the tightening of the overall labor market combined with rising female education had been leading to a closing of the gender gap in both employment but also wages. One important point that Chung and Das Gupta (2007) make in

relation to the improvement in sex ratios in South Korea is that it was resulted from developmental changes that triggered normative change within society as a whole rather than through changes in individuals as their socio-economic circumstances changed.

One example of an attempt to take a more coordinated approach is the most determined and focused effort by the Chinese government till now to address this problem. Its Care for Girls campaign, piloted in 24 countries from 2003-2006 and rolled out nation-wide in 2006. The campaign has five components all under one leadership and management umbrella. The components are: public campaign and awareness-raising, providing preferential economic and social policies, information and evaluation, law enforcement on illegal sex selective abortions and pre-natal identification of fetus and offering health services to women of child bearing age. There are widespread problems of enforcement. Arrests of doctors and technicians have taken place but penalties do not seem to be sufficient deterrent within the lucrative sex selection business. Nevertheless the national SRB has been falling for three consecutive years and there is hope that it will continue to fall in the near future to around 115 by 2015.

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# Appendix

**Table 1. Neonatal and Post Neonatal Mortality Rate (per 1000 Live Births) by Sex, Bangladesh**

| Year | Neonatal mortality rate | | | | Post neonatal rate | | | |
|---|---|---|---|---|---|---|---|---|
| | Both sex | Male | Female | F/M | Both sex | Male | Female | F/M |
| 1981 | 81 | 89 | 72 | 0.810 | 30 | 24 | 37 | 1.542 |
| 1985 | 64 | 67 | 60 | 0.895 | 48 | 47 | 49 | 1.042 |
| 1990 | 67 | 71 | 62 | 0.873 | 28 | 27 | 29 | 1.074 |
| 1995 | 52 | 54 | 50 | 0.781 | 19 | 19 | 20 | 1.053 |
| 2000 | 39 | 41 | 39 | 0.951 | 19 | 19 | 20 | 1.053 |
| 2005 | 33 | 36 | 30 | 0.833 | 18 | 17 | 18 | 1.059 |
| 2006 | 31 | 33 | 29 | 0.879 | 16 | 16 | 17 | 1.063 |

Source: Vital Registration System (BBS 2007)

**Table 2. Neonatal and post neonatal mortality rates (per 1000 live births) for the ten-year period preceding the survey by sex, DHS 1993-2007**

| Survey year | Period | Neonatal mortality rate | | | Post neonatal mortality rate | | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | Ratio( F/M) | Male | Female | Ratio( F/M) |
| 1993-1994 | 1983-93 | 70.9 | 55.7 | 0.786 | 36.5 | 37.7 | 1.033 |
| 1996-1997 | 1986-96 | 60.3 | 49.0 | 0.813 | 34.7 | 35.2 | 1.014 |
| 1999-2000 | 1989-99 | 54.7 | 45.9 | 0.839 | 27.5 | 31.1 | 1.131 |
| 2004 | 1994-04 | 52 | 40 | 0.769 | 28 | 24 | 0.857 |
| 2007 | 1997-07 | 42 | 36 | 0.857 | 19 | 17 | 0.895 |

Source: BDHS various years (NIPORT 2009)

**Table 3. Infant Mortality Rate (IMR) per 1000 Live Births and Child Death Rates (CDR) per 1000 population by Sex, Bangladesh**

| Year | Infant mortality rate | | | | Child death rate | | | |
|---|---|---|---|---|---|---|---|---|
| | Both sex | Male | Female | F/M | Both sex | Male | Female | F/M |
| 1981 | 111 | 113 | 109 | 0.965 | 16.5 | 15.6 | 18.0 | 1.154 |
| 1985 | 112 | 114 | 109 | 0.956 | 15.2 | 14.0 | 16.4 | 1.171 |
| 1990 | 94 | 98 | 91 | 0.929 | 14.2 | 13.4 | 14.8 | 1.104 |
| 1995 | 71 | 73 | 70 | 0.959 | 12.0 | 12.7 | 12.2 | 0.096 |
| 2000 | 58 | 59 | 57 | 0.966 | 4.2 | 4.0 | 4.7 | 1.175 |
| 2005 | 50 | 52 | 47 | 0.904 | 4.1 | 4.1 | 4.0 | 0.976 |
| 2006 | 45 | 47 | 43 | 0.915 | 3.9 | 4.0 | 3.7 | 0.925 |

Source: Vital Registration System (BBS 2007)

