The Impact of Microfinance on Decision-Making Agency: Evidence from South India

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ABSTRACT

Evaluations of the effects of microfinance programmes on women's empowerment generate mixed results. While some are supportive of microfinance's ability to induce a process of economic, social and political empowerment, others are more sceptical and even point to a deterioration of women's overall well-being. Against this background, development scholars and practitioners have sought to distil some of the ingredients that might increase the likelihood of empowerment or at least reduce adverse effects. This article formally tests the impact of some of the suggested changes in programme features on one particular dimension of empowerment: decision-making agency. Using household survey data from South India, the author explores the importance of the borrower's gender and the lending technology for intra-household decision-making processes. It is shown that direct bank–borrower credit delivery does not challenge the existing decision-making patterns, regardless of whether men or women receive the credit. These findings change when credit is combined with financial and social group intermediation. Women's group membership seriously shifts overall decision-making patterns from norm-guided behaviour and male decision-making to more joint and female decision-making. Longer-term group membership and more intensive training and group meetings strengthen these patterns.

INTRODUCTION

In recent years microfinance has generated great enthusiasm among development practitioners and academics. Against the background of success stories such as those of the Grameen Bank in Bangladesh, BancoSol in Bolivia, and Bank Raykat Indonesia's Unit Desa in Indonesia, momentum gathered with the Microcredit Summit of 1997. This event attracted worldwide attention for the tool of microfinance, boosted the amount of donor and commercial bank money available, and raised the expectation that by 2005 at least 100 million impoverished households, and in particular their female members, would have access to credit (Microcredit Summit, 1997).

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While microfinance institutions diverge in many ways, the gender of the majority of their borrowers tends to be a common feature: in their 1998 survey of the 925 member institutions, the Microcredit Summit Council of Practitioners reported that about 76 per cent of clients are women (Microcredit Summit, 1999).[1] Female borrowers have better repayment records (Hulme and Mosley, 1996; Sharma and Zeller, 1997), which enhances the lending organization's financial self-sustainability, while returns to investment seem to be better spread over all household members when credit is directed at women (Pitt and Khandker, 1998; Pitt et al., 1998). It is further believed that opening up microfinance services to women may induce a process of economic, social and political empowerment, altering underlying social and gender relations. Notwithstanding the high expectations, however, evidence about the impact of microfinance on women's empowerment has been mixed. While most of the evaluations to date share the same South Asian context,[2] some are positive and supportive of the empowerment potential while others are sceptical and even point to the potentially adverse effects of microfinance on women.[3]

Troubled by these controversial findings, scholars and practitioners started to search for successful programme features with a view to increasing the likelihood of an empowering outcome for women or, at least, diminishing adverse effects. For instance, it has often been suggested that an integrated package of services ('a credit-plus' approach) has more empowerment potential than minimal credit.[4] Acknowledging the potential adverse effects on the cost of lending of the organization's administrative and the borrower's time burden, it is thought that effects on women's empowerment may be increased when access to credit is combined with other services, including additional financial services (such as voluntary savings facilities, non-productive loan facilities, insurance), enterprise development services (production-oriented and management training, marketing support) and welfare-related services (literacy and health services, gender and social awareness training). Several documents recommend the incorporation of female staff members and gender-awareness training for all staff (Johnson, 1997; USAID MDO, 1995).

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1. Lapenu and Zeller (2001) argue that the over-representation of female loanees only holds if the difference in size (in terms of the number of members) of microfinance institutions is not taken into account. In their comprehensive survey of 1500 microfinance institutions they found that the outreach to women declines from 78 per cent to about 45 per cent if weighted averages are computed.
2. For a discussion of microfinance and empowerment in Africa, see Mayoux (1999).
3. See Kabeer (2001) for a comprehensive review of 'positive' and 'negative' empowerment assessments of credit programmes in Bangladesh.
4. For a discussion on this, see Ackerly (1995), Berger (1989), Johnson and Rogaly (1996), Mayoux (1999, 2001) and Tendler (1989).

Financial and social group mediation is also thought to be superior to direct bank–borrower individual lending.[5] While group participation places an additional time burden on its members, group membership is thought to create an information asset and to strengthen women's access to extra-household networks. However, in the context of the underlying discussion it is crucial to differentiate between those microfinance programmes that use groups as financial intermediaries only, little more than a substitute for conventional collateral, and those programmes that consider groups to be genuine social intermediaries.[6] While the former programmes have an instrumentalist vision of women's groups, the latter stress their 'transformatory' potential and use access to credit as a selective incentive[7] to mobilize women and to stimulate collective action (see Olson, 1965). Women's groups engaging in collective action and bargaining in all kinds of community-related matters have the capacity to act as local institutional 'entrepreneurs', bringing about changes in gender roles. This expansion of women's options outside the home has the further potential of increasing an individual member's participation in decision-making within the household.[8]

While these lists of best practice have their merits, formal testing of the impacts of different lending models and lending technologies on women's empowerment has largely been lacking. My own research findings from a South Indian survey allow for just such a testing. This article therefore seeks to assess the importance of the borrower's gender in the case of direct bank–borrower individual credit delivery, and then to ascertain the impacts of women's group membership, longer membership of women's groups, and different organizational practices.

As is clear from the conflicting evidence so far — and as also highlighted by Kabeer (2001) in her review of Bangladeshi impact studies — different studies do not necessarily use the same concept of empowerment, neither do

5. For a literature review of social intermediation and microfinance programmes, see Edgcomb and Barton (1998).
6. See also Mayoux (2001) on the difference between microfinance programmes that narrowly focus on financial sustainability and those that invest more in building social capital.
7. Credit can be used as a selective incentive as it is only those women who become members of a women's group who have access to credit. Our interviews have indicated that this conditional access to credit does indeed diminish the resistance of husbands to their wives' participation in women's groups.
8. Expanding a woman's outside options potentially increases her 'threat point' in intra-household bargaining, which will eventually lead to allocations that are closer to her preferences. For a comprehensive overview of intra-household modelling, see among others Haddad et al. (1997). For a discussion of the importance of group membership for women's intra-household position see, for example, Agarwal (1994, 1997) and Kabeer (1995).

they measure it in the same way.[9] Some studies are vague both about the notion of empowerment that they are using, and how they have made the concept operational. In order to avoid such problems of 'construct validity' (see Campbell and Cook, 1979), one could integrate different dimensions and measures of empowerment into one study and arrive at valid conclusions through triangulation. Another option is to restrain from generalizing to such complex constructs as empowerment and to put the whole research in terms of a particular dimension or indicator of empowerment. This study takes the latter option: it explicitly frames the research in terms of 'decision-making agency', which is one dimension of empowerment that is frequently covered in empowerment research. The following sections therefore set out in more detail how 'decision-making agency' is explored empirically; describe the credit programmes selected, the research setting and sample characteristics; and present and analyse the research findings.

