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MICROFINANCE AND POVERTY IN INDONESIA: AN ANALYSIS OF THE ROLE OF KUKESRA AND MKEJ

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Dedication

I dedicate this work to my beloved wife and son who are my rock and my constant inspiration who supported me in my STRUGGLE

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ABSTRACT

Following the success of the Grameen Bank in Bangladesh, Microfinance institutions (MFIs) which apply group-lending method through the medium of small credit have been regarded as a new and effective tools for poverty alleviation for the poor in many Less Developed Countries. This study analyses the role of two MFIs, namely KUKESRA, a government administered programme and Mitra *Karya* East Java (MKEJ) which is a privately managed institution in poverty alleviation in Indonesia. It examines to what extent these institutions have been successful in helping the poor, and improving the living standards of the recipients. Two alternative approaches, namely the institutionalist and the welfarist approaches, are used to examine the question of whether the poor benefited from the two programmes, followed by a comparison of the performances between the two.

Using data obtained from a sample survey of 393 respondents in the District of Malang in East Java, from December 1998 - June 1999, it was found that the differences in management, organisational structure, programme design, and the system of coordination, all resulted in differences in performance of the two MFI institutions studied.

It was found that both programmes increased the incomes of the recipients, but the impact of KUKESRA was much lower than that of MKEJ. However, KUKESRA had a greater positive effect on employment than MKEJ. Neither of the programmes resulted in a significant improvement in the consumption of basic needs of the recipients. Of the two approaches used in the evaluation of the programmes, a good performance in terms of outreach and sustainability under the institutional approach did not imply that the poor really benefited from the programme. It was found that the welfarist approach is much more appropriate in evaluating the effectiveness of MFIs in Indonesia.

GLOSSARY

Afdeelingbank	Bank Kabupaten [District bank] in Dutch Colony government.
AKSI	*Asuransi Keluarga Sejahtera Indonesia* (Indonesian Prosperous family's Insurance)
ASKBI	*Asuransi Keluarga Berencana Indonesia* (Indonesian Insurance for family planning).
AVB	"AlgemeneVolkscredietbank" the successor of *Centrale Kas* (see *Centrale Kas* below) in 1920
Badan Padi Sentra	Center for Rice Board
bank dagang desa	Village trade bank
bank tani	Farmers' bank
BAPPENAS	Badan Perencanaan Pembangunan Nasional (National Planning Board)
BARUGA	*Balai Rujukan Keluarga* (Forum of Family's Reference)
BCA	*Bank Central Asia,* one of the Indonesian private banks.
BEJ	*Bursa Efek Jakarta* (Jakarta Stock Exchange (JSX))
Besek	A kind of covered square basket of plaited bamboo
BI	*Bank Indonesia* (Indonesian Central Bank)
BIMAS	*Bimbingan Massal,* (Agricultural program to improve the productivity). This program also has some improvements such as *BIMAS Gotong-Royong* (Mutual Self-help), *BIMAS palawija* (including other crops such as maize, ground-nuts, sweet potato, cassava and soybeans), *BIMAS yang disempurnakan* (Completed BIMAS).
BKD	*Badan Kredit Desa* (Village Corporate Board including village bank and *lumbung*)
BKK	*Bank Kredit Kecamatan* (Sub-District Credit Bank)

BKKBN	*Badan Koordinasi Keluarga Berencana Nasional* (Coordinating Board of National Family Planning)
BKKBN'S Welfare classifi-cation: KPS, KS I, KS II, KS III, and KS III+.	Keluarga Pra-Sejahtera, Keluarga Sejahtera I, Keluarga Sejahtera II, Keluarga Sejahtera III, and Keluarga Sejahtera III+ (Pre-welfare, Welfare I, Welfare II, Welfare III, and Welfare Ill-plus respectively).
BMS	*Balai Mitra Sejahtera* (Forum of prosperous partners)
BNI 1946	*Bank Negara Indonesia 1946* (the National Bank of Indonesia 1946)
Boedi Utomo	A political movement struggling for Indonesian independence from colonialists established in Surabaya
BRI Unit Desa	*Bank Rakyat Indonesia Unit Desa* (Village Units of Indonesia People's Bank)
Bangga Suka Desa	A movement to create a feeling of pride for living in rural village.
Centrale Kas	Central Funds, the institution that played a role as central bank in the Dutch colony government.
cultuur-stelsel	The system of forced cropping introduced by the Dutch colony government in 1830 that all farmers had to grow cash crops and less food. As a result, many in Java starved.
Demas	*Demonstrasi Massal.* The procedure introduced by the Bogor Agriculture Institute in order to improve agricultural production.
Gerakan Keluarga Sejahtera Sadar Menabung	Saving awareness for prosperous families
gotong royong	Community self help
Gerakan Pembangunan Keluarga Sejahtera	The prosperous family development movement
IBI	*Institut Bankir Indonesia* (Indonesian Banker Institute)
IDT	*Inpres Desa Tertinggal* (Presidential instruction for helping the poor villages)
INKESRA	*Investasi Keluarga Sejahtera* (Investment for welfare family)
INMAS	*Intensifikasi Massa* (Rice Intensification programme introduced in 1967).
Inpres	*Instruksi Presiden* (Presidential Instruction)

INSUS	*Intensifikasi Khusus* ('Special Rice intensification' programme and subsequently became the 'New Insus' or well-known as 'Supra-Insus' in 1982.)
JABOTABEK	Jakarta, Bogor, Tangerang and Bekasi
Kabupaten	District (administrative unit below province)
Cadrer	Trained or un-trained person who acts the mediator or the hand lengthening of BKKBN to always keep in touch with local people.
Kartu Anyoman Kesehatan	Health Protection Card
KB	*Keluarga Berencana* (Family Planning Program).
KCK	Kredit Candak Kulak (Credit extended to small middlemen)
Kecamatan	Sub-districts (administrative unit below district)
Keputusan Presiden or Keppres	Presidential decree
KFM	*Kebutuhan Fisik Minimum* (Minimum Physical Needs)
KIK	*Kredit Investasi Kecil* (Small business loans)
KKB	*Klinik Konsultasi Bisnis* (Clinic of business consultation).
KKU	*Kuliah Kerja usaha* (lecture on business practices)
KMKP	*Kredit Modal Kerja Permanen* (subsidised loan programme for small business)
KTP	*Kartu Tanda Penduduk* (residence Identification Card)
KURK	*Kredit Usaha Rakyat Kecil* (Productive Credit for poor People),
Lebaran	The day of celebration at the end of moslem fasting month
LKMD	*Lembaga Ketahanan Masyarakat Desa* (Village social activities group)
LPK	Lembaga Perkreditan Kecamatan (Sub-District Credit Institution)
LPN	*Lumbung "Pitih Nagari"* (A local traditional Microfinance intitution in Sumatera)
LPPI	*Lembaga Pengembangan Perbankan Indonesia* (Indonesian Institute for Banking Development)

Lumbung	Rice credit institution for helping people in crisis time such as in planting season or in *paceklik* (food shortage). It has some variants such as *Lumbung Cooperatives*, *Lumbung* Desa (Village *Lumbung*), *Lumbung Miskin* (*Lumbung* for the poor).
MFIs	Microfinance institutions
MKEJ	Mitra Karya East Java (MKEJ or Mitra Karya)
naib	Mosque official or deputy of local religious.
new-start	Those who started their businesses in the period after receiving the loan from KUKESRA or MKEJ
NGO	Non Governmental Organisation
Oendang-Oendang	See UU
paceklik	Period of food shortage
Pakjan 1990	January Policy Package 1990
Pamong	Village administrator
Pancasila	The *five-principle* foundation
Parindra	*Partai Indonesia Raya* (Great Indonesia Party)
Pelaju	*Petik, Olah, Jual, dan Untung* (picking, processing, selling, and getting profit),
Pemaju	*Proses, Kemas, Jual, dan untung* (processing, packaging, selling, and getting profit)
Pembantu Bupati	Vicar of the head of the district
Pikul	A traditional measure where a *pikul* equals 62.5 kg.
PKK	*Pendidikan Kesejahteraan Keluarga* (program at village level to educate women on various aspects of family welfare).
PKS-PPK	Pembangunan Keluarga Sejahtera dalam rangka Peningkatan Penanggulangan Kemiskinan (Development of prosperous families for poverty alleviation).
POKJANIS	Kelompok Kerja Teknis (team work)
Posyandu	*Pos Pelayanan Terpadu* (all integrated health services post)
PP	Peraturan Pemerintah (governmental regulations)