**Table 4. Infant mortality rate (per 100 live births) and child (1-4 years) mortality rate (per 1000 population) for the ten-year period preceding the survey by sex, DHS 1993-2007**

| Survey year | Period | Infant mortality rate | | | Child mortality rate | | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | Ratio( F/M) | Male | Female | Ratio( F/M) |
| 1993-1994 | 1983-93 | 107.3 | 93.4 | 0.870 | 46.7 | 62.3 | 1.334 |
| 1996-1997 | 1986-96 | 95.0 | 84.2 | 0.886 | 36.9 | 47.0 | 1.274 |
| 1999-2000 | 1989-99 | 82.2 | 76.9 | 0.936 | 28.4 | 37.7 | 1.327 |
| 2004 | 1994-04 | 80 | 64 | 0.800 | 24 | 29 | 1.208 |
| 2007 | 1997-07 | 61 | 54 | 0.885 | 16 | 20 | 1.250 |

Source: BDHS various years (NIPORT 2009)

**Table 5. Sex ratio in Bangladesh *de facto* population censuses 1951-2001and Demographic and Health Surveys, 1993-2007, Matlab surveillance area villages**

| Year | Population (Million) | Sex ratio census males/100 females | Sex ratio DHS males/100 females | | Sex ratio Matlab males/100 females | |
|---|---|---|---|---|---|---|
| | | | All ages | 0-4 years | All ages | 0-4 years |
| 1951 | 41.912 | 109.6 | | | | |
| 1961 | 50.840 | 107.6 | | | | |
| 1966 | | | | | 104.0 | 102.5 |
| 1974 | 71.476 | 107.7 | | | 104.1 | 104.6 |
| 1981 | 87.120 | 106.4 | | | 102.0 | 107.9 |
| 1986 | | | | | 102.3 | 106.5 |
| 1991 | 111.456 | 106.1 | | | 100.4 | 101.0 |
| 1993-94 | | | 100 | 105 | 99.4 | 101.5 |
| 1996-97 | | | 98 | 99 | 97.5 | 102.5 |
| 1999-2000 | | | 98 | 104 | 95.8 | 103.2 |
| 2001 | 123.850 | 106.6 | | | 93.8 | 104.0 |
| 2004 | | | 96 | 102 | 91.8 | 103.7 |
| 2007 | | | 95 | 99 | 89.2 | 104.2 |
| 2008 | | | | | 87.3 | 103.2 |

Source: Population census 2001 (BBS 2004), BDHS various years (NIPORT 2009), Matlab Health and Demographic Surveillance System (personal communication, ICDDR, B)

**Table 6. Percentage of children age 12-23 months who received vaccination* at any time before the survey (according to a health card or the mother's report)**

| BDHS survey years | Both sex | Male | Female | Ratio( F/M) |
|---|---|---|---|---|
| 1993-1994 | 58.9 | 62.1 | 55.6 | 0.895 |
| 1996-1997 | 54.1 | 55.8 | 52.2 | 0.935 |
| 1999-2000 | 60.4 | 63.4 | 57.0 | 0.899 |
| 2004 | 73.1 | 73.4 | 72.8 | 0.992 |
| 2007 | 81.9 | 81.2 | 82.5 | 1.016 |

Source: BDHS Surveys various years (NIPORT 2009)
Note: *BCG (for tuberculosis), measles, and three doses each of diphtheria, pertussis, and tetanus (DPT) and polio vaccine (excluding polio vaccine given at birth)

**Table 7a. Changing number preference in Faridpur by age: 1979-2009**

| 1979 | N | 1-3 | 4 | 5-7 | MV |
|---|---|---|---|---|---|
| Age LE 34 | 203 | 90 | 5 | 6 | 2.0 |
| Age GT 34 | 142 | 74 | 11 | 14 | 2.8 |
| 2009 | N | 1-3 | 4 | 5-7 | MV |
| Age LE 34 | 211 | 97 | 3 | 0 | 1.2 |
| Age GT 34 | 304 | 94 | 5 | 1 | 1.5 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 7b. Changing sex preference in Faridpur by age: 1979-2009**

| 1979 | N | 1-3 | 4 | 5-7 | MV |
|---|---|---|---|---|---|
| Age LE 34 | 201 | 36 | 19 | 44 | 4.1 |
| Age GT 34 | 141 | 21 | 26 | 53 | 4.7 |
| 2009 | N | 1-3 | 4 | 5-7 | MV |
| Age LE 34 | 215 | 58 | 19 | 22 | 3.2 |
| Age GT 34 | 320 | 57 | 22 | 20 | 3.3 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 7c. Changing number preference in Faridpur by land owning status: 1979-2009**