STUDYING DECISION-MAKING AGENCY

Studying 'decision-making agency' is not straightforward as there are no clear-cut definitions, indicators and measures that are routinely used. The approach used here is based on the reflections of scholars such as Agarwal (1994, 1997) and Kabeer (1995, 1999, 2001) and tries to learn lessons from previous empirical research on decision-making agency and decision-making processes.[10] In order to avoid the trap of making pre-determined assumptions about what is 'genuine' decision-making agency, I opted to explore overall decision-making processes taking place within the household. This explicitly includes the possibility of non decision-making, with men and women adopting local norms. Genuine norm-following by women and men is not an exceptional way of arriving at decisions, and it is particularly relevant in the context of empowerment research. Guarding particular 'areas of life' against individual male and female agency, and thus accepting 'taken-for-granted' norms as the guiding principle, is actually one of the most powerful mechanisms to enforce and fortify existing 'gendered' behaviour. Limiting the mapping of decision-making processes to only those cases where explicit decisions are made would consequently capture just a fraction of reality — and not necessarily the most important fraction.

9. See Kabeer (1999) on the different dimensions and notions of empowerment and Mayoux (1998) for a discussion in the context of microfinance programmes.
10. See, among others, Acharya and Bennett (1982); Allen and Straus (1984); Conklin (1988); Hashemi and Schuler (1994); Marshall and Woolley (1995); Pyke (1994); Safilios-Rothschild (1970); Vlassoff (1994); White (1984).

Against this background it is crucial to study decision-making in different areas separately rather than adding them all into one indicator. Which particular areas are relevant depends on the research setting. In this case, selection of areas was done on the basis of in-depth interviews with non-sample respondents and key persons during exploratory field visits.[11] The following seven areas were finally selected: ‘loan use’, ‘expenditure’, ‘money management’, ‘time and task allocation’, ‘kinship and family matters’, ‘agricultural business’ and ‘cottage industry’. For each of the seven areas, we asked ‘who decided’ about a number of well-defined decisions taken in the recent past, rather than questioning behaviour in overly general terms, in order to avoid socially desirable answering (Acharya and Bennett, 1982; White, 1984). Which particular decisions entered into each of the seven areas of decision-making was also largely determined by interviewing key persons and non-sample respondents.

All interviews were conducted in private, with female respondents and the researcher herself, accompanied by a male translator.[12] Answers were noted down literally, and were later coded by the researcher. After all the interviews had been completed, the answers were classified into four answering categories. We thus arrived at a categorical dependent variable, labelled ‘decision-making mechanism’ with four levels: ‘the wife’ (labelled hereafter ‘female decision-making’), ‘the husband’ (labelled ‘male decision-making’), ‘jointly/together’ (labelled ‘bargaining’) and ‘norm-following’. Identification of the first three categories and assigning the answers of respondents to one of these categories was straightforward and required little discretion: the category of ‘norm-following’ was less obvious as none of the interviewees literally used the notion of ‘norm-following’. Rather, they responded in such terms as: ‘nobody’; ‘it is natural, we do not need to take a decision on that’; ‘we do not really decide on that, we just do like we always have done’; ‘this is what we always do, we do not need to take a decision on this’; ‘it is normal, everybody/nobody does’. In a small number of cases (4 per cent of all decisions taken), other household members such as the grandmother,

11. Before the main empirical research that took place from July until October 1997, two exploratory field studies were performed (in 1996 and in 1994).
12. The latter was clearly not the best option but considerable efforts to find a female translator did not pay off. Female translators from outside the community were not willing to live in the research area, while possible candidates from inside the community were not allowed to travel within the research area. Test interviews with a number of beneficiaries further indicated that they considered individuals, both men and women, from inside the community ‘too close’ to reveal issues related to intra-household decision-making. Consultation with local key persons suggested that the best alternative was to select a clear outsider who was not considered to be threatening by the interviewees themselves or their husbands. This led us to work with a male Christian translator who was intending to become a priest.

grandfather, an older son or 'the group'[13] decided. Those cases were added to the category of 'norm-following'.

Table 3 gives an overview of the prevalence of different decision-making mechanisms used in different areas of household decision-making, sub-divided over several sub-samples. Before analysing the findings and trying to establish linkages with participation in different credit programmes, the following section sets out the survey design in more detail.

SURVEY DESIGN AND DATA

The best option for sound impact assessment is to use an experimental research design; however, the microfinance programmes under study were already operational which meant it was impossible to assign households randomly over the different programmes. One of the main problems resulting from this is the presence of pre-existing differences between participants in different programmes and between those who participate and those who do not participate at all. When those initial differences prove to be related to the dependent variables being studied, it becomes difficult to disentangle the effects of different credit programmes from those which may be accounted for by initial heterogeneity. Selection bias mainly results from (un)intentional selection processes by programme staff, programme location strategies, from participants' self-selection or through differential attrition (de-selection). In the context of our study, for instance, one might ask whether direct bank–borrower microfinance programmes are not located predominantly in cities and larger villages, ignoring the more remote areas. Particularly pertinent to this study is whether microfinance programmes that work through women's groups are not primarily targeting women who already have a higher stake in decision-making, which would explain the recorded outcomes at the level of decision-making agency.

While a selection bias may never be ruled out completely in a quasi-experimental design, different techniques have been elaborated over time to deal with selection bias (for an overview, see Rossi et al., 1999). Nowadays two-stage estimation procedures are increasingly used; these include the Heckman or the instrumental variable (IV) approach which first model selection and then integrate the results from the first round as a predictor in the final outcome model. Like other credit impact studies (such as Pitt and Khandker, 1998; Pitt et al., 1999), we were not able to identify valid (statistically significant) instruments that predict programme participation but do not at the same time predict decision-making processes — the outcome being studied. As two-stage models are less useful and — in cases where

13. The participation of the group in decision-making (in particular regarding 'loan use') is discussed in more detail below.

weak instruments are used and/or in the absence of large samples (see Bound et al., 1993; Stolzenberg and Relles, 1997) — may even adversely affect impact estimates rather than correcting them, we decided not to use them. As an alternative, we opted for a mixed strategy of 'constructed matching' during the design phase of the study complemented by statistical controlling at the time of data analysis.