PPLKB, PLKB, PKB	PPLKB (*Pengawas Petugas Lapangan Keluarga Berencana* or the supervisor of the PLKB) and PLKB (*Petugas lapangan Keluarga Berencana* or Facilitator of family planning Program) BKKBN attributes differently: *P*LKB and *P*KB (*Petugas Keluarga Berencana*) for the staff having no degree and for the staff holding a degree, respectively. Since PLKB and PKB do the same function, we ignore the distinction and use PLKB for both.
priyayi	Belonging to upper class in Javanese society
PROKESOS	*Program Kesejahteraan Sosial* (The Program for Social Welfare)
PROKESRA	*Progam Keluarga Sejahtera* (The Program for Welfare Household)
Puskesmas	*Pusat Kesehatan Masyarakat* (local governmental clinics)
rembukan	*Rembukan or Rembuk* is the meeting in group of members in MKEJ program.
REPELITA	Rencana Pembangunan Lima Tahun (Five-Year-Development Plan)
SAKERNAS	National Survey of Labour Force
SDI	Yaron's Subsidy Dependence Index
slametan	A type of social obligations
SPL	Subjective Poverty Line
SSBM	*Swasembada Bahan Makanan* (the program of 'Self-sufficiency of food')
SUSENAS	National Survey of Social and Economic Indicators
TAKESRA Blokir	Compulsory saving in TAKESRA Scheme
TAKESRA/ KUKESRA	*Tabungan Keluarga Sejahtera/ Kredit Usaha Keluarga Sejahtera* (Saving/Credit Schemes for Welfare Family). Sometimes it is called TAKUKESRA.
tanggung renteng	Joint liability
tape	Fermented cassava
UBN	Unsatisfied Basic Needs a measure for the lack of basic needs consumption.

UKKPS	*Usaha Peningkatan Pendapatan Keluarga Sejahtera* (The program for increasing the incomes for welfare families)
UPPKA	*Usaha Peningkatan Pendapatan Keluarga Akseptor* (The program for increasing the family planning acceptors' incomes)
UU	Undang-Undang (Ordonancies)
UUD 1945	The Indonesian constitution
Volksbank or Volkscredietbank	Popular credit bank in Dutch Colony government.
Volkscredietwezen	Popular credit system in Dutch Colony government
YDSM	*Yayasan Dana Sejahtera Mandiri* (Foundation that manages the fund of Takesra and Kukesra),
Zakat	Moslem religious donation for the poor particularly in the month of Ramadhan

CHAPTER-1: INTRODUCTION

BACKGROUND

There are many studies on poverty. The Economic Literature (Econlit) database lists more than 100 publications about this topic in the 1980s and 1990s. Some studies emphasise the causes and impacts of poverty such as Ariffin (1994), Getuhig-Jr. & Shams (1991), Sudibyo (1995), Rahardjo (1995), Lloyd & Morrissey (1994). Others develop methods to measure it such as Firdausy (1994), Bidani & Ravallion (1993), Huppi & Ravallion (1991), Lloyd & Morrissey (1994), McKinley & Alarcon (1995), Quibria (1993), Rao (1993), Peters (1996), Wong (1983), Booth (1993), and Firdausy & Tisdell (1992). All studies try to answer the question of how to eliminate poverty.

Indonesian poverty has been the focus of numerous studies such as Manning (1998), Asra (1998), Bidani & Ravallion (1993), Huppi & Ravallion (1991), Sutomo (1989) Thorbecke & Puijm (1993), Mubyarto (1996), Nasoetion (1996), White (1996), Booth (1993), Firdausy (1994), Islam & Khan (1986), and Mosley (1996). These studies deal with the measurement and trends in Indonesian poverty over different time frames. They also discuss the means adopted by the government to reduce Indonesian poverty.

The creation and spread of microfinance schemes is seen as one such measure. Indeed, microfinance has been around, as a means of giving a momentum to community economic development, for some time. But in the eighties and nineties, following the publicity about the success of microfinance, specifically of the Grameen Bank in Bangladesh, it assumed an added attraction for many parties and individuals (Hollis, 1996). In the 1970s there were some notable microfinance institutions established such as BRI *Unit Desa* (*Bank Rakyat Indonesia Unit Desa*, or Village Units of Indonesia

People's Bank) and BKK[1] (*Bank Kredit Kecamatan*, or Sub-District Credit Bank) in Indonesia and Grameen Bank in Bangladesh, besides some others in Latin American countries (Hamid, 1986; Mosley, 1996). The survival and success of BRI *Unit Desa*, BKK and Grameen Bank have encouraged more governments to adopt microfinance schemes as a means for alleviating poverty.

According to the founder of the Grameen Bank, Mohammad Yunus (1995), the poor, who previously regarded themselves as the "forgotten society", now realise that they have found a way out from poverty. This is because the financial means that the banks have historically provided to the wealthier are now available through microfinance institutions (MFIs). Such schemes are seen to reduce the incidence of poverty. In Indonesia, for instance, together with many governmental programmes designed for the poor such as agricultural subsidies and development, the credit from MFIs is seen by some writers to have contributed to a significant reduction in the incidence of poverty. (Huppi and Ravallion, 1991; Bidani and Ravallion, 1993; Thorbecke and Puijm, 1993; Nugroho, 1995; Tomich, Kilby *et al.*, 1995; Mubyarto, 1996; Nasoetion, 1996; White, 1996; Asra, 1998; Manning, 1998).

The figures on Indonesian poverty, at least until the beginning of the 1997 economic crisis, showed that poverty had dropped significantly since Indonesia began its Five-Year-Development Plan in 1970. Even though the figures showed a marked reduction in poverty incidence, the development plans showed a continued commitment to the elimination of poverty in order to achieve the economic as well as political objectives (Hughes and Islam, 1981; Dewanta, 1995; Nasution, 1995; Asra, 1998; 1998b). For the purpose of poverty alleviation, the Indonesian government has created and implemented an innovative package of programmes, namely PROKESRA (P*rogram Keluarga Sejahtera*, or The Programme for Household Welfare), for helping the poor. PROKESRA consists of several programmes, which could be grouped as TAKESRA/KUKESRA (*Tabungan Keluarga Sejahtera/ Kredit Usaha Keluarga Sejahtera*, or Saving/Credit Schemes for Family Welfare Family), PROKESOS

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[1] Previously, its name was *Badan Kredit Kecamatan*, in English: Sub-District Credit Board.

(*Program Kesejahteraan Sosial*, or The Programme for Social Welfare), and IDT (*Inpres Desa Tertinggal*, Presidential instruction for helping poor villages). All these programmes are related and are mutually supportive.

PROKESRA contains PROKESOS, TAKESRA/KUKESRA, and IDT. The objectives of these programmes are to enable the poor to be productive and become self-reliant(BKKBN, 1996). This means that at least they are able to actively participate in income generating activities.

To implement PROKESRA, the government has introduced a number of procedures (BKKBN, 1996). Firstly, the government has mapped and classified all villages in Indonesia into backward and non-backward villages. Such mapping and classification is based on 25 variables for rural villages and 27 variables for urban villages[2]; Secondly, all households are classified according to their welfare status. There are 5 categories of status: Pre-welfare (KPS), Welfare I (KS I), Welfare II (KS II), Welfare III (KS III), and Welfare Ill-plus (KS III+). These categories are based on 32 criteria[3]. The two lowest classes, KPS and KS I, are the focus of the government's anti-poverty programmes.

TAKESRA/KUKESRA were introduced in 1996 as saving/credit schemes for the poor. Though it is seen as a new innovative model of microfinance, it is deficient compared to the more established BRI Unit Desa and BKK with their proven track record. This is because TAKESRA/KUKESRA does not take account of cultural, demographic and social-economic differences between the different villages or regions. Moreover it does not run its operation in cooperation with other financial institutions dealing with the villagers such as BRI *Unit* Desa, but with BKKBN (*Badan Koordinasi Keluarga Berencana Nasional*, or Coordinating Board of National Family Planning), which deals with villagers but is not a financial institution. This board has some experience in relation to the distribution of a fairly similar type of small credit scheme which it ran for

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[2] Complete details of how the government maps the villages and why such variables are used are presented in BPS (1995a).

[3] The criteria will be presented in detail in BKKBN (1996).

its family planning acceptors that then extended to non-acceptor families. The UPPKA (*Usaha Peningkatan Pendapatan Keluarga Akseptor*, or the programme for increasing the family planning acceptors' incomes), which was then transformed to UPPKS (*Usaha Peningkatan Pendapatan Keluarga Sejahtera*, or the programme for increasing the incomes for welfare families) were both programmes under the management of the board. However, these programmes have since become inactive.

Studies on poverty in many countries have shown that the majority of the poor in developing countries are women (Bhatt, 1991; Fuglesang and Chandler, 1993; Wahid, 1993; Ariffin, 1994; Berma and Shahadan, 1994; Oorjitham, 1994; Rahman and Khandker, 1994; Sulaiman and Mahfoz, 1994; Rahman, 1996). Based on this, most studies have recommended that women who are poor need to be the focus of any poverty alleviation programmes.

