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12 The Effect of Micro-Credit Programmes on the Reproductive Behaviour of Women in Rural Areas of Bangladesh

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Background

An extensive literature is now available on the social, economic and cultural determinants of contraceptive use and fertility in developing countries (Dharmalingam and Morgan 1996; Koenig and Simmons 1992; Lapham and Simmons 1987; Schuler *et al.* 1997). However, evidence of the specific mechanisms and pathways through which societal and development factors influence reproductive behaviour is still limited (Koenig and Simmons 1992). Many studies examining the relationship between social and economic development and changing fertility aspirations still do not clearly demonstrate how women's empowerment, which can depend on many factors and assume multiple dimensions, affects their reproductive behaviour (Mason 1995). Nevertheless, it is widely understood that the major keys to improvements in women's status are education and paid employment.

Focusing on the particular role of education in influencing reproductive behaviour, Caldwell (1982) suggests that education helps women to understand the options available to them, re-think traditional cultural values, and challenge the authority and domination of men over women. A number of researchers argue that education influences reproductive outcome by reducing the number of children that women want, by stimulating their aspirations to attain a higher standard of living, by exposing women to new knowledge and practices regarding contraceptive use, by increasing husband-wife communication, and by enhancing women's knowledge and access to birth control (Cochrane *et al.* 1982; Le Vine *et al.* 1991; Schuler *et al.* 1997). Poor female education has also been found to be an important impediment to contraceptive use (Koenig and Simmons 1992).

Female education is also believed to operate by creating value changes in the community. Longer schooling increases husband-wife communication and knowledge, modifies attitudes to contraception, changes the balance in the couple's reproductive decision-making process (Cochrane *et al.* 1982; Jejeebhoy 1995), and

encourages the rejection of traditional values that foster the low status of women. In and of itself, school attendance encourages girls to modify their individual attitudes and to be more free in moving around the community (Cleland *et al.* 1996; Lindenbaum 1983).

As with the relationship between education and fertility, the link between female employment and women's contraceptive and childbearing behaviour has attracted the attention of a number of social scientists (Amin and Pebley 1990; Cain 1981). In many impoverished rural settings, children, especially male children, are expected to provide their parents with security in their old age. It is argued that women who gain economic and psychosocial independence from their children, and increased self-reliance—through their ability to earn money for themselves—acquire the motivation to practise contraception and have smaller families (Cain 1981; Dyson and Moore 1983). Similar views are also reflected in a study conducted in Pakistan, which finds that female labour force participation modifies reproductive behaviour through enhancing women's status (Govindasamy and Malhotra 1996; Sathar *et al.* 1988).

The relationship between women's work and their reproductive behaviour depends on such additional factors as the type of work a woman does, the amount of control she has over her earning, and her place of work (Mahmud and Johnston 1994). It is clear that employment for women and their ability to earn their own money help reduce women's dependency on their husbands. This affects traditional gender relations within the household, creates opportunities to exercise some degree of autonomy, and enhances women's participation in household decision-making—including limiting or spacing births (Amin *et al.* 1994; Dharmalingam and Morgan 1996; Dixon-Mueller 1978; Mahmud and Johnston 1994; Safilios-Rothschild 1982). However, no significant association between female employment and contraception is found when women are below subsistence level, forced to take employment for their survival, or when they suffer from gender-based inequalities in the household (Bruce and Dwyer 1988; Mahmud and Johnston 1994).

Conceptualizing and Measuring Women's Autonomy

The need to conceptualize women's status, female autonomy, women's rights (and the differences between these various terms) has been emphasized in many recent demographic discourses (Mahmud and Johnston 1994; Mason 1984). While women's status is defined as 'the esteem in which she is held by different individuals and groups who come in contact with her' (Epstein 1982), women's autonomy is usually regarded as the ability to make their own decisions about what to do without external influence (Visaria 1993). Some components of women's autonomy that have been identified are: control over material resources; knowledge; economic opportunities available to women; decision-making role; and freedom of movement (Jejeebhoy 1996; Visaria 1993). Women may rise to higher status levels as producers, as reproducers of labour, as mothers-in-law or in other social roles, but high status

does not automatically provide autonomy as long as their subordination to men is not eliminated (Mahmud and Johnston 1994; Safilios-Rothschild 1982). Mason (1984) identified gender inequality in prestige, power and access to or control over resources as the three most common dimensions of subordination. However, there is no consensus regarding the concept of women's autonomy that can be measured cross-culturally (Govindasamy and Malhotra 1996) because of variation in its indices with differing social context and with life cycle.

