Studying Group Dynamics : An Alternative Analytical Framework for the Study of Microfinance Impacts on Poverty Reduction

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Abstract

Group Dynamics have been largely neglected when the impacts of microfinance on poverty reduction are assessed. This paper presents an analytical framework in which the study of group dynamics is central and new channels of impact effects on the individuals participating in microfinance schemes, their households, enterprises and communities are assessed. Four potential outcomes of this fresh approach to the analysis of poverty impacts are argued; they may have dramatic implications for the way we look at the effectiveness of microfinance today.

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JEL codes: G14, G23, G32, O12, O17, O54

Introduction

The dynamics of group-lending microfinance schemes have traditionally been studied from the lenders' viewpoint, focussing on determining the factors which contribute to high loan repayments. Impact studies of microfinance on poverty reduction, on the other hand, have concentrated on assessing the effects of microfinance programmes on borrowers as individuals and as members of their households and enterprises, largely overlooking the effects of group dynamics on poverty reduction. The process through which group members interact, though, cannot be assumed to be neutral in regard to impact effects; it can bring about potentially significant costs and benefits to group members that would affect their behaviour and the poverty-reduction strategies that they decide to undertake in order to overcome riskiness, vulnerability, voicelessness, powerlessness and isolation. To substantiate this argument, this paper presents an alternative conceptual framework to the study of microfinance impacts on poverty reduction, focussing on the analysis of group dynamics and the effects of these on ultimate impacts on individuals, households, enterprises and community at large.

Theories of imperfect information help explain why the poor may be excluded from financial markets, as problems of adverse selection and moral hazard arise (Stiglitz *et al* 1981). Recent theoretical studies on group-lending schemes look at how these problems can be overcome. Ghatak (1999), building on work by Varian (1990) and Becker (1991), studies the problem of adverse selection and concludes that a self-selection process leads to a positive assortative matching, i.e. group self-select members of the same risk type, forming homogeneous groups. Building on pioneering work by Stiglitz (1990), Banerjee *et al* (1994), Besley *et al* (1995), Conning (1996), Madajewicz (1998) and Armendariz (1999) study the virtues of peer-monitoring in resolving problems of moral hazard and costly enforcement. They look at the incentives and monitoring structures of group-lending schemes, and find that a right combination of social sanctions and benefits can lead to high loan repayments.

Two problems arise when applying these theoretical models to the study of poverty impacts: (1) the assumptions underlying the models; and (2) the relative weight of costs and benefits. The formation of homogeneous groups assumes that members have perfect information about one another, or that they can raise this information costlessly. This is an obvious limitation to the understanding of how groups form in reality and, hence, the present paper rejects this assumption and takes as a starting point the proposition that potential members do not have perfect information about each other's characteristics and that raising that type of information is costly. This more realistic approach leads to the following set of questions.

(1) Does the formation of groups lead to positive assortative matching as predicted by Ghatak and other theorists? If the answer is no, then:
(2) How does it affect the evolution of intra-group interactions, and the performance of monitoring, auditing, and enforcement of contracts?
(3) Who is included and excluded from groups? Why? Does this lead to an ex-post positive assortative matching? Of what sort?
(4) How do additional incentives structures, collateral substitutes, monitoring systems, and other microfinance organisation (MFO) features influence group behaviour?
(5) To what extent do MFO staff influence group behaviour? How, why and to what effect?

To the extent that an imperfect information environment may lead to the formation of heterogeneous groups, the evolving interaction within group dynamics is most likely to lead to the exclusion of some members and the inclusion of others. The reasons behind membership fluctuations will be related to how members perform group duties (e.g. monitoring) within an imperfect information environment, the dynamic costs and benefits of participating in the groups, and the bargaining power of individual members. Contrary to theoretical models, the relative weight of benefits and social sanctions is essential to the proposed analytical framework. For theoretical models, this relationship is not relevant as long as it does not deter members from taking part in the group. For the present paper, benefits and sanctions can produce significant effects, which may not become evident in the short term so that they would not deter members from participating in groups but the long-term consequences of those impacts may be disastrous for poverty reduction. Moreover, there are additional activities that microfinance organisations oblige group members to fulfil in order to remain part of the microfinance programme, e.g. compulsory meetings. Equally, MFOs offer additional non-financial services that influence group dynamics, e.g. training courses. These considerations lead to the final set of research questions that the present conceptual framework seeks to help resolve.

(1) What are the group's main duties/activities and the costs and benefits (or incentives/ disincentives) involved in group dynamics?
(2) How do group dynamics influence the path by which impact effects on poverty-reduction materialise?
(3) Who benefits and who does not as a result of the influence of group dynamics on members' behaviour and their poverty-reduction strategies?
(4) How do intermediate impacts affect group dynamics, which in turn affect ultimate impact effects?
(5) What are the impact effects on key variables at the individual, household, enterprise and community levels?
(6) To what extent can the analysis of group dynamics serve as an early warning system for the implementing MFO to modify policies and practices in order to prevent and mitigate potential negative impacts?

With these research questions in mind, this paper develops an analytical framework that places the study of group dynamics within a broader model of impact chain (section 1) and further elaborates details of the elements to be considered for an in-depth analysis of group dynamics (section 2) and their influence in determining ultimate impact effects on members, their households and enterprises, and on community-based organisations that gave origin to microfinance groups (section 3 and 4). Concluding notes are outlined in section 5.

1. Model of impact chain

The proposed conceptual model of impact chain improves on existing knowledge in three distinct aspects (see figure 1). Firstly, it presents a *dynamic* understanding of the impact process, as it portrays a continuous path of mutually influencing effects between the group dynamics and the poverty impacts. Secondly, it highlights the underlying *causes* of impacts, tracking and elucidating how changes in people's behaviour and their poverty-reduction strategies determine the ultimate impacts on poverty. Thirdly, it brings to light *ex-post determinants* of impacts as it links poverty impacts with contract compliance and helps understanding of how the resulting effects on group dynamics feed back into the financial institution which, in turn, modifies its policies and practices, further affecting group dynamics and poverty impacts.

In this dynamic process, there is a two-way channel of influence between group dynamics and poverty impacts whereby intermediate impacts affect group dynamics via the extent of contract compliance that members accomplish. In this process, the MFO may change its policies and practices in order to steer group behaviour, further affecting group dynamics and poverty impacts. The dynamic impact chain that this model portrays must not be understood as set in a vacuum but as embedded in social, economic, and cultural structures. Group behaviour is hence influenced by cultural attitudes, power structures and evolving risks, constraints and opportunities that arise during the life of the group. The present analytical framework is, therefore, concerned with assessing the impacts of microfinance features on group and members' behaviour, their poverty-reduction strategies and the ultimate impacts on individuals, households, enterprises and community-based networks that give groups origin, in a specific social and historical context.

The model of impact chain begins with the microfinance organisation (MFO) setting the terms and conditions of financial contracts and staff performance-related incentives within the prerogatives of its governance structure and policies on poverty reduction and financial sustainability. As most MFOs rely on external funds to cover part of their institutional costs, donor policies on poverty reduction and financial sustainability influence MFO internal rules and regulations. Issues of eligibility criteria (of group members and MFO employees) and policies on targeting specific segments of the population are central to the analysis at this level.