The institution with the most experience in dealing with women is the BKKBN, with its successful *Program KB* (*Program Keluarga Berencana*, or Family Planning Programme). Besides being an appropriate institution in terms of dealing with women, BKKBN has had good management, resulting in the success of the family planning programme. BKKBN also has a broad network from the top managerial level to the household level in urban and rural areas all over Indonesia, including the remote areas. Following the success of its family planning programme, BKKBN has moved its mission forward from just encouraging small size family towards improving the general welfare of the poorer families. Thus, KUKESRA, which is basically a welfare programme, is not a totally new undertaking for BKKBN. Nevertheless, whether or not it can succeed in the area of microfinance, as distinct from that of family planning, remains to be seen. In contrast, although BRI Unit Desa has also been successful, some studies claim that its success is confined to densely populated areas such as Java, and there is doubt about its performance in the outer islands (Patten and Rosengard, 1991).

STATEMENT OF THE PROBLEM

It is generally accepted that poverty is a topic that has been around for a long time. The use of microfinance as an instrument has been seen as a new, appropriate and effective tool in the attempt to alleviate poverty in many developing countries including Indonesia. The discussion on the role of microfinance on poverty alleviation has been extensive in the last two decades. Since it is relatively new, many government and non-government organisations have tried to learn from, replicate or implement new and innovative models of microfinance (Bhatt, 1991; Ling, Zhongyi *et al.*, 1997)[4]. Unfortunately, not all microfinance institutions have been successful; some have succeeded while others have failed. Moreover, some institutions only serve the less poor, and fewer still serve the poorest of the poor (Adams, 1984; Ladman, 1984; Hussain and Damaine, 1992). Thus a relevant question now is to determine how to serve the poor while at the same time enabling the microfinance institutions (MFIs) to survive and grow. Studies have shown that there is no single answer. Patten & Rosengard (1991) have pointed out that different regions possibly provide different answers. Thus, more information and analyses may provide the necessary answers. Since KUKESRA is a national programme and reaches most of the poor, it is anticipated that it will provide invaluable information on the effectiveness of microfinance on the incomes of the poor.

For the purposes of this thesis, there are three characteristics of TAKESRA/KUKESRA, which are likely to be useful. These characteristics include the fact that it is a saving-credit scheme applying a graduated scheme of loans for recipients through groups of members. It is also a revolving fund activity, and finally it is a programme aimed at poverty alleviation. The substantive objective of the programme can be defined as an improvement in the recipients' economic life. This is achieved through fund mobilisation from saving and helping the poor to enter and participate in income earning activities. Through this process, it is expected that many more poor in the target groups can be involved in the programme and they can receive benefits from it. Through an analysis of the data collected and interviews with the recipients and the administrators of the programme, a picture of the success and failure over time and their

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[4] Since it is new and there is no single pattern of microfinance, the theory of microfinance is not well established yet. A long discussion is still on going. The mailing list for discussion on this topic is available at Devfinance@lists.acs.ohio-state.edu, Development finance mailing list (DFN).

reasons can be obtained.

However, this picture became more difficult to observe because of the complications arising after the economic crisis in July 1997. Since then, the Indonesian economy has experienced a continuing crisis beginning from the international financial sector and spreading to domestic monetary and real sectors. This event has undoubtedly affected the income and welfare of poor households especially in the informal sectors. The crisis has resulted in higher unemployment and has led some economists to examine the impact of the crisis on microfinance institutions such as BRI Unit Desa and BKK[5]. At the same time, the economic crisis has enabled us to study the impact of the TAKESRA/KUKESRA programme before and after the crisis. This thesis attempts to investigate the extent to which TAKESRA/KUKESRA has achieved its objectives of helping the poor in the periods before and after the economic crisis of July 1997.

OBJECTIVES OF THE STUDY

The objectives of this study are as follows:

1. To evaluate the performance of KUKESRA in carrying out its activities, in maintaining its sustainability and in alleviating poverty, in particular the impact on its recipients.
2. To identify and analyse the factors affecting the above performance.
3. To offer some recommendations for programme improvement.

THE IMPORTANCE OF THE STUDY

The study will be of importance for the following reasons.

1. KUKESRA is a national programme aimed at improving the well being of the poor. It is also an innovative model that is interesting to investigate. As such, this case study of microfinance in Indonesia will contribute to the theoretical

[5] This question has been discussed at length on the DFN (Development finance mailing list).

literature on the success and failure of microfinance in poverty alleviation in developing countries.

2. Few studies have been done on this national level programme in Indonesia.
3. The findings of the study should provide proof and explanation of the effectiveness of the government's programme of microfinance for poverty alleviation. This study is expected to provide some contribution to the theory of how and why government intervention in the micro credit market has succeeded or failed.
4. It also provides some options for programme improvement, especially in the current situation where the issue of poverty has once again become the focus of the nation's attention.

RESEARCH QUESTIONS

Did the government create the programme to assist the poor to escape from poverty or was it undertaken to achieve the government's short-term political objectives? If it was designed to assist the poor, can the programme survive in the longer term? If it was for alleviating poverty, has it performed better than non-governmental microfinance institutions for the poor? Did the economic crisis of 1997 affect the performance of microfinance institutions as well as small businesses?

HYPOTHESES

The general hypothesis for this study can be formulated as follows:

"KUKESRA and Mitra Karya East Java (MKEJ) have had a poverty alleviation impact on their recipients, but the effectiveness of the government's MFI in alleviating poverty was much lesser compared to that of the privately managed MFI". KUKESRA and Mitra Karya East Java (henceforth referred to as Mitra Karya or MKEJ) represent a government's MFI and private MFI respectively. The basis for this hypothesis is the fact that a private MFI establishes its operation purely on economic considerations, even when it is not a profit maximising institution. A government MFI, on the contrary, usually undertakes its operation based on economic and political considerations.

The motivations of the field staff are also different. The field staff in a privately operated MFI do their best to achieve higher productivity since productivity is the basis for their reward, while those involved in a government funded MFI tend to do just the minimum as their income is independent of productivity.

The sub-hypotheses derived from the above general hypothesis are as follows.

1. a. The objectives of MFIs are to increase the income of recipients, especially the poor. Therefore, it is hypothesised that the incomes of recipients of KUKESRA and of MKEJ improved significantly compared to the poor who did not participate in the programmes.

   b. The performance of the privately managed MFI was better than that of the government run MFI. It is hypothesised that the increase in income among MKEJ recipients will be more sustainable than the change in income among recipients of KUKESRA.

2. a. The recipients of KUKESRA and of MKEJ experienced significant changes in their employment status, either from unemployed to becoming employed, or in increasing the number of working hours compared to the poor who were non-recipients.

   b. The increase in employment among MKEJ recipients was more sustainable than those of the recipients of KUKESRA.

3. a. The Basic Needs Achievement (BNA) measured in terms of consumption of services such as in education, housing, health, nutrition and sanitation improved significantly among the recipients of MKEJ and KUKESRA

   b. The improvements in basic needs achievement were far more significant among the recipients of MKEJ than among KUKESRA recipients.

4. a. Since KUKESRA is an extensive programme, while MKEJ is a small non-governmental programme, it is expected that the coverage of KUKESRA would be much larger than that of MKEJ.

   b. Since KUKESRA focussed on the poor based on BKKBN classification, while MKEJ was targeted to those who had small-scale business activities, it is expected that KUKESRA reached a wider range of poor compared to MKEJ.

5. a. As KUKESRA was heavily subsidised, while MKEJ had no government subsidy, it is expected that the borrowing cost charged to the recipients would be lower for KUKESRA compared to MKEJ. However the quality of the services provided would be higher for MKEJ recipients than that for KUKESRA's recipients.

   b. The recipients of KUKESRA will tend to be more enthusiastically involved and stay longer in the programme that the recipients of MKEJ.

6. KUKESRA is not self-sustaining while MKEJ will be sustainable. KUKESRA had a lower cost of operation and income, while MKEJ had high costs of operation but was covered entirely by its operating income.

7. The funds from KUKESRA and MKEJ replaced those from the informal sources. Thus, as more credit (KUKESRA) was disbursed; the lesser was the reliance on the borrowing from informal moneylenders by the recipients.

8. Small businesses were affected by the crisis of 1997, which consequently reduced the recipients' ability to repay loan installments and undertake savings.

THESIS STRUCTURE

In Chapter 2, a theoretical review of poverty and the role of microfinance on poverty alleviation will be undertaken. This chapter is divided into 2 parts: the first part examines the theory of poverty, including the concept, definition, and measurement of poverty such as the poverty line and poverty index of household. The second part deals with the theory of microfinance, including aspects of the distribution of credit particularly to the target group and non-target groups, the measurement of the performance of microfinance institutions such as outreach and sustainability and related issues. The interaction between poverty and microfinance institutions, including the poverty alleviation effects of microfinance institutions, will also be examined.