Crucial for the correction of a selection bias is a good understanding of the subject being studied (in this case, decision-making agency), and of the potential selection processes at play, in order to identify the pertinent characteristics on which different groups of beneficiaries should be matched, or for which remaining differences should be statistically controlled. We therefore invested heavily in reviewing studies on the subject, and in the identification of eligible credit programmes. First, we selected credit programmes that were very similar in terms of target groups (particularly socio-economic and cultural background), selection processes and programme placement strategies. The sections below set out in more detail the different credit programmes selected, the research setting, the study population and the sample. Once the credit programmes and research setting had been selected and random samples drawn from membership lists, we collected pre-intervention data on a number of relevant household and individual-level background characteristics, as a kind of check for initial comparability among different sub-samples. We formally tested for any differences in background characteristics among the different sub-samples and controlled for the remaining differences in the regression analysis set out later in this article. Table 2 at the end of this section gives a profile of the different sub-samples and presents results from formal testing for differences. To further control the selection problem, we also explored the impact of longer group membership, one of the ways in which a selection bias has been accounted for in previous studies.

Selected Credit Programmes

In order to select appropriate microfinance programmes, an extensive number of programmes operating in southern India were reviewed, paying particular attention to their target group, their location strategy and their financial criteria set. We finally selected credit programmes that were operational in similar villages and cities, targeting the same socio-economic strata of households and using similar financial conditions and credit ceilings. The credit programmes selected diverge only in terms of the features that we wanted to test for. Table 1 gives an overview of the main characteristics of the different credit programmes and shows how each of the research questions breaks down into a comparison of the effects of two particular credit programmes.

Table 1. Overview of the Main Characteristics of the Five Credit Programme Variables and of the Research Questions

	FIVE CREDIT PROGRAMME VARIABLES				
CHARACTERISTICS	**I. IRDP Male**	**II. IRDP Female**	**III. TNWDP Myrada Young**	**IV. TNWDP Myrada Old**	**V. TNWDP Rido Old**
Gender of the beneficiary	Male	Female	Female	Female	Female
Delivery model	Direct bank-borrower	Direct bank-borrower	Intermediation	Intermediation	Intermediation
Name of the organizing NGO	Not applicable	Not applicable	Myrada	Myrada	Rido
Moment of credit receipt	1993–4	1993–4	1993–4	1990–1	1990–1
RESEARCH QUESTIONS	1. Effect of borrower's gender? II versus I				
		2. Effect of delivery model? III versus II			
			3. Effect of longer group membership? IV versus III		
				4. Effect of organizing NGO? V versus IV	

We selected the Integrated Rural Development Programme (IRDP) and the Tamil Nadu Women's Development Programme (TNWDP), both of which extend credit at an interest rate of 12 per cent per annum for productive activities to households below the poverty line who own a maximum of two acres of landholdings.[14] The IRDP is a nationwide credit-led poverty reduction programme which has been operating since 1978. It covers practically all Indian villages through the expanded networks of state banks. Under the IRDP scheme, men and women who live within households that figure on the 'poverty' list of the District Rural Development Agency (DRDA) can apply for finance from a bank that is participating in the IRDP. Decisions about loan approval are taken jointly by bank staff and the Block Development Officers (BDO). Of all beneficiaries, 30 per cent should be women. The TNWDP was developed as a joint initiative of the International Fund for Agricultural Development (IFAD), the Tamil Nadu government and a couple of non-governmental organizations (NGOs) to remedy the disappointing effects of the IRDP.[15] It started off in those districts of Tamil Nadu with the lowest scores on selected indicators of women's status (including educational attainment, literacy, maternal mortality, dependency upon agriculture for employment, percentage of scheduled caste and scheduled tribe in female population) — the districts of Dharmapuri, South Arcot and Salem. Within those districts the programme was implemented randomly and there is no evidence that it has been restricted to particular kinds of villages. The main innovative element in the TNWDP is the use of women's groups to channel individual loans, enterprise development training and social welfare services to group members. A crucial role is played by local NGOs who mobilize group members from among the poor, using techniques such as street theatre plays.[16] The same NGOs also act as financial and social intermediaries once groups are established.[17]

The NGOs involved in our research were the Mysore Resettlement and Development Agency (Myrada) and the Rural Integrated Development

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14. In 1989, households below the poverty line were identified as those whose annual household income was below Rs 6400; from 1996 onwards the cut-off point was Rs 11,000.
15. Different studies (Gaiha et al., 2001; Ghosh, 1998; IFAD, 1989; Mahajan and Ramola, 1996; World Bank, 1991) have highlighted the considerable mis-targeting of IRDP, the misuse of loans (on average 20 to 40 per cent), the extremely low repayment rates (on average 24 to 40 per cent) as well as the low percentage of beneficiaries (on average 28 to 35 per cent) who have been able to move above the poverty line.
16. Although group members who receive finance must still figure on the same DRDA-list of households living below the poverty line.
17. In an attempt to lower transaction costs further and to decrease default rates, the TNWDP increasingly shifts financial intermediation to groups themselves, keeping NGOs as social intermediaries only (IFAD, 1995). For a discussion about the financial and social intermediation of the Myrada/TNWDP programme, see Bennett et al. (1996).

Organization (Rido). NGOs are not necessarily homogeneous in size, organizational style and management structure, nor do they conceptualize group intermediation in the same way. We found that Myrada clearly had a more developed organizational and management structure than Rido: for instance, Myrada groups met once a week as compared to fortnightly meetings in Rido groups; Myrada also invested more in human resources building and transformation of women's groups into local actors of institutional change. In order to test whether longer group membership had additional effects on decision-making patterns, we included a membership duration variable. The highest variability in membership duration was found in the Dharmapuri District; this was the region where the TNWDP was first implemented and where groups were formed from 1990 until 1994.

Research Setting

Due to time and resource constraints we limited our research area to one particular block within Dharmapuri District — Morappur Block — where IRDP and TNWDP loans are extended through three bank branches of the Indian bank which apply credit programme regulations in a very similar manner and which are partly staffed by the same people. Morappur Block is an exclusively agricultural area; about 42 per cent of the population was identified as below the poverty line in 1991; Tamil is the dominant language.

Other authors (including Agarwal, 1994; Dasgupta, 1995) have studied differences in female autonomy within India along axes of region, religion, culture and socio-economic factors. South India,[18] predominantly characterized by the Dravidian culture, in general imposes fewer restrictions on female behaviour than northern regions where the Aryan culture is dominant. There is, for instance, more room for female mobility, 'purdah' (the strict confinement of women to the domestic sphere) is less widely practised, and marriage patterns diverge. Widow remarriage is less exceptional and there are fewer cases of female child marriage. In southern India marriage within one village (village endogamy) is more prevalent and marriages are often contracted among close kin, mostly between cross-cousins. This gives daughters more opportunity to maintain close relationships with their own natal kin and it influences the behaviour of parents towards their daughters throughout their childhood, as they are no longer considered to be only temporary household members. The impact of cultural factors is further strengthened by their interaction with economic factors. Female agricultural labour, for instance, is more common in the southern and eastern states,

18. While there is no agreement on the definition of the 'north' and the 'east' of India, most scholars agree on the definition of the 'south': it includes the states of Karnataka, Andhra Pradesh, Kerala and Tamil Nadu.

where rice is cultivated, than in the north-western states, where wheat is grown. However, any appreciation of women's position in the south should be set against a general background of female discrimination. Data from the National Information Centre (NIC) Dharmapuri show that even in the South Indian state of Tamil Nadu, fewer human capital goods are invested in girls, resulting in sex ratios and literacy rates below unity. In Morappur Block, for instance, the female/male literacy rate stood at about 60 per cent in 1991 and 74 per cent in 1996, while the sex ratio declined from a poor 971 females per 1000 males in 1981, to 935 in 1991 and 926 in 1996.