Assuming imperfection in information amongst potential members, the model centers the study of group dynamics on determining how groups form, evolve and transform over time, and, in this way, on identifying the underlying causes of poverty impacts. For it is within groups that members interact with one another and with MFO officers to raise relevant information, perform the group's duties of screening, monitoring, auditing, enforcement, and group strengthening, and, as groups develop, members' perceptions and attitudes towards preferred strategies to attack poverty change, leading to potentially dramatic ultimate impact effects.

The evolving social interactions within groups affect members' behaviour as their attitudes towards risks, cooperation and private rent-seeking become heavily influenced by those of their group colleagues and MFO officers. These changes in members' behaviour further influence household dynamics, decision-making processes within members' own individual small enterprises, and community relationships. Poverty-reduction strategies are consequently reassessed at all levels and this is reflected in a continuous adjustment of decisions relating to risk management, coping with risk, negotiation and conflict resolution methods. The model anchors the analysis of causes of impacts into these four broad areas of poverty-reduction strategies (i.e. risk management, risk coping, conflict management, and conflict resolution), which eventually resolve larger issues of riskiness, vulnerability, voicelessness, powerlessness and isolation. Specific identifiable poverty-reduction strategies at five levels (group, individual, household, enterprise, and community) are described in section 3. The crucial point to make at this stage is that poverty impacts of microfinance have subtle but palpable impacts on behavioural preferences and on choices of poverty-reduction strategies that are the fundamental causes of ultimate impacts.

Renewed poverty-reduction strategies are put into action in the context of an ever-changing environment. The probability of implemented strategies resulting in positive or negative ultimate poverty impacts depends on the predictable and unpredictable risks, constraints and opportunities which arise during the time gap between executing poverty-reduction strategies and reaping the returns of these actions. Shocks can hit households and communities in ways that may suddenly wipe out assets. Lack of specific skills can constrain members from reaping expected returns. New investment opportunities may tempt households into diverting resources into highly risky projects that may endanger the stability of their livelihoods.

Ultimate impacts on poverty are the tangible and intangible effects of microfinance-induced strategies that groups, members, households, enterprises, and communities put in motion to reduce poverty. The model identifies impact domains in order to assess broad areas of impacts, which are further broken down into measurable impact variables (see section 4). Impact domains relate to study areas that help evaluate the extent to which vulnerability to risks and shocks has been reduced, stability resumed, growth initiated, social networks strengthened, and empowerment enhanced. The impact domain named “asset accumulation” in figure 1 refers to restoring depleted resources and acquiring new ones. Consumption smoothing entails the enlargement of insurance stocks and the use of finance in areas leading to the stability of consumption patterns. Income-generating activities entail investments in existing and new enterprises with the purpose of achieving stability and growth. Investment in non-covariant diversification of economic activities means that shocks can be diffused effectively and vulnerability reduced. Long-term investments involve skills, health and housing development. Strengthening social networks and inducing linkages between them helps empower groups to take on actions to resolve broader poverty problems that reach beyond financial constraints.

Resulting impact effects determine members’ ability and willingness to repay loans, to contribute to compulsory savings, and to perform the group’s duties of monitoring, auditing, enforcement, and organisation strengthening. Investment projects may have failed, returns may not have materialised, or proceeds may take a long time to become visible. When monetary returns are zero due to project failure, the member is clearly unable to repay her loans. When monetary returns are smaller than the required loan repayment, the member is able to pay only a proportion of her debt and she will decide whether or not to repay the rest from other income sources. In this case, returns may be smaller because of expected or unexpected effects over the project, or they may be smaller (at one point in time) because of a *mismatch of maturity periods* between those of loans and project returns. Depending on how much a member values continuing in the programme compared with the costs of facing sanctions, she may find ways to repay the rest of her debt or convince the group to cover it for her. Strategies for full debt-repayment are crucial to the dynamic analysis of poverty impacts, as they may create debt traps if members borrow money from formal or informal sources to repay microfinance debts fully and on time.

Members' ability and willingness to supply compulsory savings is affected in as much as project returns may not be high enough, or alternative sources of savings and use of money may become more attractive investment options. Forcing members to save at the cost of more profitable alternatives has the risk of slowing down income growth rates. Poverty impacts also affect group dynamics, as decisions on non-repayment cases have to be taken in the course of intensive interactions between members and MFO officers. The costs of auditing enterprises and households may exceed the benefits associated with renewing access to credits, leading to incomplete auditing reviews and analyses. Based on imperfect information about members' true positions, sanctions are imposed on those who do not repay. Social sanctions include ostracising the defaulter from community-based relationships and harassing her until repayment is achieved. More violent sanctions include aggressive public humiliation, seizure of private property, and even burning of houses. The social costs of sanctions can have dramatic consequences on the victims and their current and future relationships with group members. Decisions on exclusion of members from the group are influenced by social relationships as much as by members' ability to repay loans on time.

Over the length of membership, group participants come and go as a result of self-exclusion or being excluded by the group or the MFO. New members are then included to comply with a minimum group size which, in the case of Communal Banking, is approximately 20 members. The stability of membership affects the financial position of groups, which has consequent effects on the financial sustainability of the MFO. This motivates subtle but concrete changes in the institution's policies and practices that further influence group dynamics. Alterations to joint-liability obligations, monitoring systems, collateral substitutes, institutional sanctions and loan maturities, are practices that effectively change financial contracts and modify social relationships within groups. Depending on how fast the institution is able and willing to modify policies and practices in order to overcome negative effects, the impact process will steer away from damaging consequences or it will become trapped in a vicious circle of poverty and inequality.

2. Group dynamics analysis

The chosen microfinance scheme for the analysis of group dynamics in the present study is the Communal (or Village) Banking methodology, which has specific characteristics for its functioning. The analytical framework developed in this section can however be usefully applied, with some adaptations, to the study of other group-based microfinance schemes. This section describes the main characteristics of Communal Banking programmes, identifies the central elements involved in the dynamics of groups, and argues on the possible outcomes of group dynamics taking into account how the costs and benefits of intra-group interactions evolve over time.

Main features of Communal Banking programmes

The standard Communal Banking methodology specifies that the MFO should deliver services through Communal Banks and allow a certain degree of autonomy for the banks to determine specific points in financial contracts and self-manage the organisation of groups. These Communal Banks are groups of 20-40 members who self-select each other under general selection criteria set up by the MFO. The life of a group is approximately 3 years, after which period the group can renew its membership for another 3 years or lengthen it to an agreed period of time. The typical 3-year programme is divided into cycles of 4 months each, making 9 cycles in total. During each of these cycles, members are offered an array of services and activities. The main characteristics of these products are described in table 1.

Table 1. Characteristics of Communal Banking services and activities

CB services and activities	Definition
External loan account	Loans originated from MFO financial resources. They start at a low level and gradually increase according to a pre-determined loan 'step ladder'.
Internal loan account	Loans originated from group's financial resources, i.e. accumulated savings. Groups have a degree of autonomy wrt loans' terms and conditions.
Complementary loan account	Loans originated from MFO financial resources. They serve as supplement to external and/or internal loan accounts. MFO sets terms/ conditions
Savings	Compulsory savings by group members. It is calculated as a fixed percentage of individual loan amounts. Members decide how to invest savings.
Meetings	Compulsory meetings. Frequency of meetings is linked to loan repayment schedules. The group determines penalty fees for non-attendance.
Training courses	Training courses offered by the MFO. Some compulsory, some voluntary. Some charged, some free of charge. Topics vary.
Communal activities	Communal activities organised and undertaken by group members. They are voluntary but MFO officers can induce them. Ad-hoc purposes.