The research methodology and data collection and analysis used in this study is discussed in chapter 3. Chapter 4 deals with the history of microfinance in Indonesia. Chapter 5 describes the organization and the implementation of KUKESRA and Mitra Karya. Chapter 6 discusses the issues of poverty in the country as well as in the regions surveyed. The findings of the study will be discussed in the remaining 2 chapters. Chapter 7 discusses the performance of the programmes based on the institutionalist approach, and chapter 8 analyses the impact of microfinance institutions on poverty reduction according to the welfarist view. The conclusions and policy implications of the study are discussed in the final chapter 9.

CHAPTER-2: POVERTY AND MICROFINANCE: A THEORETICAL SURVEY

INTRODUCTION

This chapter provides a theoretical review of poverty and microfinance. The chapter is divided into two sections. The first section gives a theoretical survey of poverty, while section two discusses the relationship between microfinance and poverty alleviation. In the first section, the concepts of poverty, including the relationship between economic growth and income inequality, the causes of poverty, and the measurements of poverty including indicators of poverty, poverty lines, and poverty indexes are discussed. Section two examines the concepts of microfinance and the debate on concessional interest rates, and the impact of microfinance on poverty alleviation.

POVERTY: CONCEPTS AND MEASUREMENTS

CONCEPT OF POVERTY

Although there have been many studies on poverty in developed countries such as Mitchell and Harding (1993) and Harding and Landt (1992) for Australia, and Albelda (1999) for the United States, among many others, most literature discusses the concept of poverty in relation to Developing or Less Developed Countries (LDCs). It is acknowledged that the prevalence of poverty in these countries is extensive. Roughly, about 40 percent of the population in these countries are poor (Getuhig-Jr. and Shams, 1991).

People, particularly those in Developing and LDCs, realise and experience poverty with or without knowing its definition. Different social sciences formulate their own definition of poverty, however, all the definitions view poverty as a form of deprivation (Soetrisno, 1995; Hatch and Frederick, 1998; Kramer, 1998). Aspects of poverty may be visible in severe malnutrition, or the lack of basic necessities such as food, shelter, health, education, as well as human dignity. It follows that no single definition of poverty could be generally applied because the concept of poverty is contextual. It can vary with place and time. Even though every country uses the term, poverty implies different things in different countries. For instance, in the Côte d'lvoire, the term poverty refers more to the situation of the lack of income, uncertainty and insecurity, exclusion and vulnerability, and powerlessness. In some other countries, it refers to the number of mouths to feed such as in rural Zambia (Sindzingre, 1999:3). For countries with a very low level of development, the term poverty equates with starvation or famine, while in other countries which are more developed it may equates with income inequality (Ariffin, 1994). Thus, poverty in developing and less developed countries has some very general characteristics: deprivation, vulnerability, and powerlessness (Khan, 2000).

One useful economic definition of poverty is the shortfall of consumption from the minimum level required for an individual to live as a human (Rosenthal, 1969). However, Sen (1992) emphasised that poverty is not the problem of low income, but the lack or inadequacy of income, in particular, towards the mhrimum acceptable levels of consumption. Sen (1987) states that poverty is the situation where people lack the capability to afford these minimum acceptable levels. Many factors are responsible for this situation, ranging from personal characteristics such as education, and health to the economic characteristics of society such as the market (Sindzingre, 1999).

Beside the contextuality of poverty, it is also dynamic. Poverty itself as the shortfall of income can be seen as static, but vulnerability is dynamic (Jalan and Ravallion, 1998; McCulloch and Baulch, 1998; Sindzingre, 1999; Khan, 2000). Some poor remain in poverty indefinitely, while others change from non-poor to poor or move from poor to non-poor. Thus, poverty can be identified as permanent or chronic and temporary or transient. Transient is related to the fortune or misfortune the individuals obtain from a shock such as an economic crisis, floods, drought, accident, or illness (Jayaraman and Lanjouw, 1998; Ferreira, Prennushi *et al.*, 1999). Besides chronic poverty, there is also trans-generational poverty (Khan, 2000). The concept of trans-generational poverty supports the theory of the "culture of poverty" introduced by Lewis (1969).

Deprivation can be divided into absolute and relative deprivation, and the dimension of poverty can be seen as either absolute or relative poverty. The concept of relative poverty and absolute poverty was first introduced in 1958. Galbraifh (1964) stated that poverty is partly physical and relative. Absolute poverty uses subsistence or the biological approach. Ariffin (1994:1-6) conceptualised absolute poverty as the "bare existence" concept. The measurement of absolute poverty makes it possible to compare poverty among different regions or time periods. According to Ariffin (1994:1-6):

> Absolute poverty is measured by basic measurement standards to enable comparison with other places and times. A usual method is to use the biological approach, which explains the relationship between poverty and the inability to obtain minimum necessities to maintain physical efficiency or to fulfil basic human needs. An aspect, which is also stressed, is the right of human beings to achieve at least a basic living standard.

Absolute poverty categorises as poor those whose income is too low to satisfy minimum necessities in order to maintain physical efficiency. If the amount of income is insufficient to satisfy the minimum necessities as represented by a poverty line, those who fall below the poverty line are categorised as poor. Nevertheless, given that this is a biological approach, the minimum necessities may differ from individual to individual. It will at least differ by physical categories, such as gender, age, job, and the level of physical activity required. To the extent that the poor can be placed in such physical categories, they can then form the basis for comparing poverty in different places and over different points in time.

The alternative relative poverty concept relates to and is based on the distribution of income. It evaluates how income in a society is distributed among the people in that society. Greater inequality is then associated with higher levels of poverty. Since this concept is based on the income of a person or a group of persons in relations to others, there are certain implications which follow. They can in turn complicate the discussion of poverty. This can be illustrated by the following example.

A person who is regarded as relatively rich in a poor region/country may, in moving to a richer region/country drop into the ranks of the relatively poor and vice versa. A related point which follows from this is that in more developed countries/regions where all the people may be said to have enough income to satisfy their basic needs, the lower 20 percent of the population would be categorised as poor under the relative poverty concept, but not by using the absolute poverty concept. In contrast, in LDCs, where 95 percent of the population are unable to meet their basic needs, where the top 40 percent of the population would not be poor under the relative income concept, the majority of such people would be categorised as poor under the absolute poverty concept.

Relative poverty could be measured by comparing the proportion of income in a society, comparing the income of the bottom 20 percent of population with that of the upper 20 percent. In this sense it measures relative deprivation i.e. it measures the extent to which the bottom 20 percent of the population lags behind the top 20 percent in the income distribution.

Even in the measurement of absolute poverty, the concepts of relative poverty can be made to play a part. This is because what is regarded as a necessity may change with time and place. Getuhig-Jr. and Shams (1991), for instance, defines poverty as human deprivation of the consumption of basic needs such as food, and of basic social infrastructure items such as health services, education services, housing services, clean drinking water. Each item is evaluated based on its own norm value in the community. Thus, a community's norm becomes a standard for each item (Navajas, Meyer *et al.*, 1996; 2000).

GROWTH, POVERTY AND INCOME INEQUALITY

Rigorous studies on the relationship between economic growth and income inequality started when Kuznets (1955) published his work on "*Economic Growth and Income Inequality*". Kuznets (1955) claimed that the relationship between the two mentioned variables takes an inverted U shape. As the economy grows, per capita income increases, which is followed by an initial increase in inequality in the distribution of income and inequality will reduce as the per capita income increases further. Subsequent studies confirm that growth and income distribution are not independent (Kanbur and Lustig, 1999). Ahluwalia (1976) showed that cross-sectional country data can be used to test the relationship between growth, poverty and income inequality.

Numerous studies have been carried out to test this hypothesis.

Studies by Li, Squire *et al.* (1998), Deininger and Squire (1996), Anand and Kanbur (1993), and Ravallion and Chen (1997) did not support the hypothesis. Based on econometrical analysis using more reliable data, they proved that there is no empirical relationship between income and inequality as claimed by Kuznets. Deininger and Squire (1996) even found that the bottom 20 percent of the population, that is the poor, significantly lose from policies designed to reduce the level of income inequality. However, Elbers, Lanjouw *et al.* (2000), using cross-sectional data, found that inequality increases following an increase in expenditure, but could decrease following the continuing increase in expenditure for economies that have higher levels of expenditure. The finding was still consistent even when the model included demographic variables.