Women's autonomy, or decision-making ability in personal affairs, is determined by both social custom and tradition (Dyson and Moore 1983). A clear understanding of the power relations between women and men within the household is, therefore, needed to understand the role of women's increased autonomy on reproductive decision-making (Jejeebhoy 1996; Mahmud and Johnston 1994). Employment and control over resources help create women's self-respect and perception of self-worth that can subsequently enhance a sense of identity and reduce their dependence on men. Such an environment, in turn, helps reduce gender inequalities and enhance women's decision-making role.

In this study, female empowerment is conceptualized as the process whereby women gain access to a new world of knowledge and can begin to make new, informed choices in their life (Batliwala 1994). In traditional structural contexts that tend to perpetuate the oppression and exploitation of poor women (Moser 1989), empowerment involves enhancing women's awareness of, and readiness to act against, such subordination and inequality (Young 1988).

The relationship between women's autonomy and their reproductive behaviour has been well documented (Cleland *et al.* 1996; Mason 1984; Schuler *et al.* 1997). Women in patriarchal settings are forced to be dependent upon men for protection and economic support, and to assume a subordinate role in familial decision-making. They are thus limited in their ability to adopt such innovative behaviour as contraception (Cain 1984; Dyson and Moore 1983; Mason 1984). Women's subordinate status and their dependency upon men limit their mobility, requiring them to spend most of their time inside the household (Koenig and Simmons 1992).

Micro-Credit Programmes

Collateral-free micro-credit programmes—designed primarily to involve poor rural women in income-generating and education projects—typically offer women a wide array of support services: training in how to form an income-generating group; advice on setting up mechanisms for group savings; and special skills training in areas of commerce that will give women the opportunity to earn by themselves and contribute financially to their family. Several earlier studies have assessed how women's participation in credit-based income-generating activities affects their decision-making capacity or reproductive behaviour (Amin *et al.* 1993; Schuler and Hashemi 1994).

Most of these studies have been insufficiently attentive to the issue of endogeneity and self-selection (Pitt *et al.* 1999). While numerous studies have found that the beneficiaries of micro-credit development programmes are more likely than nonbeneficiaries to use contraceptives (Amin *et al.* 1996; Khan *et al.* 1997; Mahmud 1991; Schuler and Hashemi 1994), it has also been shown that this relationship can be a result of the self-selection bias: that is, women who participate in credit programmes were often better off than nonparticipants before entering the programme, or represented an especially motivated group of women (Pitt *et al.* 1999). This study has attempted to reduce such errors by employing a longitudinal approach.

Data and Methods

The data used in this chapter come from a demographic registration system (WATCH) covering 87 villages in Manikganj district of Bangladesh in which private voluntary development agencies—such as BRAC, Grameen Bank, Proshika, and others—have been operating intensive credit-based income-generating programmes since the mid-1970s. The registration system was designed to document the possible demographic changes associated with this array of income-generating activities and development programmes for women in the area.

In the 1986 benchmark survey, 11,011 married women aged between 15 and 49 were interviewed about their participation in income-generating activities, and their reproductive and contraceptive history. A followup survey was conducted eight years later, in 1994, when 1,535 married women in the same age range were randomly selected. The two samples—from 1986 and from 1994—were comparable in the sense that the women were residing in the same villages with nearly similar demographic characteristics. But they were different in terms of their literacy rate, land ownership and level of exposure to a development programme.

In this study, we look at the effect on various measures of women's reproductive behaviour exerted by four dimensions of their autonomy, independently of the effect of the usual demographic and background characteristics. The four dimensions of female autonomy are: women's mobility within their locality; their ability to manage their households; their role in the decision-making process within the household; and their freedom from control by husbands.

Physical mobility. Women's mobility outside the home has been used as a key indicator of autonomy in many studies (Hashemi *et al.* 1996; Jejeebhoy 1996; Khan *et al.* 1997), where mobility means the freedom to move within and between villages (Dharmalingam and Morgan 1996), visiting the local market and clinic alone or with their minor children (Amin *et al.* 1996; Schuler and Hashemi 1994).