Source: Adapted from Hatch *et al* (1989)

There are three types of loan accounts which are offered to group members. The main loan account is called "external account" and refers to loans originated from the MFO's financial resources. The terms and conditions of this loan account are determined by the MFO. Loan sizes start at a level of around US$75-100 in cycle 1 and increase progressively each cycle to a maximum of approximately US$350. In each cycle, members are obliged to save an equivalent of 20% of the loan. The progressive or "step ladder" lending that characterises the external account follows a fixed pattern: after the initial loan, loan sizes are equal to the previous loan plus the savings made for that loan. Interest rates are approximately 3-4% monthly, of which around 0.5% goes to build up the group's savings; the rest is taken by the MFO. Maturity periods are of 4 months per loan but repayments are requested on a monthly basis. Loans from the "internal account" refer to those loans that originate from the group's accumulated savings. In theory, groups have complete autonomy with regard to the management of the internal account. They may deposit these savings in a commercial bank, or they may lend to group members, or they may lend to non-members, or they may invest for other purposes. In practice, the degree of autonomy varies significantly, depending on the MFO's policies and the intrinsic characteristics of group members and MFO officers. The terms and conditions of loans from the internal account are also partly endogenous, determined within groups. Loans from the "complementary loan account" originate from the MFO's financial resources and seek to supplement external and internal loans when the need arises. Terms and conditions are determined by the MFO but the groups can influence decisions on who receives these loans and who does not.

In addition to financial services, Communal Banking programmes offer training courses to strengthen skills and capabilities, particularly with regard to the management of loan and savings accounts, which are typically compulsory and free of charge. However, depending on institutional policies, MFOs can offer additional training courses to support business development, strengthen gender empowerment and improve health practices. Topics can vary depending on supply and demand, and on whether financial resources can be allocated to these purposes or charges made to members. Group meetings are, on the other hand, compulsory. Group members and MFO officers meet typically every month to manage financial transactions, organise group duties, make decisions on incentives and sanctions, negotiate personal interests with other members and MFO officers, raise issues affecting the group, and organise communal activities. Communal activities can be induced by MFO officers or left to group members to organise them voluntarily. The motivations to organise communal activities vary; they may respond to the group's desire to increase its internal account, or to support a member in need, or to start a collective enterprise, or to respond to pressures from the MFO. The costs and benefits of these financial and non-financial services influence group dynamics. The socio-economic interactions amongst group members and between members and MFO officers can be comprehensively understood by highlighting the central elements involved in group dynamics. This is developed in the following section.

Elements of Group Dynamics

There are three central elements in the study of group dynamics developed in this section: (1) Main objectives of group dynamics; (2) Groups' duties, activities and MFO staff' involvement; and (3) Costs and benefits of group dynamics. The tight interrelationships that exist between these three elements give rise to possible outcomes of group dynamics, which mark the path of impact effects on poverty reduction. This is developed in the next section.

Two major objectives drive the internal dynamics of groups: financial sustainability and organisational sustainability. In the realms of Communal Banking programmes, groups are expected to work towards the *financial sustainability* of their own groups by securing prompt repayments of loans from the external, internal and complementary accounts; by extending progressively increasing loan sizes; by inducing higher savings growth rates; and by capitalising their internal accounts. Groups are equally expected to achieve *organisational sustainability* through the self-management of the group as a social network, based on internal rules and regulations that members agree to comply with. These internal regulations are designed by the MFO and discussed with potential members prior to them joining the MFO, as they are requested to agree upon the regulations before the group starts functioning. Apart from describing the types of services that the MFO offers, these regulations introduce the idea of joint-liability to members and compel them to hold regular meetings and elect a central committee from amongst members of the group. Members are also requested to agree upon the penalty rates for non-attendance to meetings and the interest rates for internal accounts' loans. Communal activities and training courses are not necessarily specified in the internal regulations of groups, as they are usually left to be voluntarily organised by group members or offered by MFOs.

To achieve these broad objectives, groups are expected to embark on an array of duties and activities, which involve intensive interactions amongst members and between members and MFO officers. Figure 2 depicts the types of duties and activities that groups are expected to undertake and the key areas of change that this analytical framework finds critical to evaluating the evolution of group dynamics over time. The study of group dynamics is methodically analysed in accordance to the different phases through which groups pass. The *formation period* refers to the period of time where MFO officers approach potential members and encourage the formation of groups to join the Communal Banking programmes. The *learning period* refers to the first year of group functioning as a Communal Bank (CB). The *critical period* refers to the second year of CB's life and usually involves significant changes in the dynamics of groups that can lead to serious consequences for the survival of the group. The *consolidation period* refers to the third year of CB's life, when lessons from the previous period have been learned and applied. The post CB life period refers to the few months after completion of CB's life; members may have renewed their membership to CB programmes or they may have left the MFO. The analysis of this period helps capture long-term impacts of CB programmes.

For the achievement of financial sustainability, groups are expected to carry out the duties of screening, monitoring, auditing and enforcement of financial contracts. Although members are expected to perform these duties independently, the influence of MFO officers should not be underestimated. MFO officers are assigned to supervise a number of groups to ensure that the objectives of financial and organisational sustainability are achieved. To encourage efficiency, MFOs typically offer performance-related incentives to officers, which are based on three indicators: level of loan portfolio, repayment rates, and total number of members. Given these incentives and depending on officers' intrinsic characteristics, the degree of officers' influence on group decisions can be a crucial determinant in the performance of group's duties. During the formation period, MFO officers actively search for potential group members and encourage them to self-select a minimum of 20 people in order to form a CB. Three areas of study are essential to the analysis of group dynamics in this period: the groups' criteria for the self-selection of members, the MFO's selection criteria for programme placement and general characteristics of potential group members, and whether groups are formed of homogeneous or heterogeneous sets of people.

During the first year of CB existence, there is a learning process by which MFO officers set the criteria for loan and savings management and members learn in practice what entails to be jointly liable for their individual loans. Monitoring practices start to unfold and those put in place for the monitoring of external accounts are not necessarily the same as those for internal accounts, leading to potentially significant differences in the management of each of these accounts. As part of a learning process, there is a tendency to encourage self-management of groups and, hence, practices with regard to auditing and enforcement of loan repayments are also left to members to agree upon. Assuming an imperfect information environment, the issues to study relate to how decisions are made with regard to these duties, who perform these duties, what the nature of these duties is, and how the screening process is replayed in this period.