| 1979 | N | 1-3 | 4 | 5-7 | MV |
|---|---|---|---|---|---|
| Landless | 149 | 91 | 3 | 6 | 2.0 |
| Landed | 196 | 78 | 11 | 11 | 2.5 |
| 2009 | N | 1-3 | 4 | 5-7 | MV |
| Landless | 409 | 95 | 4 | 1 | 1.3 |
| Landed | 106 | 94 | 6 | 0 | 1.5 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 7d. Changing sex preference in Faridpur by land owning status: 1979-2009**

| 1979 | N | 1-3 | 4 | 5-7 | MV |
|---|---|---|---|---|---|
| Landless | 147 | 30 | 22 | 48 | 4.4 |
| Landed | 195 | 30 | 22 | 49 | 4.4 |
| 2009 | N | 1-3 | 4 | 5-7 | MV |
| Landless | 426 | 58 | 21 | 22 | 3.2 |
| Landed | 109 | 57 | 24 | 18 | 3.2 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 7e. Changing number preference in Faridpur by education 1979-2009**

| 1979 | N | 1-3 | 4 | 5-7 | MV |
|---|---|---|---|---|---|
| < 5 years | 266 | 83 | 8 | 9 | 2.3 |
| 5+ years | 66 | 89 | 3 | 8 | 2.1 |
| 2009 | N | 1-3 | 4 | 5-7 | MV |
| < 5 years | 331 | 94 | 6 | - | 1.4 |
| 5+ years | 184 | 97 | 3 | - | 1.2 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 7f. Changing sex preference in Faridpur by education 1979-2009**

| 1979 | N | 1-3 | 4 | 5-7 | MV |
|---|---|---|---|---|---|
| < 5 years | 263 | 27 | 22 | 52 | 4.6 |
| 5+ years | 66 | 46 | 20 | 35 | 3.7 |
| 2009 | N | 1-3 | 4 | 5-7 | MV |
| < 5 years | 346 | 55 | 21 | 23 | 3.4 |
| 5+ years | 189 | 61 | 22 | 19 | 3.0 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 7g. Changing number preference in Faridpur by number of children ever born 1979-2009**

| 1979 | N | 1-3 | 4 | 5-7 | MV |
|---|---|---|---|---|---|
| 0-2 | 117 | 93 | 3 | 4 | 1.8 |
| 3-5 | 93 | 85 | 8 | 7 | 2.3 |
| 6-8 | 81 | 79 | 10 | 11 | 2.3 |
| 9+ | 54 | 68 | 15 | 17 | 3.0 |
| 2009 | N | 1-3 | 4 | 5-7 | MV |
| 0-2 | 240 | 97 | 3 | 0 | 1.2 |
| 3-5 | 188 | 96 | 4 | 0 | 1.4 |
| 6-8 | 68 | 88 | 10 | 2 | 1.8 |
| 9+ | 19 | 84 | 16 | 0 | 1.9 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 7h. Changing sex preference in Faridpur by sex composition of living children 1979-2009**

| 1979 | N | 1-3 | 4 | 5-7 | MV |
|---|---|---|---|---|---|
| G>B | 140 | 31 | 20 | 49 | 4.5 |
| G=B | 52 | 32 | 25 | 44 | 4.4 |
| G<B | 150 | 28 | 23 | 49 | 4.4 |
| 2009 | N | 1-3 | 4 | 5-7 | MV |
| 0 children | 46 | 52 | 22 | 26 | 3.4 |
| G>B | 171 | 27 | 39 | 33 | 3.2 |
| G=B | 121 | 64 | 22 | 14 | 2.9 |
| G<B | 197 | 55 | 21 | 24 | 3.5 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 8. Comparing sex preference as measured by I-scale and by single valued statement (Faridpur village)**

| I S values | Son preference | Daughter preference | Sex indifference | Total |
|---|---|---|---|---|
| IS 1-3 | 38% | 9% | 53% | 379 |
| IS 4 | 56% | 4% | 40% | 125 |
| IS 5 | 65% | 2% | 33% | 124 |
| Total | 47% | 7% | 47% | 628 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 9. Variations in sex preference, religion, religious conservatism, paid work, NGO membership, wealth status and education by district**