In constructing an index of physical mobility for this study, four items were used: a woman's ability to move *within* her village; *outside* her village; to a local *market*; and to a *clinic*. A woman received zero if the response was negative. One point was

given if the response was positive, and two points if she ever went out of the home alone or with minor children. All items were added to construct the index.

Purchasing power: Women's involvement in paid employment enhances their economic independence, raises their ability to buy essential household items, and determines their position within the households (Amin *et al.* 1996; Dharmalingam and Morgan 1996). A woman's purchasing power defines the degree of control she has over at least a part of the household resources, regardless of whether or not she earns some small income of her own. However, the capacity to make purchases may be a misleading indicator of autonomy if it must be permitted or granted by the husband (Khan *et al.* 1997; Schuler and Hashemi 1994).

The index of purchasing power used here is based on whether a woman has the capacity to buy such items as daily food, grocery, utensils, snacks and apparels for children, clothing for herself, cosmetics, and medicines, without her husband's support (Amin *et al.* 1996; Schuler and Hashemi 1994). One point was given if the response was positive, and zero if negative. The points were then added together to create the index.

Decision-making: The capacity of women to make decisions for themselves, or the degree to which women can actively participate in the decision-making processes within the household, is the most commonly used indicator of women's autonomy (Dharmalingam and Morgan 1996; Dyson and Moore 1983). Major decision issues are education of the children, the type of medical treatment she or her children receive, whether or when to visit the natal home or other places, the amount of money to be spent by family members during festivals, and whether or how much money should be lent to or borrowed from others.

Items used in the construction of this index include: decisions about education for a woman's children; the type of medical treatment she or her children can obtain; when to visit her natal home and other places; the amount of money to be spent during festivals; and how much money should be lent to or borrowed from others. One point is given for a positive response, and zero for a negative response in each of the eight decision issues.

Spousal relations: The way in which husbands and wives interact when making decisions about family spending, women's ability to bargain with their husbands about the control of household resources, and women's relative freedom from spousal domination are some of the various dimensions of power relationships among couples (Dharmalingam and Morgan 1996; Schuler and Hashemi 1994).

The indicator of spousal relations used here is based on women's answers to four items of behaviour. The respondent was asked to assess herself on a five-point scale (ranging from 0 to 4) where zero was considered negative and four was given for positive responses in constructing this variable. The items were: whether her husband always consulted with her about family finances; whether she participated in controlling household resources; whether she could bargain with her husband about household affairs; and whether she had ever been physically or verbally abused by her husband within the past year.

The internal consistency and reliability of the indices of autonomy are examined using reliability analysis¹ that provides correlation coefficients and an overall index of the repeatability or internal consistency of the scale as a whole. The analysis indicates that only the spousal relations variable is fairly correlated with buying capacity (with a value of correlation matrix of 0.204). The estimates of common inter-item correlation and reliability of scale are within acceptable limits.

In estimating the effect of credit programmes on contraceptive behaviour, most studies have used data from multiple sources that were pooled together if the sample proportion of credit programme participants was not equal to the population proportion of the participants (Pitt *et al.* 1999). This combined, choice-based, sample may lead to inconsistent estimates of the impact of credit programmes. In this study, samples were randomly chosen, and both credit participants and non-participants were proportionately represented.

As found in many other studies, cross-sectional data that does not randomly assign women between participants and nonparticipants in credit programmes may have generated biased estimates, because women who are more likely to use contraceptives may also be more likely than others to join the credit programmes (Amin *et al.* 1996; Hashemi *et al.* 1996; Pitt *et al.* 1999). The problem of possible self-selection is addressed in this study by using retrospective data that permit a before-and-after group framework of analysis (Rahman and De Vanzo 1997). Women who were nonusers of the contraceptive method in 1986 were followed until 1994. Of the 1,535 randomly selected women interviewed in 1994, 707 women were identified who had not used any contraceptive method before 1986. The reason why so many cases had dropped out was that a significant proportion of women 42 years or older in 1986 were no longer eligible to be in the sample in 1994, by virtue of their age. For the same reason, women aged 23 years or less were excluded from the sample because they were not eligible (< 15 years old) in 1986. Thus, the sample forms a cohort of women aged between 23 and 49 in 1994 who had never used a contraceptive method before 1986. This approach (i) helps establish a causal link between credit-based income-generating activity and its subsequent impact on autonomy indices and contraceptive use, and (ii) largely reduces the probability of selection bias (Pitt *et al.* 1999).