Many macroeconomic studies on poverty alleviation show that poverty, in particular absolute poverty, will reduce if mean income increases, but economic growth can result in either an increase or decrease in the level of income inequality in a country (Khan, 2000). In particular, Bruno, Ravallion *et al.* (1998) emphasised that poverty cannot be alleviated without economic growth. Furthermore, other studies such as Ravallion and Datt (1999) and Aghion, Caroli *et al.* (1999) showed that distribution is crucial for such growth. These studies found that growth and poverty alleviation in a region/country depends much on the distribution of income and resources at the beginning, in particular, the distribution among sectors.

Canagarajah, Mazumdar *et al.* (1998:3) found the same pattern of relationship between growth and income distribution in Ghana. In Ghana in 1988, 1989 and 1992, even though inequality of income distribution declined, the number of people on welfare increased. This trend was observed for Ghana as a whole as well as for the various regions. Poverty declined the most in areas with better distribution of and vice versa.

However, Bigsten and Levin (2000) in their review of "*Growth, Income Distribution, and Poverty*" found that there is no strong relationship between growth and inequality of income distribution, although some facts support the thesis that inequality will reduce growth in the economy.

Canagarajah, Mazumdar *et al.* (1998:3), found evidence to show that the initial distribution of income harms the growth process except in the case of land ownership in agriculture dominated countries. However, Bigsten and Levin (2000) confirmed that there is a systematic relationship between growth and poverty. The higher the rate of economic growth, the larger the rate of poverty alleviation.

The concepts of poverty and inequality are different even though Kramer (1998:55) says that for some sociologists both concepts are taken as synonymous due to the fact that both basically imply deprivation. The concept of inequality in the distribution of income has become the base for relative poverty. The more even the distribution of income the less will be the extent of relative poverty. For a given society, the more equal the distribution of income, the higher would be the welfare of that society, because relative poverty is seen to impact on the measure of welfare. This is because an individual living with a relatively rich neighbour will feel relatively more deprived than if the same individual had a neighbour who had almost the same economic situation. The transfer of income from a rich to a poorer person in the same society will reduce inequality and hence increase welfare. However, it does not guarantee that the more equal the distribution the better the welfare of a society in terms of absolute poverty. Poverty in absolute terms will reduce if there is also an increase in income, in particular, if average income of the poor increases.

Following Ravallion and Datt (1999) and Aghion, Caroli *et al.* (1999), if there is zero growth, poverty alleviation could happen and welfare, in turn, would increase if there is an improvement in income inequality. There are various methods of measuring income inequality. These include the Lorenz curve, and the Gini ratio among many others (Kramer, 1998).

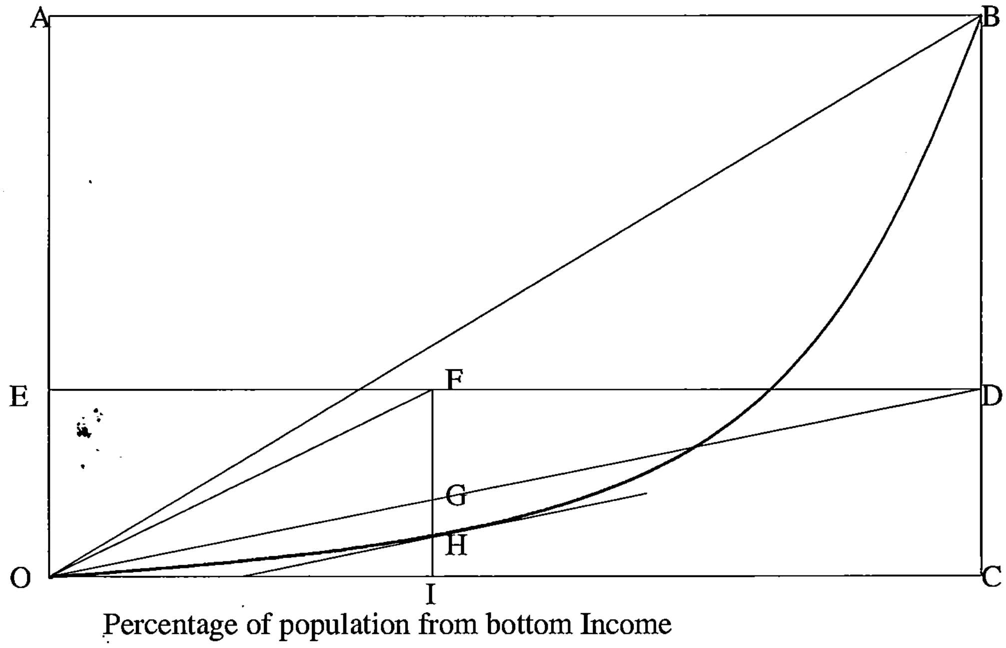

Figure 2-1 Income Distribution and Poverty
Source: Sen (1976:226).

The relationship between income distribution measured by Gini ratio, or Lorenz curve, and poverty is presented diagrammatically in Figure 2-1. In the figure, income, population, and the poverty line are normalised. The segment line OB is the mean income. The line OHB is the Lorenz curve reflecting the inequality in the distribution of income. The Gini ratio, used as the index of inequality, is the ratio of OHB to OBC. If the Lorenz curve over imposes the line OB, OHB then becomes zero and the distribution of income is purely even. The larger the area of OHB, the bigger the Gini ratio meaning the larger the inequality. The slope of line **OD** is the "poverty line" in the normalised units. H is the point where the Lorenz curve equals the "poverty line". The number of the poor is shown by OI. Then, poverty is calculated as the ratio of areas OHG divided by OIF. From the diagram, it is clear that the more even the distribution of income the less the poverty would be.

Since inequality is closely related to poverty, the distribution of income should be incorporated into the poverty index of a society or community as Sen (1976), among others, has done. According to Sen's index (1976), the more unequal the distribution as measured by the Gini ratio, the higher the degree of poverty of the community. Elbers, Lanjouw *et al.* (2000) found from their empirical study that an increase in inequality would increase the poverty level. Some other indexes developed later such as Kakwani (1980), Takayama (1979), Clark, Hemming *et al.* (1981), Thon (1983), and Foster, Greer *et al.* (1984) have attempted to improve the Sen index from some of the drawbacks related to the weakness of the Gini ratio and the aspect of relative deprivation or formulation, but have no different argument on the role of income inequality on poverty.

CAUSES OF POVERTY

Lipton (1994) distinguishes various factors that are strongly related to poverty, namely, population, work, nutrition, ownership of assets, education, and health. All these factors can be indicators as well as factors affecting poverty. Poverty here is related to deficiency in income and the lack of basic needs.

Poverty is a consequence and also the cause of the lack of human resources development (Ariffin, 1994). To identify the causes of poverty, it will help to examine the different dimensions of poverty because each dimension is to some extent caused by different factors. Four main dimensions of poverty can be identified in the literature: spatial, temporal, gender, and personal.

The spatial dimension of poverty can appear at both inter-regional (inter-state or inter-provincial may be substitutes for inter-regional within a country) and intra-regional levels of analysis. The spatial dimension of poverty is evident from the fact that in one country there are some provinces which are richer than others, and some parts of a province which are wealthier than other parts.

This leads us to examine the factors behind such spatial differences in poverty. It is unlikely that the poor intentionally gather in a certain area while the rich go to some other areas; though there have been historic cases where the poor have been kept out either through pass laws as in the case of South Africa or through zoning laws, while differences in the quality of educational and other services have attracted the rich to areas providing superior services. Such differences in quality of services can form the basis of a more generalised model. Myrdal's (1957) model of circular and cumulative causation is one such model. The initial trigger for spatial differences may be caused by the exploitation of natural resources by firms, facilitated by the government' s provision of infrastructure. This lowers costs for firms and increases demand for others, leading to the expansion of existing firms and the location of new firms, while training by the firms creates a pool of skilled labour. Such external economies can create a circular and cumulative causation. It can create Hirschman's (1958) "polarisation" or what Myrdal (1957) calls "backwash" effects (see also Ravallion, 1998). Capital, skills and enterprising individuals, often young, are drawn to such an area from the neighbouring areas or regions, thus further stimulating the growth of this area and increasing both inter-provincial as well as intra- provincial inequality. A virtuous circle may be created in the area, which has achieved the initial stimulus. Through such external economies and the inflow of capital and skills from other parts of the country, in Hirschman's terminology, it becomes a growth pole (see also Karsten, 1997:7).

Deprived of capital, skills and left with a relatively older and dependent population, a vicious circle may operate in the lagging region. Such a vicious circle may be reversed and a virtuous circle may come into play, as and when an external stimulus is created through the creation of infrastructure to facilitate investment in a major project. However, Hirschman (1958) and Myrdal's (1957) "spread effects" may, also, come into play.

Spread effects imply that benefits spread to other parts and regions from the early growth pole(s). This may happen if those who have the capital and skills decide to create and expand firms in these other parts (Karsten, 1997:7). Such a development may be triggered by the emergence of external diseconomies (rising costs, which are external to the firm, for instance through transport bottlenecks and regular power shortages) in the growth pole, forcing firms to relocate elsewhere to reduce such costs. There are likely to be provinces which may be isolated from this process, because of their remoteness. In such areas/provinces intra-area inequality may be quite low. However, compared to other parts of the country, they may be quite poor.