| District | DP | NP | SP | Muslim | Wears *burkah/hijab* | Paid work | NGO member | Poorest | 0 educ |
|---|---|---|---|---|---|---|---|---|---|
| Chandina | 2.2 | 34.1 | 63.6 | 82 | 77 | 3.8 | 31 | 41 | 46 |
| Modhupur | 5.5 | 43.3 | 51.2 | 98 | 65 | 11.7 | 49 | 37 | 54 |
| Bagerhat | 5.1 | 48.2 | 46.7 | 90 | 70 | 8.9 | 33 | 38 | 30 |
| Faridpur | 6.5 | 46.9 | 46.7 | 89 | 41 | 13.2 | 53 | 20 | 35 |
| Narayanganj | 8.8 | 54.9 | 37.3 | 97 | 74 | 16.2 | 32 | 18 | 35 |
| Chapainawab-ganj | 7.3 | 57.2 | 35.6 | 96 | 31 | 4.2 | 36 | 28 | 52 |
| Mauvibazar | 7.6 | 65.0 | 27.4 | 79 | 57 | 8.6 | 31 | 25 | 43 |
| Kurigram | 5.8 | 71.9 | 22.3 | 90 | 22 | 14.0 | 31 | 59 | 49 |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 10a. Regression (logit model) on son preference for all women**

| Independent variables and covariates | | Dependent Variable: Son Preference | | |
|---|---|---|---|---|
| | | Odds Ratio | Std. Err. | P>z |
| Age | | 0.995247 | 0.012157 | 0.697 |
| Age squared | | 0.999925 | 0.000134 | 0.577 |
| Woman's marital status | Never married | 0.721407 | 0.090347 | 0.009 |
| | Widow | 1.310388 | 0.166713 | 0.034 |
| | Separated/divorced | 0.981486 | 0.198438 | 0.926 |
| Number of children | | 1.03181 | 0.021808 | 0.138 |
| Female household head | | 1.018956 | 0.104472 | 0.855 |
| Woman's education level | Primary | 0.860314 | 0.070973 | 0.068 |
| | Secondary or above | 0.746564 | 0.078681 | 0.006 |
| Paid Word | | 0.985671 | 0.064441 | 0.825 |
| Head's education level | Primary | 0.912086 | 0.072431 | 0.247 |
| | Secondary or above | 0.867245 | 0.078268 | 0.115 |
| NGO member | | 1.11839 | 0.074243 | 0.092 |
| Watches TV regularly | | 0.979055 | 0.075742 | 0.784 |
| Family values work | | 0.765484 | 0.04831 | 0 |
| Wears *burkah*/*hijab* | | 1.251111 | 0.090823 | 0.002 |
| Household wealth index | | 0.848013 | 0.040793 | 0.001 |
| Owns asset (land/home) | | 0.851651 | 0.079281 | 0.085 |
| Religion | Muslim | 0.622967 | 0.07078 | 0 |
| District | Faridpur | 0.677994 | 0.084661 | 0.002 |
| | Tangail | 0.669894 | 0.081333 | 0.001 |
| | Chapainawabganj | 0.396808 | 0.051403 | 0 |
| | Moulovibazar | 0.256117 | 0.032853 | 0 |
| | Bagerhat | 0.61692 | 0.074185 | 0 |
| | Kurigram | 0.189164 | 0.025397 | 0 |
| | Narayanganj | 0.448272 | 0.056422 | 0 |
| n | | 5199 | | |
| Pseudo R2 | | 0.0685 | | |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 10b. Regression ( logit model) on son preference for women aged 29+**