Depending on the performance of the group's duties during the first year of CB's life, serious financial problems can arise which could threaten the sustainability of the group during the second year. Changes in monitoring systems, incentive structures, collateral substitutes, and screening criteria can be expected during this critical period. The involvement of MFO officers can significantly increase during this year, particularly with respect to the management of internal accounts, as this tends to be relatively unattended-to during the first year. The research issues for this period relate to the decision-making process, the degree of MFO officers' influence over groups' decisions, and the nature of the new criteria for performing group's duties. During the third year of the CB's existence, a period of consolidation can be expected if the CB survives the critical period of the second year. There may be further negotiations with MFO staff to modify financial contracts and incorporate additional sanctions, extend loan maturities, and open access to savings accounts, for example. Key research issues during this period relate to the final re-structuring of group's duties, nature of negotiations between groups and higher levels of MFO staff, and changes in financial contracts. During the period after the completion of the CB's life, research questions relate to whether members join new CBs in the institution or leave the MFO for other financial institutions, or whether members decide to disengage with group-lending microfinance schemes altogether and why.

For the attainment of organisational sustainability, groups are expected to establish an organisation structure based on annual election procedures, attend compulsory regular meetings, hold communal activities, and undertake training courses when required. The degree of MFO officers' involvement in these activities can be considerable, as they are (formally or informally) accountable for the good functioning of groups. Their influence can be traced back to when groups are formed. During this period, MFO officers meet with potential group members a number of times in order to elaborate on the CB internal regulations that they would have to accept when joining the MFO programme, the type of governing structure that they are expected to establish, and the CB methodology for delivery services. Issues of concern at this stage relate to the length of interaction between MFO officers and potential members, the degree of clarity in explaining MFO regulations, and the extent to which potential members understand the information provided and the possible implications of joining CB programmes.

Having elected the central committee's members, groups start their first year of existence with a governing structure and some theoretical understanding of what is expected from them. During the first year, they learn that in practice first intentions may not always hold. Original deep-rooted power structures, traditional norms and cultural attitudes may clash with the group's internal regulations set by the MFO. Attendance at frequent meetings, where MFO officers work at installing the MFO's philosophy, is made compulsory and members who do not attend or who arrive late have to pay a fee that is set prior to the commencement of the CB's life. Training courses are compulsory for members of the central committee when they relate to the management of loan and savings accounts. Other courses vary. Communal activities are usually promoted to instigate some sort of social bonding and to raise funding to increase internal accounts. Key research issues in the period relate to how central committee's members are elected, what the major characteristics of the governing structure are (democratic vs hierarchical styles), what the level of members' participation in group discussions is, what the extent of officers' participation in group decisions is, where the original power structures lie, what are the traditional norms and cultural attitudes that characterise group members and MFO officers (degree of heterogeneity within the group), and how alien MFO regulations and officers' behaviour appear to be to the group members.

As members interact primarily to raise private information about individuals' likelihood to default (or repay) loans, serious potential problems can arise which relate to the potential clash between MFO rules and traditional norms and power structures. Revealing true information may lead to a deterioration of social relations outside the CB, e.g. when a member reveals information about another member who happens to be a community leader outside the CB and can seek vengeance for this disclosure. Depending on the types of social relations that exist prior to joining CBs, information can be distorted, hidden or simply not volunteered. Serious organisational problems can hence emerge and become visible in the second year when members are likely to be more open about their negotiation and bargaining strategies because MFO officers would want to resolve problems either individually or in groups. The degree of officers' influence over group decisions is hence likely to intensify in this period and, depending on performance, re-election procedures for central committee's members may change. Ad-hoc training courses and communal activities may also be introduced to salvage the group's organisational stability. Relevant research issues during this stage of development refer to the types of negotiation and bargaining processes that take place within groups to manage conflict, the degree of officers' influence over groups' decisions, the changes in governing structures, members' participation levels, and types of training courses and communal activities.

During the third year of life and depending on the type of organisation structure that resulted from the previous year, groups can be expected to start a consolidation period whereby power structures become established and new negotiations at higher levels of the MFO's organisation structure can lead to modifications in internal groups' regulations, meetings, training courses and communal activities. Issues to be considered at this stage include changes in bargaining processes and strategies, governing and power structure, members' characteristics, nature of meetings and training courses, level of members' participation in meetings, nature and strength of social ties between members. During the period after the CB's life, research concerns revolve around whether group members interact as frequently as they used to when participating in CBs and whether they are able to use this social network for common purposes.

To determine the extent of members' involvement in groups' duties and activities, this analytical framework identifies key costs and benefits arising from participating in CB programmes. Table 2 lists private and collective costs and benefits involved in group dynamics. There are explicit and implicit benefits and costs that serve as incentives to perform the expected duties and activities. To attain financial sustainability, joint-liability contracts are intended to ensure group loan repayment. This type of contract provides private benefits, which relate to the individual's access to progressively increasing loan accounts; and private costs, which refer to the social sanctions and costs of monitoring, auditing and enforcing contracts.

In addition, groups experience collective benefits and costs when participating in CB programmes. The group's savings act as collective benefits because returns on savings can only be accrued if the total amount of savings is invested collectively. The group also bears costs collectively when all members of the group lose access to loans if one or more members do not repay their loans; or when they use their collective savings to pay for defaulters. To assess the effectiveness of these incentives in producing expected collective actions, costs and benefits have to be compared to alternative costs and opportunities. For example, when alternative sources of credit become easily accessible to members or when the opportunity costs of compulsory savings increase over time, members will be less likely to collaborate with group duties and may eventually leave the group. Furthermore, depending on power structures within the group, benefits and costs can be unequally granted or imposed. Over the life of the group, members negotiate and accommodate to maximise private and collective net benefits. Research questions in this regard relate to the extent to which collective and private net benefits vary over time, and the effect of this on the performance of group duties, distribution of costs and benefits within the group, and the impacts on members' behaviour and changes in poverty-reduction strategies.

Table 2. Costs and benefits of Group Dynamics

Financial sustainability	
Collective Action	Group loan repayment
Private benefits	Individual member's access to: Progressively increasing external loan account Internal loan account Complementary loan account
Private costs	Social sanctions for non-repayment Costs of monitoring and auditing Cost of exercising enforcement norms and rules Opportunity costs of compulsory savings Alternative sources of credit and savings
Collective benefits	Returns accrued from investments of group's savings
Collective costs	Use of savings to repay loans of defaulters Group's loss of access to loans when some members do not repay
Organisational sustainability	
Collective Action	Self-management of the group as an organisation
Private benefits	Skill development Empowerment Mutual support in times of need Participation in positions of power
Private costs	Social sanctions for non-cooperation Fee charges of non-attendance to meetings Penalties for non-collaboration in activities Opportunities costs of time spent in meetings Alternative sources of skill/empower developm.
Collective benefits	Independence as a social network Linkages with other social networks
Collective costs	Erosion of social ties Fracturing of group as social network

For the achievement of organisational sustainability, non-financial services are intended to provide sufficient private and collective incentives. Training courses, communal activities, participation in governing committees and meetings provide private benefits such as skill development, self-confidence, empowerment and support in times of need. These services also provide private costs including social sanctions for lack of cooperation and penalties for non-attendance to meetings. The potential collective benefits refer to the possibility of the group becoming an independent social network, which could serve as a platform for taking additional collective actions, e.g. exercising greater pressure for land reform or establishing joint enterprises. These collective benefits can also be accompanied by potential costs such as the erosion of social relations and the fracturing of existing social networks if, for example, social sanctions are unfairly imposed. Alternative sources of skill development and opportunities costs of time spent in meetings can also diminish the potential net benefits of engaging in CB activities. Research issues relate to the evolving private and collective net benefits, as members perceive them, and the effects of net benefits on group performance, members' behaviour and poverty-reduction strategies.