Spatial poverty can also be seen between rural and urban areas. Beside the problem of access to land in rural areas, the availability of infrastructure is likely to be an important key determinant of income. Remote areas tend to have limited infrastructure. This is likely to make them isolated. The higher the degree of isolation, the lower the level of inter-regional mobility, *ceteris paribus*, and this in turn makes for lower level of development. The availability of infrastructure is not just a case of the distance from the capital, but is likely to be related to political priorities of the dominant forces within the government.

The spatial dimension of poverty, dealing with remoteness and the backwash effects, can be linked to a discussion of temporal dimension of poverty. Temporal dimension of poverty relates to the fact that many poor people experience chronic poverty while some others are transient. A number of poor people have lived in poverty for years on end or even for generations. This may be even in countries where there have been periods of sustained growth. Vicious circles can be used to explain aspects of chronic poverty. Since the poor have low incomes, their consumption of basic needs is low as well. They tend to experience under-nourishment, lack of shelter, lack of education and health services. Thus, they tend to be physically weak, resulting in low productivity. In addition, since they are characterised by low education and low income, their capability to send their children to school is low. Therefore, their children also tend to have low levels of education. This process makes chronic poverty possible. This theory of vicious circles combined with the culture of poverty explains the inter-generational transmission of poverty.

However, the culture of poverty cannot be applied generally for every poor person. The theory of the culture of poverty works under certain stipulations (Lewis, 1969). It applies to the poor who have no aspiration to improve their future and are mired in hopelessness and apathy and tend to accept their situation as given. Their generation tends to live in poverty and is infected by the values of the culture of poverty. The value system is then transferred to their offspring. Their neighbours may have changed their situation but they tend to be unchanged. However, there is no clear income dividing line between those who are mired by such a culture and those who are not.

Chambers (see in Soetrisno, 1995) identifies 5 traps of deprivation experienced by the poor. The traps are poverty itself, physical condition, exclusion, vulnerability, and the lack of capability. The first 3 traps are related more to chronic poverty which endures the poor to live in a poor situation, while the last 2 are more related to transient poverty, in particular, coping with any economic "shock" or crisis. This applies also to economic depression. In such a period of crisis, such as the 1929-33 depression, the poverty worsens (Atkinson, 1987). This is because it leads to a fall in effective demand, followed by businesses cutting back on investment, leading to an increase in unemployment, followed by a cut in consumer demand, making for more business bankruptcies, leading to a fall in employment and in incomes. Khan (2000) identifies natural disasters such as floods or drought as factors which lead to more transient poor. Janvry and Sadoulet (2000:6) confirm that the rural poor are very sensitive to income shock. A shock like an income crisis increases rural poverty. The economic crisis in the 1990s has proved that many countries experienced an increase in rural poverty, for example, Mexico during the 1994-1996 crisis and the crisis in Venezuela between 1990-1994. Inequality of income distribution in rural areas also follows a similar pattern. Economic crisis results in larger inequality which does not revert back following the economic recovery.

The gender dimension of poverty is evident from the fact that the majority of those living in absolute poverty are women. Gender differences in education, employment opportunity, and also the power to control the allocation of tasks and income within the households are factors behind gender poverty. The differences reflect the gender subordination of the female. In many societies, it is traditional to value men higher than women.

Personal (family) poverty depends on personal (family) characteristics including knowledge, managerial skill, attitudes to risk-taking, which all affect a person's productivity, differences in which lead to differences in income, resulting in different poverty levels.

It is clear from the above discussion that poverty of persons or family units is directly affected by their real income. The levels of income they have depend on their access to employment opportunities and to productive resources. Such access, when combined with their own characteristics, impacts on their productivity. If people of a certain gender group have less opportunity to become involved in education or in jobs, their qualities of human resources is lower, so their productivity is also lower and hence this lowers the incomes they have. If the poor are farmers, for instance, and land is the only resource they have, the more fertile the land the higher the level of income they obtain. Productivity of resource influences the income they have. Ownership of this resource depends on how it is distributed among the people. It is affected by variables related to political, economic, social and cultural structures (Ariffin, 1994). Obviously, the rural landless, since they have no control over land resources, are likely to be even poorer than farmers with access to marginal land.

The above discussion shows the causes of poverty from a macro to a micro context. Most macroeconomic development studies tend to identify lack of growth as the major factor affecting the persistence of poverty in a country or areas/regions in a country. Getuhig-Jr. and Shams (1991) criticise the macro approach to the causes of poverty. The macro approach sees low growth as a cause of low income and maintains that increasing the growth rate will improve the welfare of the poor. The big question raised by Ravallion (1999) is "when growth is pro-poor". Deininger and Squire (1996) have shown from their study that the poorest bottom 20 percent of population can become worse-off as a result of growth. Thus, since poverty is contextual, the causes should be analysed with the focus on those living in poverty and not at the aggregate level. On the other hand, Rahardjo (1995) sees the causes of poverty as being very specific, and localised. Rahardjo (1995:146-148) identifies the following seven causes of poverty. The first is the limited opportunity of employment that makes the poor unemployed, under-employed, or disguised employed. The second factor causing poverty is the very low wage received. The third is low productivity, especially in the agricultural sector. The fourth is lack of assets such as land. The fifth is discrimination against gender. Women are the most disadvantaged. The sixth is low agricultural prices leading to low income received from their produce. The final cause is the loss of land. Land is people's asset, and selling the land in many cases leads to poverty.

It is generally accepted that poverty is multidimensional (Getuhig-Jr. and Shams, 1991; Janvry and Sadoulet, 2000; Khan, 2000 April). Poverty is like a cycle. It has some causes but it also has repercussions on the causes, which further impact on poverty itself. Therefore, to analyse the causes, there is a need to distinguish poverty as an effect (output) or as a source (input). Analysis of the causes identifies poverty as an effect (Getuhig-Jr. and Shams, 1991).

As poverty is the effect, the low level of income causes it. The low level of income results in the inadequacy to satisfy the minimum acceptable levels of consumption. People experience a lack of many basic necessities. The low level of income is the result of working conditions. Involvement in low productivity jobs can cause low income. Alternatively, physical weakness could result in low productivity leading to low income.

The disadvantaged working conditions could be caused by a lack of access to resources, including the opportunity to work. The lack of access is the result of either a limited number of available opportunities or a lack of quality of human resources. The quality of human resources is not independent. It is in turn affected by the adequacy of the consumption of basic necessities such as education, nutrition, shelter, and health services. The levels of consumption are dictated by the level of real income.

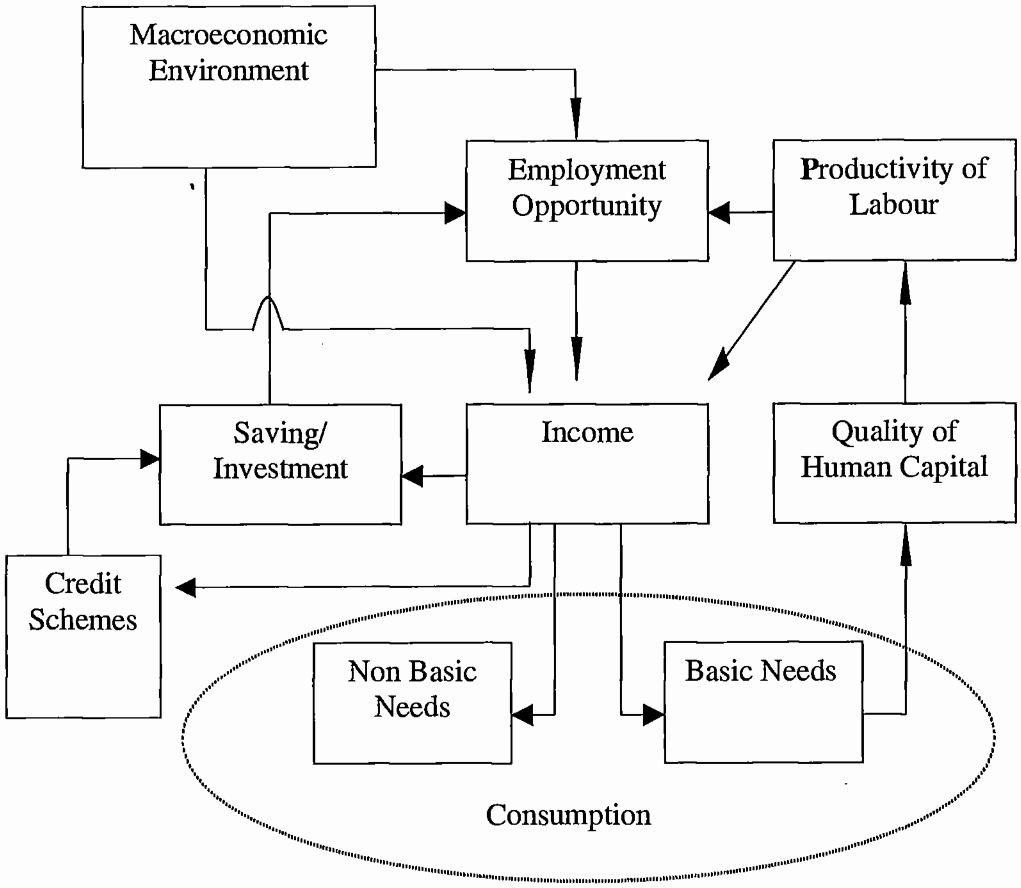

Figure 2-2 Poverty Cycle
Source: Adapted from Getuhig-Jr. and Shams (1991).