However, since NGOs generally operate in relatively poorer villages, the study suffers from the problem of the nonrandom placement of credit programmes. In many studies, the unobserved village attributes were not controlled in the statistical analysis. This omission might lead to upward or downward bias in the estimated effect of programme participation on contraceptive behaviour (Pitt *et al.* 1999).

The hypothesis to be examined in this study is that the participation of poor rural women in organized credit-based income-generating programmes improves

¹ Women who had not used contraception until 1986 ($N = 707$); estimated common inter-item correlation: 0.0945; unbiased estimate of reliability: 0.2964; full sample of all women surveyed in 1996 ($N = 1,534$); estimated common inter-item correlation: 0.2269; unbiased estimate of reliability: 0.5406.

women's autonomy in ways that subsequently modify their relationship with their husbands and lead to increased contraceptive use. Ordinary least-squares regression models are employed when women's autonomy indices are considered as the outcome variables (Jejeebhoy 1996). On the other hand, in assessing the impact of participation in a micro-credit programme on contraceptive use, a logit regression approach is followed, by modelling a dichotomous dependent variable, contraceptive use, which is coded 1 if a woman has accepted any method after 1986, and 0 otherwise. The logit model is considered appropriate because the dependent variable is dichotomous (Aldrich and Nelson 1984; Hanushek and Jackson 1977). The main independent variables are credit programme participation during the study period and the four indices of women's autonomy.

In addition, other variables included in the analytical framework are women's age, years of attendance in school, number of living children, husband's occupation, and amount of land owned by the household. These variables are assumed to modify the impact of our main hypothesis: that participation in a credit programme leads to enhanced autonomy, which leads to increased contraceptive use. The measurement of these variables is shown below:

Definition and measurement of variables

Variable	Category
Contraception	Prevalence of any contraceptive method (no=0, yes=1)
<i>Autonomy indices</i>	
Physical mobility	Women's physical mobility score within the community (range: 0–8)
Buying capacity	Buying capacity of usual household items (range: 0–9)
Decision-making	Decision-making role of women in the household (range: 0–8)
Spousal relations	Level of bargaining capacity with the husband and freedom from domination (range: 0–6)
Credit programme	Participation in micro-credit programme (never participated=1, participated=2)
<i>Other variables</i>	
Age	Age of eligible women (in years)
Living children	Number of living children
Years of schooling	Years of schooling completed by a woman
Land	Household ownership of land (in dec.)
Agri-labour	Husband is agricultural labourer (no=1, agricultural labour=2)

Results

The background characteristics of the study women in 1986 and 1994, shown in Table 12.1, indicate that differences in mean age and parity are minor, although significant differences in years of schooling, literacy rate, land ownership and

Table 12.1. Background characteristics of sample women, 1986 and 1994

Background characteristics	Married women ages (15–49)	
	1986	1994
Mean age (in years)	29.8	31.1
Mean no. of living children	2.6	2.5
Mean years of schooling	0.8	1.7
% literate	11.5	30.2
% of husbands labourers	39.9	47.7
% landless	38.7	47.7
Mean land (in dec.)	142	126
N	11,011	1,535

husband's occupation are evident. The increase in literacy may reflect the general increase of female education in Bangladesh and the efforts of NGOs to raise female literacy. The size of land holding has decreased, and both landlessness and the proportion of husbands employed as labourers are on the rise, trends that have also been found elsewhere (Cleland and Phillips 1993).

Table 12.2 shows differentials in contraceptive use by participation in credit programme and sociodemographic variables among all randomly selected women in 1994. Older women—both participants and nonparticipants in the credit programme—are less likely than younger women to use contraceptives, a finding similar to that of other studies (Mitra 1992; Mitra *et al.* 1994). This is probably because many older women become infertile as a result of menopause or from chronic illnesses. It is also likely that it is more difficult to convince older women to accept contraception, given their relatively shorter exposure to the family planning programme. Furthermore, a positive association is found between women belonging to a credit programme and their utilization of a contraceptive method, even after controlling for sociodemographic categories.