Possible outcomes of Group Dynamics

In the pursuit of high net benefits by members, groups and MFO officers over the life of the Communal Bank, four possible outcomes may result, which highlight the potential tension that exists between the goals of financial sustainability and organisational sustainability within the group. Table 3 draws attention to some possible consequences of each of these outcomes.

Table 3. Possible outcomes of Group Dynamics

<table>
<tr><td colspan="4">Financial sustainability</td></tr>
<tr><td rowspan="3">Organisational sustainability</td><td></td><td>(+)</td><td>(-)</td></tr>
<tr><td>(+)</td><td>Increasing loan and savings growth rates
Growing or stable membership rates
High repayment rates
Stronger ties in the group</td><td>Decreasing loan and savings growth rates
No use of internal acc.
Mismanagement of internal loan accounts
Uneven repayment rates</td></tr>
<tr><td>(-)</td><td>Fragmentation of the group as a network
Individualistic behaviour
High membership turnover
Lower social interaction
Exclusion of the powerless and poorest</td><td>Group break-up</td></tr>
</table>

One possible outcome is that of achieving both financial and organisational sustainability (quadrant ++ in table 3). This is the optimal scenario for lenders and participants, as the consequences of this outcome would be generally positive for the people involved. The underlying forces driving this outcome can be diverse. The MFO may have a policy by which it places equal weight to the importance of achieving financial sustainability and organisational sustainability of groups. With this type of policy, it can be expected that, when problems arise during the life of a group, actions will be taken to resolve disputes and prevent conflictive situations from occurring in the future. Channels of communications between members, officers and MFO senior managers are expected to be fluid enough to allow members to express their views about the CB programme and detect potential impacts on wellbeing. Flexibility in contract design and ad-hoc training courses for MFO officers and group members are likely to be introduced to better adapt the MFO's services to the needs of members. Additional factors may facilitate the process towards an optimal scenario. A lack of alternative sources of finance, for example, might make members want to comply with MFO regulations with less resistance or criticism. Although this helps maintain group stability, it cannot be assumed that impact effects will always be positive, as it may be the case that increasing debt generates negative long-term effects. In sum, this scenario produces positive consequences such as growing or stable membership rates, increasing loan and savings growth rates, high repayment rates, and stronger social ties within the groups. Although general positive short-term impacts on members' wellbeing can be expected, longer-term effects should also be incorporated in order to assess this scenario completely.

There are two other possible scenarios where a trade-off between financial sustainability and organisational sustainability may occur, leading to undesirable consequences for the parties involved. These scenarios can arise as a result of a preference by the MFO of achieving one goal over the other, or they may arise as a result of limited skills and resources available to detect and resolve problems that occur during the life of a group. One of these scenarios comes about when organisational sustainability is achieved over financial sustainability (quadrant -+ in table 5). This situation resembles the period in which MFOs used to emphasise the sustainability of groups and members over the MFO's financial sustainability and hence loan repayments were not strictly enforced. Group interactions would result in strengthened social networks, improved members' skills and higher sense of empowerment. Financial sustainability, on the other hand, would be neglected, as credit to the poor was generally seen as highly subsidised cash.

This scenario can also arise in present-day MFOs that emphasise the goal of financial sustainability. Possible reasons for this outcome relate to members' motivations for joining CB programmes, their financial needs in relation to the environment where they live, their skills and risk attitudes to investment, and MFO officers' ability to manage groups. Members may want to join CB programmes in order to acquire, primarily, non-financial services, such as training in health issues, and to feel part of a social network where friends and neighbours are also participating in. They may be risk-averse or their investment opportunities may be so limited that their demand for loans would be low or decreasing. Risk aversion and an emphasis on social factors may also explain why members would prefer not to use internal accounts and be lenient about loan repayments. Officers' abilities, risk attitudes and judgement on goal priorities contribute to the direction that final outcomes take.

The overly emphasised importance of achieving financial sustainability can lead to a third scenario, one in which this objective is attained at the expense of reaching organisational sustainability (see quadrant +- in table 5). In this environment, the organisation of the group tends to be regarded as an additional means to achieve financial sustainability and, hence, its evolution matters in as much as it affects loan growth rates and repayments. Group interactions are concentrated on the primary goal of setting incentives and sanctions to secure high repayments, neglecting other aspects of group dynamics that help strengthen relations within the social network. Individualistic behaviour tends to be encouraged, as members and MFO officers are highly valued if loan repayments are high, regardless of the extent of membership fluctuation and negative impact effects. In this trend, meetings may lose purpose and become mere occasions for financial transactions, where officers and members fail to recognise fundamental differences between MFO rules and the socially-constructed norms and regulations which members respect. The potential clash of internal rules in group interactions and the lack of attention to organisational sustainability are likely to result in the fragmentation of groups whereby high membership turnover occurs and the powerless and poorest members of the group are excluded, leading to significant negative impact effects.

The threat to groups' survival reaches an extreme when neither of the broad objectives of financial and organisational sustainability is achieved and the group collapses before the end of its intended life (last quadrant in table 5). This scenario may occur when fundamental institutional errors have been made, proven cases of corruption and embezzlements have been identified, or group members have been utterly dissatisfied with the MFO services and methods of delivery. The underlying reasons for these events may be connected to inadequacies of institutional contracts, selection criteria, MFO officers' training, lack of communication between parties concerned, and insufficient mechanisms for the management and prevention of crises. This scenario is likely to result in general negative effects for members, officers and communities alike.

3. Units of analysis and causes of impacts

The analysis under this conceptual framework is undertaken at five levels or units of impact: the *group* of members who join together in order to have access to microfinance services; the *individual* member of the group; the *household* of which the individual is a member; the *enterprises* that households possess; and the *community* in which members, households, enterprises and microfinance programmes are embedded. This section elaborates on the key underlying causes of impacts, which in figure 1 has been identified as the behavioural changes and resulting variations in poverty-reduction strategies. Table 4 summarises the types of units of analysis for this study and the specific behavioural changes and poverty-reduction strategies that are examined at each level of impact.

At the group level, social interactions amongst members and between members and MFO officers are shaped by financial contracts, group duties, and the personal characteristics of the participants. The immediate effects on group behaviour will be reflected in risk attitudes towards the degree of monitoring and enforcement that the group would have to exercise in order to carry out collective actions; perceptions of the influence of actual power structure over group decisions; intensity of interaction that members volunteer to put in practice within the group; cooperative activities that members undertake to fulfil group duties; exclusionary tendencies when dealing with repayment problems; and the intensity and quality of interactions that the group and MFO officers seek in order to achieve expected outcomes.