| Independent variables and covariates | | Dependent variable: Son preference | | |
|---|---|---|---|---|
| | | Odds Ratio | Std. Err. | P>z |
| Age | | 0.985404 | 0.02189 | 0.508 |
| Age squared | | 1.00002 | 0.000216 | 0.925 |
| Woman's marital status | Never married | 1.626067 | 0.853456 | 0.354 |
| | Widow | 1.341235 | 0.185486 | 0.034 |
| | Separated/divorced | 0.891123 | 0.221927 | 0.643 |
| Number of children | | 1.02859 | 0.023917 | 0.225 |
| Female household head | | 0.946243 | 0.122977 | 0.671 |
| Woman's education level | Primary | 0.808189 | 0.087272 | 0.049 |
| | Secondary or above | 0.776392 | 0.12025 | 0.102 |
| Paid Work | | 0.97721 | 0.087513 | 0.797 |
| Head's education level | Primary | 0.980497 | 0.106564 | 0.856 |
| | Secondary or above | 1.036011 | 0.129847 | 0.778 |
| NGO member | | 1.086141 | 0.094199 | 0.341 |
| Watches TV regularly | | 0.979297 | 0.107403 | 0.849 |
| Family values work | | 0.790295 | 0.066329 | 0.005 |
| Wears *burkah*/*hijab* | | 1.117619 | 0.107518 | 0.248 |
| Household wealth index | | 0.78923 | 0.052432 | 0 |
| Owns asset (land/home) | | 0.90034 | 0.093597 | 0.313 |
| Religion | Muslim | 0.699449 | 0.105137 | 0.017 |
| District | Faridpur | 0.748204 | 0.125342 | 0.083 |
| | Tangail | 0.67865 | 0.111104 | 0.018 |
| | Chapainabganj | 0.301338 | 0.052153 | 0 |
| | Moulovibazar | 0.203829 | 0.034847 | 0 |
| | Bagerhat | 0.588512 | 0.093913 | 0.001 |
| | Kurigram | 0.138213 | 0.024787 | 0 |
| | Narayanganj | 0.424835 | 0.071164 | 0 |
| n | | 3072 | | |
| Pseudo R2 | | 0.0848 | | |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table10c. Regression (logit model) on son preference for women aged 15-29**

| Independent variables and covariates | | Dependent variable: Son preference | | |
|---|---|---|---|---|
| | | Odds Ratio | Std. Err. | P>z |
| Age | | 1.007501 | 0.037001 | 0.839 |
| Age squared | | 0.999236 | 0.00073 | 0.296 |
| Woman's marital status | Never married | 0.767615 | 0.113791 | 0.074 |
| | Widow | 0.814538 | 0.601345 | 0.781 |
| | Separated/divorced | 1.44374 | 0.575232 | 0.357 |
| Number of children | | 1.157736 | 0.078333 | 0.03 |
| Female household head | | 1.244367 | 0.216414 | 0.209 |
| Woman's education level | Primary | 0.856296 | 0.123539 | 0.282 |
| | Secondary or above | 0.712759 | 0.111333 | 0.03 |
| Paid Word | | 0.981466 | 0.096706 | 0.849 |
| Head's education level | Primary | 0.851301 | 0.101386 | 0.176 |
| | Secondary or above | 0.738161 | 0.095982 | 0.02 |
| NGO member | | 1.184561 | 0.127542 | 0.116 |
| Watches TV regularly | | 0.961603 | 0.105285 | 0.721 |
| Family values work | | 0.725137 | 0.071574 | 0.001 |
| Wears *burkah*/*hijab* | | 1.480291 | 0.168107 | 0.001 |
| Household wealth index | | 0.910075 | 0.059534 | 0.15 |
| Owns asset (land/home) | | 0.752585 | 0.183822 | 0.245 |
| Religion | Muslim | 0.52318 | 0.095088 | 0 |
| District | Faridpur | 0.620292 | 0.120131 | 0.014 |
| | Tangail | 0.676486 | 0.125035 | 0.034 |
| | Chapainabganj | 0.600628 | 0.120556 | 0.011 |
| | Moulovibazar | 0.352931 | 0.069533 | 0 |
| | Bagerhat | 0.668122 | 0.12574 | 0.032 |
| | Kurigram | 0.310535 | 0.064324 | 0 |
| | Narayanganj | 0.501301 | 0.098847 | 0 |
| n | | 2127 | | |
| Pseudo R2 | | 0.0619 | | |

Source: Work Survey 2007, Pathways of Women's Empowerment programme, BDI, BRAC University

**Table 11. Trends in economic growth, per capita income growth and poverty levels in Bangladesh, 1975-2005**

| Period | Growth rate (% p a) | | | Population under poverty line (%) |
|---|---|---|---|---|
| | Real GDP | Population | Per capita income | |
| 1972/75 | 2.7[1] | 2.48 | -0.10 | 80 |
| 1980/81 to 1984/85 | 3.7 | 2.2 | 1.5 | |
| 1985/86 to 1989/90 | 3.7 | 2.1 | 1.6 | |
| 1990/91 to 1994/95 | 4.4 | 2.0 | 2.4 | 58.8 |
| 1995/96 to 1999/00 | 5.2 | 1.6 | 3.6 | 49.8 |
| 2000/01 to 2004/05 | 5.4 | 1.6 | 3.8 | 40.6 |

Source: Mahmud *et al.* 2008 Table 1, pp 5; Ahmed and Sattar (2004) Table 6, pp 4062.