The household cycle of poverty can be seen as a vicious circle. The poor's living condition is characterised by the low quality of human capital, which affects some of the variables such as the low level of education, experience, and physical condition. Consequently, their productivity is also low. This leads to a low level of income leading to low capability to fulfil their needs, both basic and non-basic. Basic needs are those necessary to fulfil the minimum requirement to maintain life as a human. The main components of basic needs are transportation, housing, food or nutrition status, potable water, sanitation, health services, and education.

The lack of ability to satisfy these basic needs leads to low quality of human capital. Low quality of human capital leads to low productivity. This in turn results in a low level of income. At the same time, since the level of income of the poor is low, the levels of saving and investment are low as well. This leads to a lack of opportunity for employment, and to unemployment, and low income. All these simultaneously put the poor into a poverty trap.

MEASURING POVERTY

Poverty lines: Concepts and applications

The poverty line is a threshold income which distinguishes the poor from the non-poor. The poverty line can be used to determine the number of poor and the degree of poverty, that is the extent to which people's incomes fall short of the poverty line. Each country has its own estimates of the poverty line. There are also variations within countries. The poverty lines can differ among regions/provinces and between rural and urban areas. Just as the term poverty relates to different situations, the term poverty line also varies according to the different methods used. Differences in the concepts of poverty used result in differences in the methods of establishing the poverty line. The concepts of absolute and relative poverty discussed above would derive the absolute and relative poverty lines, which can be extended to objective and subjective poverty lines.

To measure absolute poverty, a fixed income threshold or an absolute poverty line is required. This poverty line provides either a fixed minimum income or basic needs to satisfy a subsistence living standard or acceptable minimum levels. There are some absolute poverty lines, such as income poverty line, basic needs poverty line, and nutritional poverty line (Carter and May, 1997:3). The line which is most used, which is simple and easy, is the income poverty line. People whose income falls below the line are categorised as poor while those who fall above the line are regarded as non-poor.

Unlike absolute poverty, relative poverty cannot be measured by a fixed threshold income. To measure relative poverty, the distribution of income is paramount. Usually relative poverty is measured with reference to the arithmetic mean income (Creedy, 1998), or the median income (Mitchell and Harding, 1993), or the bottom quintile of the distribution of income or consumption expenditure such as that used in Pakistan

(Alderman and Garcia, 1993; Adams-Jr and He, 1995; see also in: McCulloch and Baulch, 1998).

The distinction between the absolute poverty line and relative poverty line mentioned above raises the question of whether the absolute poverty line is really absolute. It differs among countries and regions and between different time periods in a country. Even for the same country and time period, the figures can be dramatically different if the comparison uses different methods to estimate the absolute poverty lines such as that shown in the work of Barrington (1999). An absolute poverty line should be appropriate for any period of time if the poverty line is kept constant in real terms (dollars). From her work it is difficult to accept the concept of absolute and relative poverty lines. Even Orshansky (1964) admits that her poverty line is not absolute but relatively absolute. Barrington (1999) argues for the use of the term objective poverty line rather than absolute or relative poverty line because absolute poverty line is not absolute across time. She conceptualises poverty lines in this manner (page 407):

> ..... Objective lines, on the other hand, are set by experts and are absolute across individuals. Any expert following the same procedure will produce the same line.
>
> Subjective poverty lines are constructed by soliciting community members' opinions of what income level separates the poor from the non-poor in their communities. Subjective poverty lines are thus built from the wide-ranging estimates provided by biased parties.....

Those who experience the deprivation decide the subjective poverty line (SPL). Since it is different for each individual the SPL sounds relative. The "Leyden Poverty line", using Praag, Spit *et al.*'s (1982) terminology, is a subjective poverty line (SPL). The "Leyden Poverty line" does not use the community's norms but individual judgements of each individual's own minimum amount of necessities. The rationale is that only individuals best know the minimum incomes they need to satisfy their basic needs. Here, the judgement would be overall, not only for buying goods and services but also in relation to people's economic positions in the community. In this case, community norms have been incorporated into individual judgement. To get the individual's norm, each individual is asked a simple minimum income question (MIQ) such as:

> "What income level, in your opinion, do you personally need as the absolutely minimal? That is, you mean that with less than this amount you could not make ends meet".

The difference between the fixed and the SPL is related to simplicity and the excludability of the poor. The fixed poverty line is simple and easy to apply because it uses a definitive amount of minimum income, and all individual incomes are compared to this minimum income. Thus, based on the poverty line, poverty for all individuals has the same meaning. However, it is an artificial line decided from outside the poor and is used to evaluate all members of a society. Besides, Ravallion (1996) criticises the income objective poverty line as it only captures material well being. Individuals have their own standards for the minimum they need to live, which include material and non-material things. A fixed poverty line ignores these differences. In contrast, a relative poverty line is more complicated because each community or individual has its own norms. However, it includes the poor in deciding their minimum requirements. Hoewever, since the value of "minimum" for each individual is different, it has the crucial weakness that the poverty of one individual cannot be compared with the poverty of others.

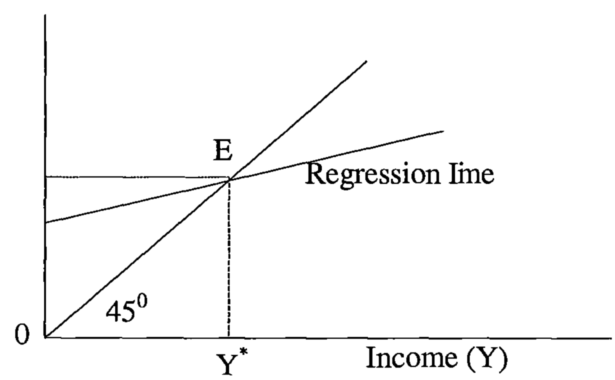

Figure 2-3 Social Subjective Poverty Line

From the individual subjective poverty line, the SPL for the society or community can be constracted (see also: Pradhan and Ravallion, 1998; Milanovic and Jovanovic, 1999)

E is the intersection between the 45^0 line and the regression line (MY= f(Y)), and Y* is the Social Subjective Poverty Line. Individuals situated on the left side of point E are poor because their income is below the minimum requirement, while those situated at the right side of E are non-poor because their incomes are greater than the minimum needed.

The measurement of poverty is related to 2 basic issues: the incidence and the intensity (Carbonaro, 1990 p.254) of poverty. The incidence of poverty tries to show how many people are poor or lie below the poverty line, while intensity tries to provide answers to questions such as how are the conditions of the poor. Both need instruments to identify the poor before measuring poverty itself. The need to distinguish people between poor and non-poor precisely is essential for discussing poverty further. Rosenthal (1969) says that the indicator ideally should be simple, easy to compute and generally applicable.

Studies on poverty existed a long time before Orshansky (1964) created her poverty line threshold income that has become a benchmark for the estimation of the poverty line in many countries in recent times. Poverty has been defined and measured before Orshansky. However, Orshansky's attempt to define poverty and identify the poor in the United States is relatively well known compared to other similar studies on poverty. Fisher (1999) traces historically the studies on the poverty line concept and find that such studies began as early as the middle of the 19th century.

In 1850, European statisticians made a study on family income and expenditure for different social and occupational groups. Some studies were also made to evaluate families' living standards over time. One of the most widely known studies is that of Ernst Engel (1821-1896) and his now famous Engel's Law. According to Engel's law, poverty is negatively correlated with the proportion of income spent on food by the family (1999).

In the early 20th century, 2 European statisticians, namely Charles Booth and B.