As group behaviour changes over time, implicit and explicit poverty-reduction strategies are undertaken to overcome common problems. Depending on how behavioural changes affect the functioning of groups, participants devise appropriate strategies including the strengthening of group's collective benefits such as: the search for profitable investments of group savings; the management of crises through conflict-resolution approaches; the delegation of monitoring of members' investments from, for example, group-monitoring to individual supervision; the substitution of joint-liability mechanisms for asset- and guarantor-based collateral; the organisation of communal ad-hoc activities to help members repay their debts and to reinforce social relationships; the self-management of groups to minimise MFO officers' influence over decision making; and the enhancement of sanctions to increase probabilities of timely repayment.

Members of groups are affected by the evolving dynamics of groups as their behaviour is influenced by the actions of fellow members and the MFO officers supervising them. At the individual level, then, members' risk attitudes towards loan usage and savings accumulation change over time, and they may become risk-takers or risk-averse with respect to investments and show rent-seeking behaviour when interacting with other members under imperfect information. Given the size of groups, attitudes towards monitoring intensity change and members may display free-riding behaviour to avoid the costs involved in monitoring. Their attitudes towards revealing private information about colleagues may also change over time and, as a result, the quality of information will be affected positively or negatively. The degree of fairness of social sanctions and members' participation in decision-making will influence individual responses to group interactions and their attitudes towards finance, business, work ethics, and ability to voice concerns openly in meetings will be affected.

Table 4. Units and causes of impact

Units of impact	Behavioural changes	Poverty-reduction strategies
Group	• Risk attitudes on monitoring and enforcement • Perceptions of power structure within the group • Intensity of interaction between members • Cooperative tendencies • Exclusionary tendencies • Staff/group extent and quality of interaction	• Strengthening of group's collective benefits • Conflict mgmt / resolution • Delegation of monitoring • Substitution of joint-liability mechanisms • Organisation of communal ad-hoc activities • Self-management • Enhancement of sanctions
Individual	• Risk attitudes on use of loans and savings • Rent-seeking behaviour • Free-riding on monitoring • Attitudes towards revealing private information • Responses to degree of fairness of social sanctions • Attitudes towards finance, business, and work ethics • Ability to voice concerns	• High-risk investments • Lengthening of personal working hours • Temporary job migration • On-lending • Debt management • Reliance on informal finance for loan repayment • Positioning oneself within the group power structure • Exercise influence
Household	• Temporal time preferences • Divergence/convergence of individual preferences on use of loans/savings • Quality of interaction between members • Attitudes towards women' position within household • Cross-generational investments	• Insurance building (animals, grain stock, etc) • Housing improvement • Stability of children's school enrolment • Preservation of health • Migration of offspring • Negotiation amongst member • Conflict resolution • Asset building for offspring
Enterprise	• Risk attitudes on investment • Influence of group peers' choice of business • Separation of consumption and production • Attitudes towards business, and work ethics • Profit-maximisation as goal • Attitudes towards women and child labour • Cross-generational investments	• Initiation of enterprise • Stabilisation of enterprise • Self-mgmnt of financial reports • Technology adaptation • Growth of enterprise • Labour of household members at enterprise • High-risk investments • Hiring external labour • Change/addition of business • Offspring control over old and new enterprises
Community	• Demonstration effects on people's perceptions of institutional finance • Members' competitors reaction to profit margins • Perceptions of degree of fairness in programme selection of members • Local markets' response to members' use of finance	• Growth of informal finance • Entry of financial NGOs • Creation of similar micro-enterprises • Re-structuring of community-based organisations • Re-setting of market prices for goods and labour • Creation of jobs • Innovation on business types

Depending on the extent to which group dynamics affect individual behaviour, members develop poverty-reduction strategies in relation to the usage of financial and non-financial services that the microfinance programme offers. To this end, members position themselves within the group power structure to exercise greater influence over the making of decisions and increase their chances of gaining larger benefits. Resulting poverty-reduction strategies include the utilisation of loans on high-risk investments such as on-lending MFO loans to non-members, the lengthening of working hours that individual members dedicate to their economic activities, the temporary migration to neighbouring communities in search for jobs, the reliance on informal finance sources to repay MFO loans on time, and the management of debts in which microfinance services can play a central role.

At the household level, the intensity and quality of interaction between members can be affected by the participation in microfinance programmes. Individual preferences over the use of loans can divert or converge according to how household dynamics evolve over time. Changes in behaviour are reflected in variations in the inter-temporal time preferences for household consumption and production, attitudes towards women' roles within the household, and the cross-generational preferences when deciding whether to invest in children's development and financial independence.

Poverty-reduction strategies are hence continuously reassessed in the context of evolving household dynamics. After a process of negotiation between members, which may involve resolving conflictive exchanges, households prioritise strategies to smooth consumption over time and build long-term assets. These include investing financial services in the restoration and building of communal resources that could serve as insurance against shocks, the improvement of housing infrastructure, the education of children, the preservation of family members' health, and the fostering of offspring's financial independence which is managed by helping them initiate their own small businesses or migrate to more affluent places.

Behavioural changes at the enterprise level are intrinsically related to the evolution of household dynamics, as decisions on consumption and production are intertwined. Risk attitudes towards investment destinations change over time as households make decisions in relation to short- and long-term investments. The degree of internalisation of the philosophy of microfinance programmes is reflected in the extent to which groups influence members' choices of businesses and their decisions on whether to separate consumption from production choices and strive for profit-maximisation of their enterprises. Attitudes towards work ethics and the involvement of women and children in the running of enterprises are hence affected.

As a result of changes in risk attitudes and depending on actual constraints and opportunities, households may adapt their strategies in order to achieve business stability and growth. They may decide on investing in high-risk economic activities, change the technological process of their enterprise (be it farming, trading or industry), increase employment by hiring relatives or members of the community, improve the management of the business, diversify into new income-generating activities, and give control over existing or new businesses to offspring.

At the community level, microfinance programmes affect community members' perceptions of institutional finance, including the perception of the degree of fairness with which participant selection is handled. Local markets, households and businesses react to behavioural changes of participants and are affected by them. As a result, community members may decide on new strategies to overcome problems and take advantage of emerging opportunities, including the re-structuring of community-based organisations, the creation of small enterprises to compete with participants' businesses, the re-setting of prices of goods and services, the generation of jobs for the community, the growth of informal financial arrangements, and the emergence of competing MFOs in the locality.

4. Impact domains and variables

Building on existing empirical impact studies, the present analytical framework identifies additional relevant impact domains and variables. Domains of impacts are understood in this study as the spheres of activity, processes or aspects of impact, which develop within the units of analysis. Variables of impacts are specific indicators of changes that occur within the impact domains at each level of analysis. Tables 5a and 5b describe the impact domains and variables considered by this framework.

At the group level, three impact domains are taken into account. They refer to the group's financial sustainability, its organisational sustainability, and the stability of relationships between group members and MFO officers. Variables that help explain the evolving process towards financial sustainability include loan maturities and the growth and stability of loan sizes (of the external, internal and complementary loan accounts), arrears rates, savings, and loan repayment rates. Levels at which interest rates of internal accounts and penalty rates for contract non-compliance are set, are also relevant variables of financial sustainability. To assess impacts on the group's organisational sustainability, several quantitative and qualitative variables are used, including the growth and stability of membership, criteria for exclusion and inclusion of members, the governing period of the central committee, degree of group's self-management, benefits and costs of peer monitoring and other group's duties, management of internal accounts, social sanctions and rates of attendance at meetings. Impact variables of the stability of member/staff relations include, amongst others, MFO officers' workload and performance-related incentives, staff turnover, intensity of interaction between members and staff, and channels of communications for members to voice their concerns and influence senior management decisions.