Study Population and Sample

In 1990–91, some 497 women living in the Morappur Block received a loan under the TNWDP. Of these, about 397 belonged to Myrada groups and 100 to Rido groups. In the period 1993–4, approximately 200 women received a loan through Myrada groups (MAHAM, 1996). Bank staff estimated that in the same period about 420 men and 180 women benefited from an IRDP loan. Before drawing random samples from the lists of beneficiaries that were made available at the banks, we further restricted the study population in two ways. First, in an effort to avoid the confounding (spill-over) effects of credit schemes, households that received credit through both IRDP and TNWDP were excluded. While there is mutual exclusivity between the different credit programmes, diffusion effects may take place in more subtle ways. Merely living in a village where women's groups are operational, without being a member oneself, could enable an individual to enjoy some of its benefit.[19] The study population of IRDP beneficiaries was thus restricted to villages where women's groups were not present but that were otherwise similar in outlook. In addition, the survey included a section on the degree of interface between non-TNWDP beneficiaries and women's groups. Second, we limited the study population to those households where, at the time of the survey, there were at least a husband and a wife present. From each of the five groups that were thus arrived at, we drew a random sample of fifty households. To take into account the possibility of non-response we originally selected sixty households at random from the bank lists. In order to diminish the threat of 'attrition bias' we made considerable efforts to diminish non-response. There is no evidence that households which did not respond were significantly different from those that responded.

Aside from the differential impact of different credit schemes we were also interested in their net impact. We consequently also included a comparison group of fifty below poverty-line households living in Morappur Block who

19. See, for instance, Hashemi and Schuler (1994) and Steele et al. (1998) on this phenomenon.

were eligible candidates for IRDP credit and TNWDP membership and who had no particular contact with TNWDP group members.

Once the six sub-samples of fifty households were selected, we made a detailed profile of each sub-sample on the basis of in-depth interviewing with the female respondents using retrospective questions on relevant household and individual-level background characteristics. The choice of characteristics to be included was led by studies of relevant secondary literature and by interviews with key persons and non-sample respondents at the time of the exploratory field studies. We formally tested for statistically significant differences among the different sub-samples using Chi-square test of correlation, one-way ANOVA and Kruskal Wallis.

Data in Table 2 confirm that the large majority of all households belonged to the most backward castes, were landless or owned a small piece of land. The majority of the women were illiterate, while on average about 50 per cent of the husbands could read and write. Marriage patterns were as expected and confirm south Indian practices: in about 75 per cent of cases, marriages were contracted among kin and in about 25 per cent of cases the marriage took place between partners who were living in the same village.

A more detailed analysis of the data shows a number of interesting patterns. The idea that TNWDP beneficiaries would initially score better on characteristics associated with greater participation in decision-making is not at all confirmed. On the contrary, access to an independent income, for instance, was substantially lower among TNWDP beneficiaries and clearly higher among IRDP female beneficiaries. Before their group membership TNWDP beneficiaries were more often confined to their own land or household, while IRDP female beneficiaries were more often engaged as wage labourers or were running their own business before they received credit. Interviews with bank staff suggested that their employment status might well explain why those women obtained an IRDP loan in the first place. This would be indicative of a selection bias on a clearly observable characteristic. Another interesting difference may be observed at the level of landownership. TNWDP beneficiaries were more likely to belong to landed households, while the opposite was true for IRDP female beneficiaries; they were likely to belong to landless households, but if the household owned some land, it was more likely to be registered in their name. Our data seem to support evidence from previous studies (such as Acharya and Bennett, 1982; Agarwal, 1994) that indicate an inverse relationship between a women's position inside and outside the household. In general, households that are better off and have a higher position within society tend to apply gender norms more strictly. Data from interviews also indicated that the majority of the TNWDP beneficiaries did not decide for themselves to become a member of a women's group: most of them had actually been 'forced' by their husbands who had been attracted themselves by the selective incentive of future credit receipt. Statistially significant differences

Table 2. Descriptive Statistics on Selected Background Characteristics

	IRDP Male	**IRDP Female**	**TNWDP Myrada Young**	**TNWDP Myrada Old**	**TNWDP Rido Old**	**Control Group**
Household-level background characteristics						
Caste						
% most backward	92	82	94	86	84	84
% scheduled	8	18	6	14	16	16
Household landownership (initially)						
% yes	56	46	66	58	62	46
% no	44	54	34	42	38	54
Mean quantity of land owned (initially)	2.12 (1.6)	1.91 (2.1)	1.98 (1)	1.75 (1.2)	1.83 (1.12)	1.97 (1.5)
Mean number of male children (actually)	1.7 (2.3)	1.6 (2.4)	1.7 (3.1)	1.9 (2.9)	1.6 (2.2)	1.6 (2.1)
Mean number of female children (actually)	1.3 (2.6)	1.4 (3.1)	1.6 (3.4)	1.7 (3.2)	1.3 (2.4)	1.4 (2.8)
Kinship relationship between husband and wife before marriage						
% yes	72	76	70	72	74	74
% no	28	24	30	28	26	26
Village endogamy of marriage						
% yes	32	38	30	34	36	32
% no	68	62	70	66	64	68
Individual-level background characteristics						
Mean age of female respondents (years) (actually)	33 (10.8)	36 (9.5)	36 (8.3)	38 (8.9)	37 (7.5)	33 (10.1)
Mean difference in age between husband and wife (years)	6 (3.2)	5 (2.4)	6 (4.8)	6 (3.6)	4 (2.9)	5 (2.3)
Literacy status of female respondent (initially)						
% yes	30	12	12	20	30	28
% no	70	88	88	80	70	72
Literacy status of husband (initially)						
% yes	64	56	46	54	50	54
% no	36	44	54	46	50	46
Landownership by the female respondent (initially)						
% yes	4	12	8	8	6	4
% no	96	88	92	92	94	96
Independent income earned by female respondent (initially)						
% yes	38	44	32	36	36	38
% no	62	56	68	64	64	62