Various dimensions of women's autonomy are regressed, controlling for the amount of land owned by the household and husband's occupation (Table 12.3). Participation in credit programmes appears to have a positive association with each of the autonomy indexes. As participants of credit schemes, women are required to go outside their homes to attend meetings with other women and men. Moving beyond their homes and attending meetings has provided women with wider exposure to the outside world, and strengthens their self-confidence (Egero and Hammarskjöld 1996). Access to credit and the income earned from the investment of that credit raise their buying capacity. Increasing self-confidence and earning opportunities not only have raised their decision-making capacity but also have increased their bargaining power capacity within the household—particularly with their spouses. For all equations, R^2 values are low, suggesting that

Table 12.2. Estimated contraceptive acceptance rates among women in 1994 by sociodemographic characteristics and involvement in credit programme (N=1,535)

Sociodemographic characteristics	Credit programme	
	Did not participate	Participated
All	45.4	61.6
<i>Age</i>		
15-29	39.7	49.6
30-39	54.4	66.1
40-49	19.0	62.6
Significance	$p < 0.01$	$p < 0.01$
<i>Living children</i>		
2 or less	42.3	48.1
3-4	47.3	48.1
5 or more	46.8	61.3
Significance	ns	$p < 0.01$
<i>Years of schooling</i>		
None	46.2	62.9
I-V	43.2	54.0
VI+	43.0	61.9
Significance	ns	ns
<i>Occupation of husband</i>		
Labourer	47.4	64.1
Agriculture	41.3	56.5
Business	52.5	59.4
Service	37.5	55.0
Significance	ns	ns
<i>Land ownership</i>		
Landless	48.4	64.1
1-199 dec.	45.4	59.3
200+ dec.	40.8	52.5
Significance	ns	ns
N	904	631

other factors not included in the model significantly influence autonomy indices. Despite the low R^2 values, the regression equations for most indices are statistically significant.

The impact on contraceptive use of credit programme participation, women's autonomy indices and selected sociodemographic variables is examined using logit regression analysis (Table 12.4). Model I indicates that credit programme participants are 40 per cent more likely to use contraceptive ($p < 0.01$) than nonparticipants, controlling for age and living children. When autonomy indices are added to model II, the credit programme effect on contraceptive use declines ($p < 0.05$), indicating that women's autonomy indices also explain a part of that effect. The effects of the autonomy indices on contraceptive use—controlling for age and

Table 12.3. Correlates of women's autonomy: OLS regression coefficients controlling for amount of land owned by the household, and occupation of husband ($N = 1,535$)

Explanatory variable	Autonomy Indices			
	Physical mobility (0–8)	Buying capacity	Decision-making (0–8)	Spousal relations (0–16)
Credit taken (rc=no)	0.50***	0.15	0.42***	0.44***
Age of women	0.04***	0.02***	0.01	0.07***
Years of schooling	0.07***	0.01	0.08***	0.17***
Constant	1.18***	3.30***	1.37***	6.25***
R^2	0.11	0.04	0.05	0.09

* $p < 0.10$, two-tailed test.** $p < 0.05$, two-tailed test.*** $p < 0.01$, two-tailed test.

living children—are estimated in model III. No indicator except spousal relations ($p < 0.01$) is found to be significant. In model IV, the effects of both credit programme participation and the autonomy indices are estimated after controlling for the sociodemographic variables. Among the autonomy indices, only the spousal relations variable is found to have a statistically significant impact on contraceptive use. Overall, it appears that both raising women's autonomy, by empowering them in their relationships with their husbands, and participation in credit programmes have a positive impact on contraceptive use, even when demographic and socio-economic differences are controlled. This finding was also the case in studies in other parts of South Asia (Dharmalingam and Morgan 1996; Visaria 1993).

Longitudinal Analysis

The analysis based on data from 1994 indicates possible associations between credit programme participation, women's autonomy and contraception. In this section, an attempt has been made to establish a causal link between credit programme participation and contraceptive use. We are working here with a subsample of women who had not used contraceptives until 1986. Influences on women's autonomy for this group are shown in Table 12.5. Although much of the influence on autonomy remains unexplained, the data clearly suggest that programme participation raises the scores of physical mobility ($p < 0.01$), decision-making capacity ($p < 0.01$), and relations with husband ($p < 0.05$). The role of credit programme participation in raising the buying capacity of women is not statistically significant. The role of age in increasing women's autonomy is negligible, while education seems to have visible and statistically significant effects on decision-making and women's relationships with their husbands.