At an individual level, four impact domains relate to tangible and intangible aspects of microfinance effects over group members: asset accumulation, skill development, empowerment, and self-esteem and respect by others. Impact variables to assess effects on asset accumulation include the growth and stability of members' income and consumption, and the quantity of food intake, which affect members' health and productivity. Skill development can be measured by members' perceived value of MFO training courses and information exchanges between members, and the influence that these may have over individual abilities to perform business and household duties. Indicators of empowerment impacts include the degree of members' participation in group meetings, enrolment in community organisations, control over use of loans and investment returns, and individual financial independence. Self-esteem and respect by others, on the other hand, is measured by members' ability to voice their own concerns within groups and households, and their perceived treatment by others.

Table 5a. Impact domains and variables

Units of impact	Impact domains	Impact variables
Group	• Financial sustainability	• Growth and stability of external and internal loan sizes, arrears rates of external and internal loans, savings growth, loan repayment rates, frequency of loan collection, fine rates, interest rates of internal account loans and additional ways to increase collective savings
	• Organisational sustainability	• Growth and stability of membership, meeting attendance rates, voting system, committee governing period, degree of exchange of members skills in business or poverty-reduction strategies, frequency and types of communal activities, criteria for exclusion and inclusion of members, criteria for loan size eligibility, degree of self-management, benefits and costs of monitoring, types of joint-liability substitutes, benefits and costs of social sanctions, quality of information about members' ability and willingness to save and repay loans, benefits and costs of meeting attendance
	• Staff/members stability	• NGO officers profiles, risk attitudes, job duties and performance-related incentives, number of supervised groups, staff turnover, length of supervision of a given group, degree of delegation of duties to group members, frequency of interaction between staff and members, degree of staff influence over group decision-making, frequency and quality of members/group auditing, extent of members influence over institutional contracts, channels of communication between members and senior management
Individual	• Asset accumulation	• Stability and growth of personal income and expenditure, food intake, health. Non-CB loans
	• Skill development	• Perceived value of NGO training courses, topics of group meeting agendas, book keeping, information about members' business and livelihoods. Ability to perform old and new duties
	• Empowerment	• Degree of participation in group meetings, enrolment in other organisations, control over use of loans and returns, financial independence from husbands/ others
	• Self-esteem and respect by others	• Ability to voice own concerns within groups and households, degree of participation in decision-making, perceived treatment by others
Household	• Asset accumulation	• Stability and growth of income, expenditure, net worth. Restoration and acquisition of land, equipment, h/h appliances, vehicles, animals
	• Consumption-smoothing	• Stability and growth of consumption, food security, savings diversification, motives for saving (insurance, precautionary, etc), expenditure in emergencies, clothing, h/h bills; growth and stability of social networks for consumption-smoothing purposes
	• Long-term investment	• Actual and perceived returns of investments in housing, education, health, fixed assets (tangible and intangible returns; maturity periods). Percentage of investment on young and grown-up children
	• Power structure & intra h/h relations	• Degree of participation in decision-making by h/h members wrt finance, expenditure, short and long-term investments; degree of unequal control over h/h resources, intensity of interaction between members, incidence and severity of violent conflict resolution

Table 5b. Impact domains and variables

Units of impact	Impact domains	Impact variables
Enterprise	• Existing enterprise	• Stability and growth of income, net profits, net cash flows. Acquisition of physical equipment, inputs, vehicles, land, animals. Sales on credit (seasonality, maturity periods). Formal and informal debts
	• Diversification of economic activities	• Types of waged and non-waged jobs, new enterprises. Risks, returns, maturity periods. Co-variance of risks between enterprises
	• Business management	• Improvements on book keeping, financial management of enterprises; formal registration/licence of businesses
	• Employment	• Women and child labour hours. Skill development. Productivity. Creation of jobs/enterprises for offspring, friends, relatives, community fellows
	• Technology	• Labour-reducing technologies. Cost-reducing, efficiency-enhancing technologies
Community	• Community-based organisations	• Degree of influence on power structures, criteria for exclusion and inclusion of members, extent of participation in new community organisations
	• Horizontal and vertical linkages of social networks	• Frequency of meetings for Communal Banks of different maturity levels, intensity of interactions between members of similar economic activity, extent of coordination with local governments and private institutions to achieve collective actions/projects
	• Empowerment	• Degree of participation in local organisations (differential amongst CB members), displacement of community members, increased control over common properties, participation at regional/national levels
	• Financial market	• Growth of informal and formal sources of finance, interest rates, loan maturities, types of emerging financial products, number of members that leave CBs to join other financial schemes
	• Labour market	• Growth of temporary and permanent jobs in the community (relatives and non-relatives), wage levels, number of working hours
	• Real market	• Growth of economic activities (by type), degree of displacement of existing businesses, changes in market prices, degree of competition, number of new market niches being opened.

At the household level, the study identifies four impact domains: asset accumulation, consumption smoothing, long-term investment and power structures within intra-household relationships. Variables to assess impacts on asset accumulation include the growth and stability of the household income, expenditure and net worth, and the acquisition or restoration of household appliances, equipment, land, animals and vehicles. Indicators of households' ability to smooth consumption include the building of assets, social networks, and savings for insurance and precautionary purposes, savings diversification, the growth and stability of consumption, and expenditure in emergencies. Impacts on long-term investment are measured by the actual and perceived returns of investments in housing, education, health and fixed assets. Indicators of changes in power structures within households include the degree of participation by household members in decisions regarding finance, expenditure, short and long-term investments, the degree of inequality in the control over household resources, the intensity of interaction between household members, and the incidence and severity of violence resulting from internal conflicts.

At the enterprise level, impact domains refer to identifiable impact effects on the existing enterprise, the diversification of economic activities, business management, the level of employment, and the type of technology. Variables to assess impacts on the existing enterprise – be it farming, trading, servicing or industry – include: the stability and growth of income, net profits and cash flows; the acquisition or restoration of physical equipment, vehicles, land, and animals; and the growth and stability of sales on credit, and debts from formal / informal sources. The assessment of impacts on the diversification of economic activities is measured by the extent to which new enterprises are initiated (including waged jobs) and the degree of co-variance risk that exists between the economic activities. Indicators of changes in employment include the number of working hours that household members dedicate to the enterprises, the creation of temporary and permanent jobs, the initiation of enterprises for offspring, and increases in workers' skills and productivity. Variables to capture impacts on technology include the introduction of labour- or cost-reducing technologies for the enterprise development.