Notes:
1. Figures in parentheses are standard deviations.
2. Chi-square tests of association were performed and Phi coefficients were calculated for all categorical variables. Null hypothesis of 'no relationship between particular background characteristic and sub-sample' was rejected for 'initial landownership' ($p = 0.000$, Phi $= 0.357$), for 'literacy status of female respondent' ($p = 0.011$, Phi $= 0.223$), 'literacy status of husband' ($p = 0.000$, Phi $= 0.331$), 'initial landownership by the female respondent' ($p = 0.087$, Phi $= 0.194$), 'independent income earned by the female respondent (initially)' ($p = 0.016$, Phi $= 0.215$). We failed to reject the null-hypothesis at the 10% level for the other categorical variables.
3. One-way ANOVA were performed for 'mean age of female respondents (years)' and 'mean quantity of land owned (initially)'. Null-hypotheses of no statistically significant differences could not be rejected at the 10% level.
4. For the remaining background characteristics, we performed Kruskal-Wallis as the conditions for one-way ANOVA were violated. For none of these characteristics could the null-hypothesis be rejected at the 10% level.

among sub-samples summarized at the bottom of Table 2 were accounted for by entering those variables as control variables when performing regression analysis to explore impacts of different credit schemes on decision-making processes.

FINDINGS AND ANALYSIS

This section starts with a brief description of our raw research findings and focuses in particular on differences in decision-making patterns across different areas of decision-making. Observational differences in decision-making patterns among the different sub-samples are then analysed more systematically, looking especially at whether these differences are related to credit receipt under different programmes. Loglinear analysis then provides us with insights on the importance of the borrower's gender, financial and social group intermediation, membership duration and organizational practice. Table 4 summarizes results of loglinear regression,[20] while Figures 1a to 1g in the Appendix illustrate marginal effects of different credit programmes on the predicted probability of using a particular decision-making mechanism.

Decision-making Patterns in Different Areas of Decision-making

Table 3 gives an overview of the prevalence of different decision-making mechanisms for the seven areas of decision-making, subdivided over the six sub-samples. Despite the fact that decision-making patterns differ among the sub-samples, it is possible to demarcate a number of general patterns that differentiate areas of decision-making. Although decisions about expenditure are often arrived at through bargaining (about 39 per cent), men and women do frequently take decisions alone, in about 25 and 28 per cent of the cases respectively. Individual decision-making is largely absent in the field of time and task allocation where norm-guided behaviour is dominant. Decisions about whether to pool resources, who will keep and manage the purse are mostly taken by husbands alone (about 74 per cent of cases), whereas decisions about a cottage industry business reside mainly within either the male or the female sphere (each about 28 per cent), largely depending on who runs the business. Kinship matters and agricultural business issues are mostly decided upon jointly but the difference with other decision-making mechanisms is not striking. Norm-following and decision-making by others are the predominant ways of arriving at decisions regarding loan use matters. This is at first sight a surprising finding: observations during our field

20. For an overview of full regression results, see Holvoet (1999).

Table 3. Prevalence (%) of the Use of Different Decision-making Mechanisms in Seven Areas of Decision-making, Sub-divided over the Six Different Sub-samples

	DECISION-MAKING MECHANISM			
AREAS OF DECISION-MAKING	**Female Decision-Making**	**Male Decision-Making**	**Bargaining**	**Norm-Following**
Loan Use (total), N (number of decisions taken) = 1605	**16.8**	**17.8**	**25.1**	**40.3**
IRDP Male	0.9	38.8	18.6	41.6
IRDP Female	7.9	28.4	16.1	47.6
TNWDP Myrada Young	20.9	8.4	30.3	40.3
TNWDP Myrada Old	31.3	7.7	28.2	32.8
TNWDP Rido Old	22.8	5.6	32.2	39.4
Expenditure (N = 1144)	**27.8**	**24.5**	**39.2**	**8.5**
Control Group	18.8	36.5	29.7	15.1
IRDP Male	14.1	27.6	53.6	4.7
IRDP Female	23.9	29.8	34	12.2
TNWDP Myrada Young	29.1	15.3	50	5.6
TNWDP Myrada Old	49.4	11.7	31.7	7.2
TNWDP Rido Old	32.7	25.5	35.7	6.1
Money Management (N = 593)	**10.5**	**74.2**	**5.2**	**10.1**
Control Group	3	86	1	10
IRDP Male	0	94	4	2
IRDP Female	1	69	4	26
TNWDP Myrada Young	12	74	6	8
TNWDP Myrada Old	27	55	11	7
TNWDP Rido Old	20.4	66.7	5.4	7.5
Kinship and Family Matters (N = 4266)	**15.5**	**18.5**	**34**	**32**
Control Group	5.5	22.2	39.4	32.9
IRDP Male	8.9	23.6	37	30.5
IRDP Female	10.7	20.9	29.4	39
TNWDP Myrada Young	16.7	11.1	36.7	35.6
TNWDP Myrada Old	29	10.1	30.2	30.6
TNWDP Rido Old	21.6	22.8	31.2	24.4
Time and Task Allocation (N = 4506)	**5.5**	**19**	**11.4**	**64.1**
Control Group	1.8	26.4	5.7	66.1
IRDP Male	1.5	24.8	9.3	64.4
IRDP Female	2.2	18.7	8.9	70.2
TNWDP Myrada Young	8.8	13.2	16.6	61.4
TNWDP Myrada Old	12.5	15.3	15.5	56.7
TNWDP Rido Old	5.6	16.3	12	66.2
Cottage Industry (N = 285)	**29.5**	**25.6**	**21.4**	**23.5**
Control Group	27.3	27.3	21.2	24.2
IRDP Male	9.7	45.6	18.4	26.2

Table 3. (continued)

IRDP Female	13.9	25	30.6	30.6
TNWDP Myrada Young	41.2	23.5	5.9	29.4
TNWDP Myrada Old	56	2.2	24.2	17.6
TNWDP Rido Old	40	40	20	0
Agricultural Business (N = 707)	**19.5**	**25.3**	**30.7**	**24.5**
Control Group	1.6	62.5	10.9	25
IRDP Male	5.3	43.4	28.9	22.4
IRDP Female	12	46.7	18.7	22.7
TNWDP Myrada Young	24.9	13	40.5	21.6
TNWDP Myrada Old	29.2	23.3	30.8	16.7
TNWDP Rido Old	23	10.2	33.2	33.7

research suggest that in the case of TNWDP-beneficiaries, it may be explained by the importance of the group in the credit screening and monitoring procedure. The group has, for instance, a considerable influence in decision-making about loan use, marketing and repayment. This shift in decision-making power from the household to the group has also been noted by Zaman (2000) in his study on the poverty and vulnerability impact of the Bangladesh Rural Advancement Committee (BRAC).