Table 12.4. Log odds ratios of selected explanatory variables to predict contraceptive use among women in 1994 ($N=1,535$).

Explanatory variable	Model I	Model II	Model III	Model IV
<i>Credit programme</i>				
Not involved	1.0	1.0		1.0
Taken credit	1.40***	1.33**		1.27**
<i>Autonomy indices</i>				
Physical mobility		0.98	0.99	0.98
Buying capacity		1.04	1.04	1.04
Decision-making		1.05	1.06	1.06
Spousal relations		1.07***	1.07***	1.06***
<i>Other indicators</i>				
Age of women	1.02	1.01	1.01	1.01
Living children	1.15***	1.17***	1.17**	1.17***
Years of schooling				1.00
Amount of land owned				1.00
Agri-labour (rc=no)				0.68***

* $p < 0.10$, two-tailed test.** $p < 0.05$, two-tailed test.*** $p < 0.01$, two-tailed test.

Among the group of women who never used any contraceptive method until 1986, the sociodemographic differentials in contraceptive use are very wide, and statistically significant, regardless of their participation in credit programmes (Table 12.6). Across all subgroups, involvement with a credit programme significantly raises a woman's chances of accepting contraceptives. Land ownership is associated negatively with contraceptive use, although the differences are small and not statistically significant among nonrecipients of credit programmes. Other variables such as age, years of schooling, living children and occupational status do not show any consistent or significant association with contraceptive use.

The logit regression estimates, shown in Table 12.7, provide a clearer picture of the linkages between credit programmes, women's autonomy indices and their contraceptive behaviour. The models show that the impact of women's participation in credit programmes on contraceptive use is strong, positive and significant, regardless of women's sociodemographic characteristics. Model I indicates that women's participation in credit programmes after 1986 means they were 65 per cent more likely ($p < 0.01$) to use any method of contraceptives when compared to women who never received any credit, even after controlling for age and the number of living children. The effect on contraceptive use exerted by participation in a credit programme remains nearly unchanged in model II, where the autonomy variables are added to model I. This analysis indicates that the effect of women's autonomy indices (except for the spousal relation variable) on contraceptive use is

Table 12.5. Correlates of women's autonomy: OLS regression coefficients controlling for amount of land owned by the household, occupation of husband and religion ($N = 707$)

Explanatory variable	Autonomy indices			
	Physical mobility (0–8)	Buying capacity (0–9)	Decision-making (0–8)	Spousal relations (0–16)
Credit taken (rc = no)	0.78***	0.03	0.55***	0.52**
Age of women	0.02***	0.02	0.00	0.03*
Years of schooling	0.06**	0.05	0.11***	0.17***
Constant	1.25***	2.88	1.83***	6.70***
R^2	0.09	0.05	0.07	0.05

* $p < 0.10$, two-tailed test.** $p < 0.05$, two-tailed test.*** $p < 0.01$, two-tailed test.

minimal. The role of female autonomy in explaining increased contraceptive use is more clearly shown in model III, when age and the number of living children are controlled. The data also suggest that older women are less likely to practice contraception. However, contraceptive use among women with a large number of living children is more likely ($p < 0.01$). In model IV, the linkage between participation in a credit programme and contraceptive use weakens when autonomy indices and the socioeconomic variables are controlled. This weaker relationship can be explained by the different acceptability of contraception across socioeconomic groups (as we reported earlier). The effects of women's relations with their husbands on contraceptive use remain consistently strong in all estimated models. This indicates that differences in power relations with husband by sociodemographic groups are minimal.

Discussion

Evidence from this study reveals several major points of interest concerning the relationship between credit programme participation and reproductive behaviour. Participation in a micro-credit programme appears to improve women's position in the household. Although involvement in the programme enhances most dimensions of women's autonomy, the programme's influence on women's autonomy is conditioned by many other contextual factors. As a result, the changes in women's status are reflected only partially in modifying reproductive behaviours. With certain caveats, the study largely supports the hypothesis linking participation in a credit programme to women's increased autonomy and changed reproductive behaviour.