At the community level, impact domains under examination include the community-based organisations that give origin to Communal Banks, the horizontal and vertical linkages that develop amongst Communal Banks and between them and local organisations, empowerment at the village level, and impacts effects on local markets such as the financial, labour and real markets. These domains help evaluate whether or not the prosperity of MFO members comes at the cost of more poverty for neighbours in the community. Variables to assess impacts on community-based organisations include the degree of influence that Communal Banks (CBs) have over the organisation's power structures, its criteria for exclusion and inclusion of members, and the extent of participation in other local institutions. Horizontal and vertical linkages of social networks are captured by the frequency of meetings that CBs have amongst themselves, the intensity of interactions of CB members with community members undertaking similar business activity, and the extent of mutual support between CBs and local governments and private institutions. Empowerment at the community level is measured by the differing degree of empowerment of members within the local community, the unequal control over common properties, and the ability of the local community as a whole to voice concerns at regional and national levels and to participate in decision making processes at those levels. Variables to assess impact effects on local financial, labour and real markets include the growth of financial organisations, employment, and economic activities in the community, changes in prices, degree of competition and displacement of existing enterprises, financial organisations, and workers.

5. Concluding notes

This paper has developed a comprehensive analytical framework for the study of microfinance impacts on poverty reduction by placing a significant stress on the study of group dynamics in order to capture changes in members' behaviour and poverty-reduction strategies, which represent fundamental causes of ultimate impact effects on the individuals involved, their households, enterprises and communities. The importance of studying group dynamics lies in assessing poverty impacts from their source, and in measuring costs and benefits that have been largely overlooked by previous impact studies. The results of implementing such a dynamic impact assessment can lead to the discovery of new impact paths and effects that could challenge the effectiveness of microfinance as a powerful tool for poverty reduction.

This analytical framework carries several implications. For research, the virtues of joint-liability lending can be called into question when it is shown that group dynamics lead to high loan repayments, not through the harnessing local information but through tougher social sanctions and greater exclusion of the poorest and weakest members. For policy, significant attention will be paid to the implications of group dynamics on poverty reduction when making policies on microfinance, as these schemes may be proven to have important negative consequences for the poor. For practice, the implementation of this analytical framework can lead to changes in MFOs' programme designs and eventual improvements on impact effects.

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Fig 1. Model of impact chain

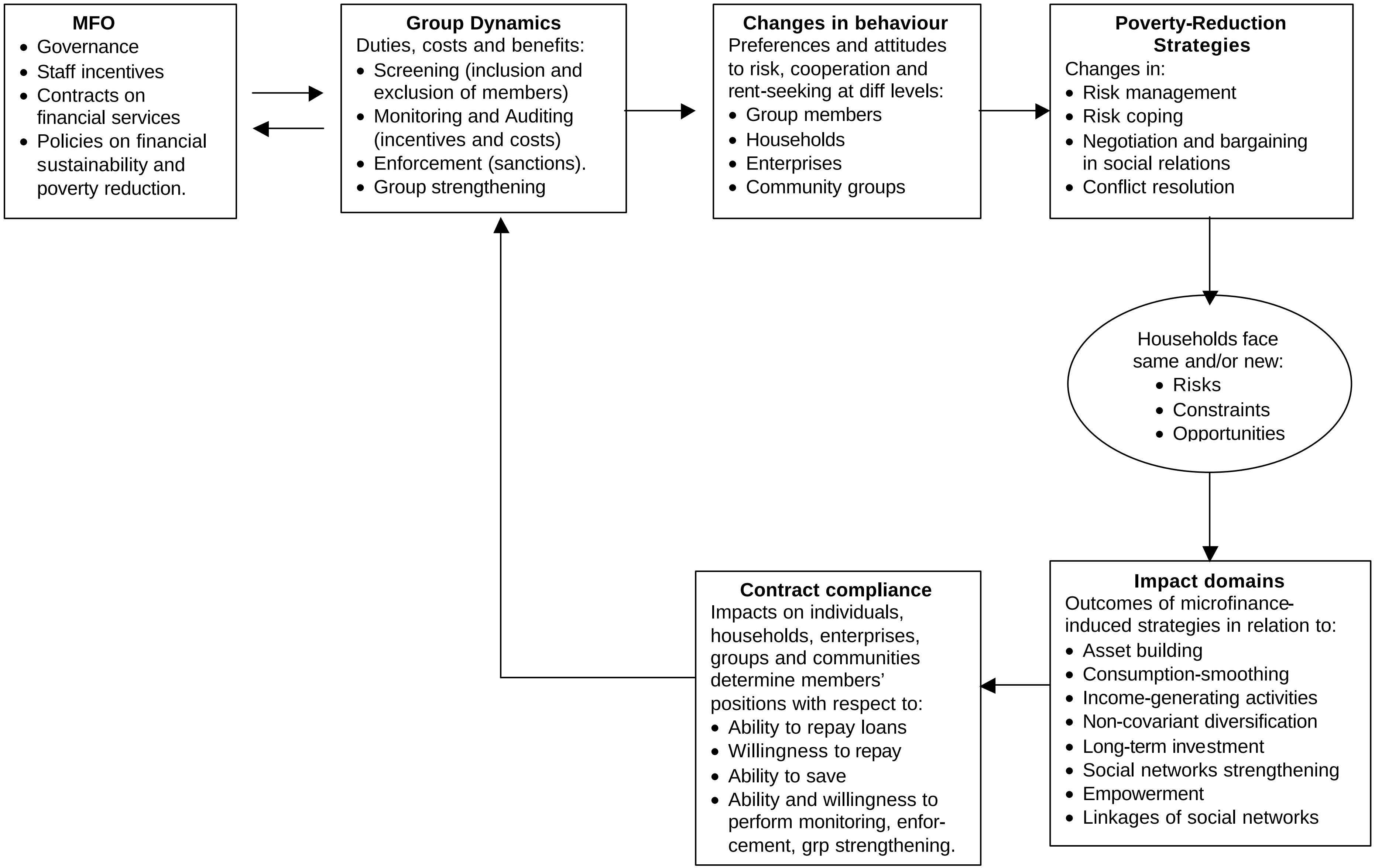

Fig 2. Group Dynamics: duties, activities and MFO staff involvement

		Formation period	1st year Learning period	2nd year Critical period	3rd year Consolidation period	Post CB life
Financial Sustainability	**Screening**	Self-selection criteria of group members	Exclusion / self-exclusion, inclusion	New criteria on inclusion / exclusion of members	Consolidation of sorting process	
	Monitoring		Monitoring of external vs internal accounts	Changes in incentives & monitoring systems	Social collateral vs physical collateral	
	Auditing		Evaluations at end of cycle by members	MFO auditing vs peer-auditing	Observation vs document-based audit	
	Enforcement		Social sanctions Repayment schedules	New collateral substitutes	MFO sanctions and penalties; legal action	
	MFO officers involvement	MFO selection criteria of group members	Criteria for loan and savings management	Stringent supervision of internal accounts	Negotiations on contract flexibility	
Organisational Sustainability	**MFO officers involvement**	Dissemination of MFO regulations	Installment of MFO's philosophy and rules	Officers' influence over group decisions	Negotiations on CB's constitution changes	
	Organisation structure	Voting systems for central committee	Democratic vs hierarchical structure	Re-election procedures & degree of participation	Entrenchment of power structures	
	Meetings	Meetings for the formation of groups	Attendance and participation levels	Negotiation and bargaining process	Re-assessment of value of meetings	
	Training courses		CB accounts management	Business development and ad-hoc courses	Revision of demand for training courses	
	Communal activities		Monthly activity, ad-hoc fund raising	Fund raising for loan repayments	Re-structuring of communal activities	