Regression Analysis

In order to determine and compare the impact of different credit programmes on the probability that a particular decision-making mechanism is used, we specified a multinominal logit model of the following form (Liao, 1994):

$$\log[prob(y = j)/prob(y = J)] = \sum_{k=1}^{K} \beta_k x_k$$

where y refers to the categorical dependent variable 'decision-making mechanism' with 4 categories: $j = 1$ for female decision-making, $j = 2$ for male decision-making, $j = 3$ for bargaining and $j = 4$ for norm-following. The category 'norm-following' has been selected as the base-category (J). As $[prob(y = j)/prob(y = J)]$ may be rewritten in the form of one single summary statistic through the use of odds, we arrive at:

$$\log O_j = \sum_{k=1}^{K} \beta_k x_k$$

where O_j refers to the probability that decision-making mechanism j ($j = 1$ to $J - 1$) is used versus the probability that norm-following is used. We thus obtain a set of $J - 1$ equations where the log odds of using a particular decision-making mechanism is expressed as a linear function of a set of explanatory variables x_k and where the coefficients β_k highlight the partial effects of variables x_k on the log odds. As the effect of the independent variables on decision-making patterns is more readily interpretable in terms of odds and odds ratios[21] rather than log odds, Table 4 gives odds ratios that are based on the multiplicative form of the model.[22] An interpretation in terms of probabilities is given in Figures 1a to 1g in the Appendix, where marginal effects of different credit programmes on the predicted probability of using a particular decision-making mechanism are displayed.[23]

Impact of the Borrower's Gender

Comparing the impact of IRDP Male and IRDP Female illustrates that channelling credit to women enables them to obtain a substantially higher stake in decision-making matters that are directly related to the loan use itself. Compared to wives of IRDP Male beneficiaries, women who receive credit in their own name are about seven times more likely to decide alone rather than to follow norms. However, they are not able to translate the one-time financial input into a longer-term and more deeply entrenched impact on decision-making in other areas. This is directly visible from Appendix Figures 1b to 1g, which indicate that marginal effects of IRDP Female and IRDP Male are generally fairly close to each other and to 0. For a number of areas — family and kinship matters, agricultural business and cottage industry — channelling credit directly to women instead of to their husbands increases the probability of their participation at decision-making, but the differential effects of credit in the hands of men and women are not substantial enough to be significant.

We further note that men who received credit themselves are more likely to take decisions alone than to follow norms (Female IRDP/Male IRDP odds ratios for male decision-making versus norm-following are smaller than unity). This differential effect is in most cases due to an insignificant increase

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21. Odds ratios summarize in one statistic the effect of a particular level of the independent variable versus another level of the same independent variable. We have used odds ratios to compare effects of different credit programmes.

22. The multiplicative form of the model $O_j = e^{\sum_{k=1}^{K} \beta_k x_k}$ is arrived at by exponentiating both terms of the second equation.

23. Marginal effects of credit programmes (x_k) on predicted probabilities of using a particular decision-making mechanism j, are calculated as follows (Liao, 1994):

$$\frac{\partial prob(y=j)}{\partial x_k} = P_j(\beta_{jk} - \sum_{j=1}^{J-1} P_j \beta_{jk}), \text{ where } P_j = prob(y=1) = \frac{e^{\sum_{k=1}^{K} \beta_{jk} x_k}}{1 + \sum_{j=1}^{J-1} e^{\sum_{k=1}^{K} \beta_{jk} x_k}}$$

Table 4. Importance of the Borrower's Gender, Group Membership, Membership Duration and Organizational Practice: Summary of Results

	Importance of Borrower's Gender		**Importance of Group Membership**	
	Null-hypothesis: effect of IRDP Female = effect of IRDP Male		**Null-hypothesis: effect of TNWDP Myrada Young = effect of IRDP Female**	
	Failure to reject	**Rejection**	**Failure to reject**	**Rejection**
Female Decision-Making/Norm-Following	EXP (0.919) FAMKIN (1.407) TIMTASK (1.078) AGRBUS (2.35) COTIND (1.171) MONMAN (1.948)	LOAN (7.35)**	EXP (1.866) FAMKIN (1.931) AGRBUS (2.311) COTIND (3.082)	LOAN (3.162)** MONMAN (80.31)** TIMTASK (6.073)**
Male Decision-Making/Norm-Following	EXP (0.757) TIMTASK (0.717) AGRBUS (1.061)	MONMAN (0.058)** LOAN (0.642)* FAMKIN (0.696)* COTIND (0.475)*	EXP (0.751) TIMTASK (0.803) COTIND (0.968)	LOAN (0.349)** MONMAN (2.966)* FAMKIN (0.671)* AGRBUS (0.292)**
Bargaining/Norm-Following	EXP (0.502) FAMKIN (0.731) TIMTASK (1.052) AGRBUS (0.639) COTIND (1.581) LOAN (0.757)	MONMAN (0.076)**	EXP (1.836) FAMKIN (1.296) AGRBUS (2.288)	LOAN (2.215)** MONMAN (2.855)* TIMTASK (2.217)** COTIND (0.200)**

Table 4. (continued)

	Importance of Membership Duration		**Importance of Organizational Practice**	
	Null-hypothesis: effect of TNWDP Myrada Old = effect of TNWDP Myrada Young		**Null-hypothesis: effect of TNWDP Rido Old = effect of TNWDP Myrada Old**	
	Failure to reject	**Rejection**	**Failure to reject**	**Rejection**
Female Decision-Making/ Norm-Following	EXP (1.716) MONMAN (3.568) FAMKIN (2.089) TIMTASK (1.394) AGRBUS (1.760) COTIND (3.035)	LOAN (1.84)*	EXP (0.719) MONMAN (0.491) FAMKIN (0.756)	LOAN (0.609)* TIMTASK (0.369)** AGRBUS (0.311)*
Male Decision-Making/ Norm-Following	LOAN (1.113) EXP (0.450) MONMAN (0.817) FAMKIN (0.862) TIMTASK (1.307) AGRBUS (2.338)	COTIND (0.149)**	LOAN (0.613) EXP (3.023) MONMAN (1.177) TIMTASK (0.907)	FAMKIN (2.798)** AGRBUS (0.215)**
Bargaining/Norm-Following	LOAN (1.144) EXP (0.415) MONMAN (2.176) FAMKIN (0.862) TIMTASK (1.146) AGRBUS (0.997) COTIND (4.205)		LOAN (0.948) EXP (1.529) MONMAN (0.436) FAMKIN (1.412) AGRBUS (0.535)	TIMTASK (0.600)*

Notes:

a. T-tests were performed: * differences significant at 0.05; ** differences significant at 0.01.

b. The following abbreviations have been used: 'loan use' (LOAN), 'expenditure' (EXP), 'money management' (MONMAN), 'family and kinship matters' (FAMKIN), 'time and task allocation' (TIMTASK), 'agricultural business' (AGRBUS); 'cottage industry' (COTIND).

in IRDP male beneficiaries deciding alone, coupled with an insignificant decline in sole male decision-making when credit is channelled to women.