Table 12.6. Estimated contraceptive acceptance rates among women in 1994 who did not borrow credit or use contraception until 1986, by sociodemographic characteristics and involvement in the credit programme ($N = 707$)

Sociodemographic characteristics	Credit programme	
	Did not participate	Participated
All	44.1	56.1
<i>Age</i>		
15–29	58.8	53.8
30–39	49.0	64.9
40–49	27.0	35.5
Significance	$p < 0.01$	$p < 0.01$
<i>Living children</i>		
2 or less	58.1	44.7
3–4	43.1	65.5
5 or more	34.5	48.6
Significance	$p < 0.01$	$p < 0.10$
<i>Years of schooling</i>		
No school	42.8	58.5
I–V	50.8	38.5
VI+	44.1	66.7
Significance	ns	$p < 0.10$
<i>Occupation of husband</i>		
Labourer	46.1	62.9
Agriculture	38.9	41.3
Business	53.6	53.2
Service	34.6	28.6
Significance	ns	$p < 0.01$
<i>Land ownership</i>		
Landless	48.1	62.8
1–199 dec.	45.1	49.6
200+ dec.	36.7	38.9
Significance	ns	$p < 0.05$
<i>N</i>	404	303

These findings are consistent with those of other recent studies (Amin *et al.* 1996; Dharmalingam and Morgan 1996; Schuler and Hashemi 1994).

Over the last two decades, a number of NGOs in Bangladesh have introduced programmes offering collateral-free credit to rural poor women. These programmes

Table 12.7. Log odds ratios of selected explanatory variables to predict contraceptive use among sample women in 1994 who did not borrow credit or use contraception until 1986 ($N = 707$)

Explanatory variable	Model I	Model II	Model III	Model IV
<i>Credit programme</i>				
No	1.0	1.0		1.0
Yes	1.65***	1.66***		1.50**
<i>Autonomy indices</i>				
Physical mobility		0.88	0.99	0.88
Buying capacity		1.08	1.06	1.07
Decision-making		0.95	1.01	1.00
Spousal relations		1.10**	1.12**	1.10**
<i>Other indicators</i>				
Age of women	0.90***	0.90***	0.89***	0.90***
Living children	1.20***	1.22***	1.23***	1.22***
Years of schooling				1.01
Amount of land owned				1.00
Agri-labour (rc = no)				0.91

* $p < 0.10$, two-tailed test.

** $p < 0.05$, two-tailed test.

*** $p < 0.01$, two-tailed test.

have also provided skills training, adult education and reproductive health services. Bringing poor rural women together to collaborate in income-generating projects has created a kind of group solidarity among the members that serves to reduce their physical and social isolation in the home. By providing women with opportunities to earn and financially contribute to the family, the credit programme has played an important part in reducing gender inequality within the household. Involvement in credit programme activities increases women's outside contacts and helps widen their knowledge and skills. It forces women to move outside the home and thus modifies their traditional role of housewife into becoming a household provider.

The apparent success of self-employed women in our study villages in gaining greater autonomy should also be viewed from within a structural context. Given the cultural context, the expected role of the husband as sole provider is challenged when his wife engages in economic activities and is able to contribute financially to the household. Through this process, women's decision-making capacity increases because they become responsible not just for their traditional domestic activities, but also for a new productive role. Their participation in income-generating projects increases women's mobility, exposes them to new ideas, and enhances their ability to interact in the public sphere (Schuler and Hashemi 1994)—including the ability

to demand and receive services available in the public sector. Participation in credit programme activities gives women the opportunity to regulate their fertility, by choosing their own method of contraception. This happens, in part at least, by a strengthening of their bargaining position within the household, either as a result of their ability to financially contribute to the family, or by their new-found ability to move beyond traditional values and beyond confinement within the household.

By organizing poor rural women into strongly bonded social groups, and by providing them opportunities to become involved in self-reliant economic activities, micro-credit programmes in rural Bangladesh have created a dramatically new situation for many women. While credit programmes alone are not sufficient to change women's position in a traditional community, the sustained and wider involvement of poor women in such programmes clearly enhances their reproductive choices. The apparently increased demand for fertility regulation and the increased contraceptive prevalence found among women involved in income-generating activities provide a clear message that family planning programmes should become a more integrated part of overall development efforts in Bangladesh.

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