Impact of Women's Group Membership

Whereas direct credit delivery to women by itself is not sufficient to produce a substantial impact on decision-making patterns, the opposite is true when credit is channelled through women's groups and combined with technical and social awareness training. Comparing effects of IRDP Female and TNWDP Myrada Young credit schemes shows major shifts in decision-making patterns from norm-following and men deciding alone towards more bargaining and women deciding alone. The effects of group membership are most striking in the areas of loan use, money management and time and task allocation whereas no substantial differences in decision-making patterns are recorded for decisions regarding expenditure. These differences in results for different decision-making domains are not surprising since money management, time and task allocation and loan use are the areas where norm-following and sole male decision-making were most dominant. There was, consequently, more room for changing patterns in those areas and any shifts towards more female involvement also become immediately apparent. This is different for areas such as expenditure where women were already more intensively involved through joint or separate female decision-making. Direct observation and interviews with women's groups suggest that conclusions regarding loan use matters should be put into perspective. Although a number of group members stated during the individual interview that they took all decisions regarding the different aspects of loan use themselves, there is clear evidence that the group had a large influence throughout the whole process.

When we tried to ascertain which particular features of the TNWDP scheme could be responsible for the striking effects on intra-household decision-making, women themselves referred to a number of factors. They pointed out how important group membership was for the effective performance of the productive activity. Under IRDP, there is no assistance or effective supervision over loan use, even though the need for this is explicitly mentioned in the IRDP Guidelines (Gaiha et al., 2001). A considerable proportion of IRDP beneficiaries (42 per cent of men and 60 per cent of women) revealed that they used their loans for consumptive and emergency purposes such as health care expenditures, dowry payment or repayment of earlier debts, while TNWDP beneficiaries had recourse to the group fund, which they considered as a kind of lender of last resort. They further indicated that the group fund and their individual savings account made it possible for them to protect part of their income from men's leverage and provided them with longer-term access to financial resources, thereby increasing their position within the household. They also stressed the importance of the 'linkage' project whereby women's groups started engaging in extra-household bargaining with more heterogeneous bodies of public decision-making such as panchayats, dairy co-operatives, forest and watershed committees, village health committees and teacher–parent associations. In their opinion, extra-household bargaining in the community increased their individual leverage in decision-making within the household. Similar evidence has been reported by Agarwal (1994, 1997) and Kabeer (1995) who both indicate that extra-household bargaining and access to intangible resources outside the household tend to increase an individual's threat point within the household. Women further emphasized that participation in decision-making in the different public bodies was not only important for themselves but also for their families because, given their low socio-economic status, both men and women were largely absent from these public arenas of community decision-making.

The Importance of Longer Group Membership

Examining the existence of differential effects when women were members of a Myrada women's group for a longer period largely strengthens the aforementioned conclusions. Shifts in decision-making patterns become even more striking: marginal effects on male decision-making and norm-following are in most cases negative, while the effect on female decision-making is positive. However, as is evident from Table 4, the additional effects of longer group membership on relative probabilities are mostly not substantial enough to be statistically significant. This is not really surprising as it is difficult to provoke further substantial changes in decision-making patterns once group membership has already shifted decisions from norm-following and male decision-making towards the bargaining area and the female sphere. There is a noteworthy exception in the case of loan use matters where we did notice a significant further shift from norm-following to women deciding alone, with probabilities decreasing and increasing further by 7.7 per cent and 10.1 per cent respectively. However, this does not provide any evidence to support the hypothesis that being a member for a longer period creates additional effects, as women belonging to all kinds of groups generally received their loans at the moment of joining the group. The fact that a higher percentage of Myrada Old group members (about one third against one fifth in the case of Myrada Young beneficiaries) take decisions alone regarding their loan use may rather be attributed to the choice of the productive activity: about 40 per cent of members used their loans to start a small cottage business, a field in which it is more straightforward for women to take decisions alone than in agricultural business.

The Importance of Organizational Practice

The results clearly show that the probability of women taking decisions alone was more strongly influenced by membership of a Myrada group than by membership of a Rido group (marginal effects on female decision-making are all larger for TNWDP Myrada Old than for TNWDP Rido, except for the case of money-management where they are about the same). Odds ratios in Table 4 indicate that effects regarding the relative prevalence of bargaining and men deciding alone are less uni-directional. For most decision-making areas we notice that the shift from norm-following towards bargaining is more striking when beneficiaries are members of Myrada groups (TNWDP Rido Old/TNWDP Myrada Old odds ratios for bargaining versus norm-following are smaller than unity), the effect being particularly apparent in the case of time and task allocation. For a number of other areas, such as expenditure and kinship matters, however, the opposite is observed. This may be explained by the fact that for these items Rido membership induced a shift from norm-following and male decision-making to bargaining whereas Myrada membership pushed issues further into the female sphere. Our data further suggest that more frequent meetings, more intensive training and more investment in building groups create more additional effects than longer group membership (differential effects between TNWDP Rido Old and TNWDP Myrada Old are more substantial than among the latter and TNWDP Myrada Young).

CONCLUSION

Evidence to date is not conclusive about the impact of microfinance on women's empowerment. While some evaluations are positive about the capacity of microfinance to empower women others indicate that microfinance reinforces existing gender imbalances. In their attempt to remedy the adverse effects and to increase the empowerment potential of microfinance, several researchers have identified potential 'success' features in delivery models and lending technologies. It is generally assumed that integrated packages have an advantage over minimal credit, while financial and social group intermediation is thought to have more empowering effects than direct bank–borrower individual lending. This article reports on tests of the impact of slightly diverging credit programmes on one dimension of empowerment — 'decision-making agency' — an aspect that is prevalent in most empowerment research. This research is not based on pre-determined assumptions about 'genuine' agency, but maps overall decision-making processes within households. Starting from the idea that non decision-making, with women and men adopting norm-guided behaviour, is relevant for the underlying research, we have also captured absence of any agency. Added to this is the observation that decision-making patterns are not uniform for different areas of decision-making. We have thus explored decision-making processes in different areas separately and identified whether men or women took decisions alone, whether they arrived at decisions through bargaining or whether they just followed norms. We subsequently analysed and compared how different credit programmes impinge on those decision-making patterns.

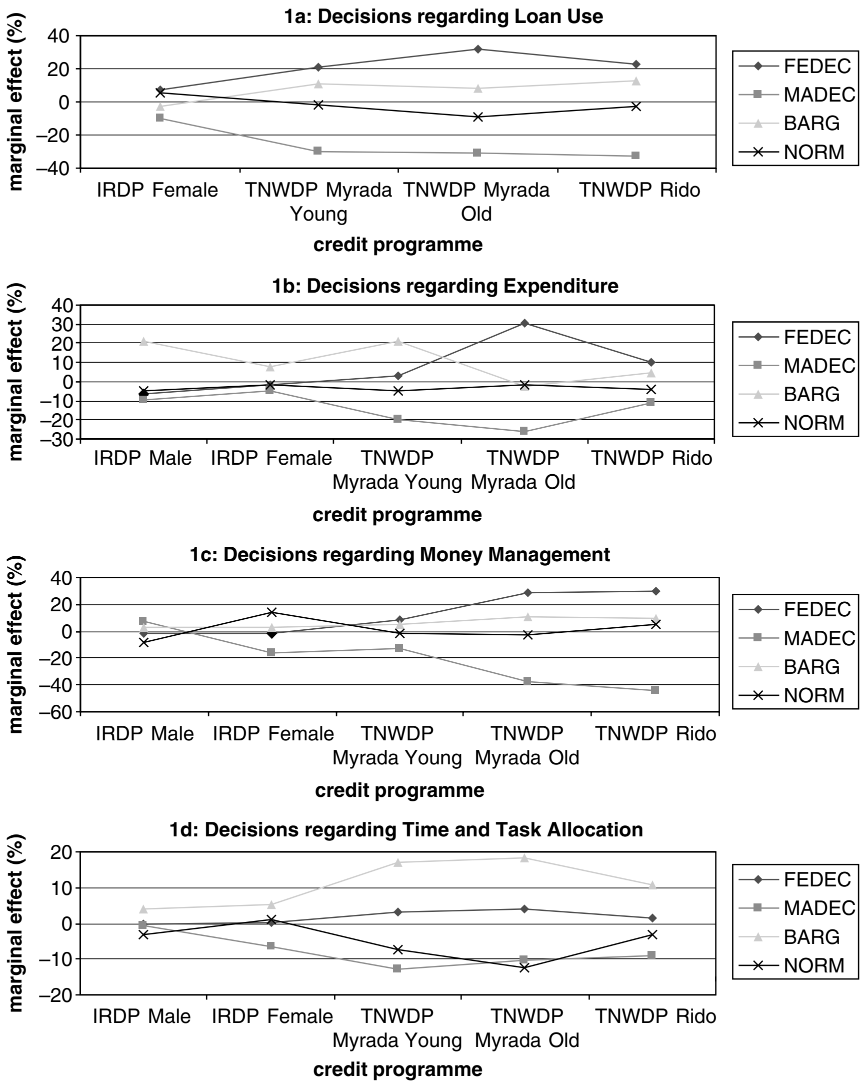
Data from our South Indian survey suggest that the way in which direct bank–borrower minimal credit enters the household is not very relevant for decision-making patterns. Women gain a higher stake in matters directly related to the loan use, but they are not able to translate this into a more substantial involvement in other domains of household decision-making. When loans are channelled through women's groups and combined with more investment in social intermediation, substantial shifts in decision-making patterns do emerge. There is, overall, a remarkable shift from norm-following and male decision-making to more bargaining and sole female decision-making. These effects are even more striking when women have been members of a group for a longer period and in particular when more attention is given to genuine social intermediation.

In terms of which particular features in group-based lending are most important, loanees themselves suggest that peer pressure and the availability of a group fund, which they see as a lender of last resort for consumptive and emergency purposes, increased the probability that the loans were effectively used for the intended productive purpose. They also felt that their position in the household had improved as they had secured access to long-term financial resources through their personal savings account and the group fund. Social group intermediation had further gradually transformed groups into actors of local institutional change. As such they were increasingly involved in extra-household bargaining with the community, thereby strengthening their individual fall-back position within the household.

In a context of increasing donor funds being channelled into microfinance programmes, it is important to put into perspective the assumption that any microfinance programme empowers women. Our research findings indicate that intensive social group intermediation, particularly, raises a programme's potential to increase women's decision-making agency. Given the growing consensus on the importance of the female voice in household decision-making for overall economic and human development, our findings suggest one possible route for increasing female leverage.

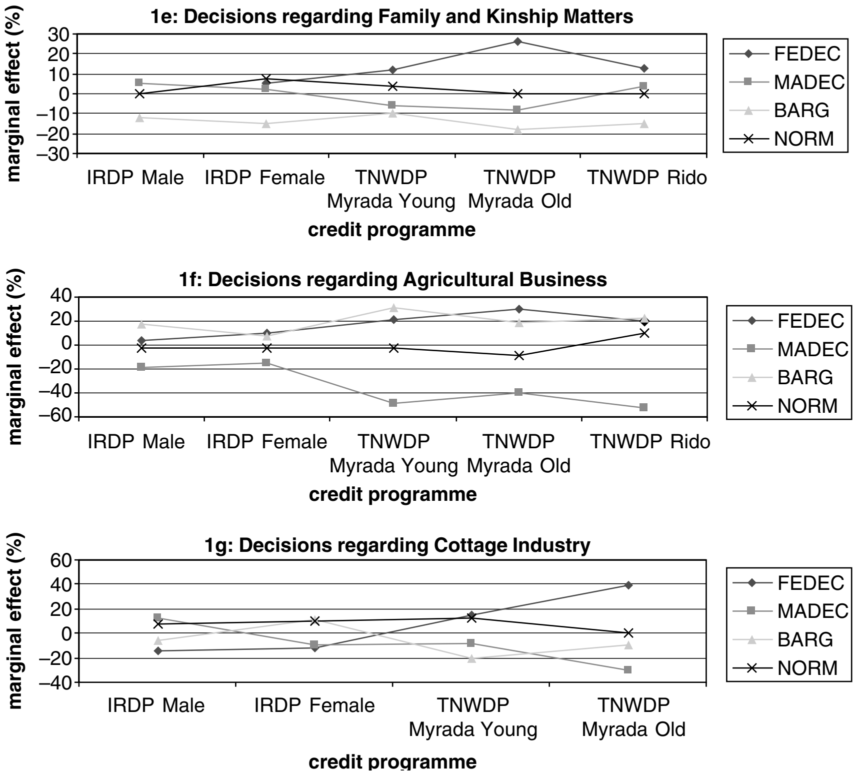
APPENDIX

Figures 1a–1g. Marginal Effect (%) of Credit Programmes on the Predicted Probability of Using a Particular Decision-making Mechanism in Household Decisions[1]



Note:
[1] In 1a, the different credit programmes are contrasted to IRDP Male. In 1b to 1g, different credit programmes are contrasted to Control Group. In calculations of marginal effects of credit programmes all other independent variables have been set at their sample mean.

Figures 1a–1g. (Continued)



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