Seebohm Rowntree, wrote on poverty and related issues. At the turn of the century, between 1889 and 1903, Charles Booth published his works on poverty, industrial and religious conditions, and made use of the "poverty line" concept. Based on his poverty line, the poor can be divided into "poor" and "very poor" groups. His poverty line used a monetary unit but it was not developed from a standard budget. Rowntree (1901), using his poverty line, divided the poor into "primary" and "secondary" poor groups. The primary poor are those who had incomes below the poverty line while the secondary poor are those with total incomes just above the line. Rowntree's poverty line was based on a standard budget made up of 3 components: food, rent, and "household sundries" (Fisher, 1999:3). The term "household sundries" used by the writer refers to a basket of other basic needs such as clothing, lighting, fuel, etc. The food component of the poverty budget was based on nutritional requirements.

In the United States, studies on poverty have appeared since the standard budget was introduced in 1890-1891. This standard budget approach was used as the basis for the official poverty line for the US between 1899-1946. During this period, poverty as a concept transformed from pauperism to insufficient income. There was also a shift in the concept of poverty as a consequence of individual characteristics such as laziness, stupidity or any other weaknesses to the concept of poverty as the consequence of a system. Poverty is a consequence of economic, social, political and institutional factors.

Since the early 20th century many studies on poverty lines have been published. Most of the writings on this topic were undertaken in association with the writers' duties in either religious or charitable activities. After 1946, the poverty lines in the US were based not on the budget standard but in terms of dollar units, which remained unchanged until 1958. In the period after 1958, the poverty line was higher than in previous years in real terms and varied according to the size of family. In this period, the concept of relative poverty was introduced. In 1958, Galbraith (1964) said that poverty was partly physical and relative. Thus the concept of poverty does not just involve a minimum standard of physical needs but also a minimum standard of the community where the person lives.

Orshansky (1963) published her articles about poverty thresholds in the *Social Security*

Bulletin. Her approach to poverty measurement has become more widely known than others. She derived two measures of poverty; one was based on the US Agriculture Department's *Low cost food plan* and the other was on *The Cheaper economy food plan.* Based on these two measures, she categorised the poor as "poor by low-cost diet" and "poor by economy diet". Orshansky's approach has been replicated and developed by many other scholars in numerous countries.

In Indonesia, Lains (1979:7) used two different approaches to estimate the absolute poverty line: *dominant item approach* and *basic need income approach.* The dominant item approach calculates minimum requirements based on the cost of a basket of food required to satisfy the minimum nutritional requirements for an individual or family. The basic needs income approach includes not only food but also some other basic needs. Studies on poverty in Indonesia use the latter approach where the poverty line is measured by the minimum income needed to satisfy basic necessities (Sayogyo,1974 and Penny and Singarimbun, 1973). They focussed on minimum food requirements and converted these into standards based on rice consumption. Sayogyo (1974) recommended 240 kg of rice per year for an individual in the rural areas and 320 kg for those who live in the urban areas. Penny and Singarimbun (1973) also used the rice standard but based their minimum requirement on individual judgement. Thus, they combined Sayogyo's approach with the subjective poverty line approach. Their study, which was based on the rural areas of Java found that the minimum requirement for an individual at that time was 240 kg of rice. Lains (1979:7) used per capita expenditure for food and other basic needs as the poverty line. Perumal (1992), another example, used Orshansky's approach to compare and evaluate the budget standard poverty line for Malaysia. All the above approaches to poverty line measurement, except that of Penny and Singarimbun (1973), are 'objective' and artificially determined by experts who are not part of the poor (Barrington, 1999:407). The definition and measurement of poverty is defined by the non-poor but applied to deterimine the welfare of the poor.

Praag, Spit *et al.* (1982) were critical of Orshansky's food ratio poverty line and compared it with "Leyden Poverty Line" which is based on individuals' perceptions of their own poverty. Later, many other measurements of poverty, such as the Basic Needs Achievement, used individual perceptions or community norms as an approach to define the "poverty line" (Navajas, Meyer *et al.*, 1996). These methods do not just estimate the poverty line but also directly count the incidence of poverty for individuals, families, or community units.

The poverty line is just an instrument to divide people between poor and non-poor, while the size of poverty is measured by using the poverty index. The development of these indexes will be discussed below.

Atkinson (1977) states that to measure the incidence of poverty, the focus of attention should be on the proportion of people living in a society who have a level of income below the line. This is, basically, to answer how many people are poor in a society. This idea has led researchers to create an index of poverty which is known as the Head-Count Index (HC). Its simplicity and ease of applications has made the index popular[6].

Even though it is simple, it has some drawbacks. One of the main drawbacks is that it is insensitive to income distribution among the poor. It does not differentiate between a person who has income near the poverty line and one who has no income at all. Thus, it fails to answer the other basic question, that is, how poor the poor are.

The United States Social Security Administration formulated a different index to overcome this problem. Poverty gap (PG) is the proportion of income gap to income at the line or the percentage of income shortfall. Let us say that income gap (y_{gi}) is the difference between income at the poverty line and the level of income of an individual. Then the poverty gap is the ratio of income gap to income at the poverty line[7].

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[6] Suppose that n is the number of people living in a society, and q is the number of people with an income below the poverty line, then the incidence of poverty can be measured as:

$$HC = \frac{q}{n}$$

[7] Suppose that y_i is the income level of an individual and ϑ is the level of income at poverty line, then the income gap of an individual is expressed as follows:

$$y_{gi} = \vartheta - y_i$$

since all people having income above the income of the line are categorised as nonpoor, the gap of income becomes censored and can be written as:

Both indexes, HC and PG, are simple and easy to implement but they have several weaknesses. All the weaknesses are associated with the concept of poverty in a community. The weaknesses are related to axioms associated with income distribution intra and inter social classes[8]. The axioms and the development of the indexes are presented in Appendix Chp.2.1.

For household poverty analysis, where the unit of analysis is the poverty of each household, then intra and inter class transfers become irrelevant. The relevant concept of distribution in this case is the distribution of resources among household members.

Besides the size of poverty measured by a fixed poverty line, another approach such as Basic Needs Achievement (BNA) measures the size of poverty by norms or relative poverty line. The degree of Basic Needs Satisfaction negatively reflects the degree of poverty condition. All the basic needs such as education, housing, health, and nutrition situations are composed in one single index based on their own norm value in each community[9].

$$\left.\begin{aligned} y_{ig} &= \vartheta - y_i && \text{if } \vartheta > y_i \\ &= 0 && \text{if otherwise} \end{aligned}\right\}$$

Poverty gap of the individual is:

$$g_i = \frac{y_{ig}}{\vartheta}$$

since y_{ig} is censored, g_i is censored as well.

Thus poverty gap for a society is the average gaps of individuals in the society:

$$PG = \text{Average}(g_i) = \frac{\sum_{i=1}^{q} y_{ig}}{q\vartheta}$$

[8] Distribution of income intra poor class means the transfer of income from one poor person to other poor persons, while the distribution inter classes means a transfer of income from nonpoor to poor people.

[9] Navajas *et al.* (1998) formulate the index of Basic Needs Achievement as:

$$BNA = \left(\frac{1}{m}\right)\sum_{j=1}^{m}\left(\frac{X_j}{X_{js}}\right)$$

Fuzzy Approach

All the above indexes are based on the traditional poverty line using income or consumption as the main relevant indicator. The poverty lines as explained above are characterised by a threshold income that divides the population into poor and non poor groups. Unfortunately, in many cases there is a blurred area where it is not certain whether the people are poor or non-poor. Cerioli and Zani (1989) criticised the fixed threshold approach for three reasons:

The first is that data on individual income are mostly imprecise because often those who provide the data do not want to disclose the truth because they tend to see such issues as being very personal. In addition, income is difficult to define in precise terms, which introduces bias in income analysis. The second reason is that many people accept poverty as multidimensional, and income alone does not measure all the aspects of poverty. The third is that the poverty line concept is debatable, and many view it as unrealistic.

Cerioli and Zani (1989) and Micheli (1998) proposed an alternative approach that is based on theory of Fuzzy set. This is appropriate since there are situations in which it is not clear whether a person or household is poor or not. This index tries to show the degree to which a person or household can be categorised as poor. The degree of poverty mentioned is derived through a membership function incorporating all the poverty indicators. This approach is a more general that can be used to write all the above-mentioned indexes. This approach is described in detail in Appendix Chp.2.2.

Where m is the number of variables considered as components of basic needs.

X_j is the achievement of the variable j as a component of basic needs.

X_{js} is the norm value of the variable X_j.

BNA is in the range of (0,2), the value greater than 2 is censored to 2.

Navajas *et. al* (1998) applying this index in Bolivia show that in their nationwide analysis 0.9 is used as the border of poor and non-poor.

POVERTY AND MICROFINANCE

Microfinance is regarded as an important tool for the alleviation of poverty, particularly in Developing Countries. Since formal financial institutions such as banks encounter many difficulties in meeting the financial needs of the poor, microfinance institutions have been initiated in many countries round the world to overcome some of these obstacles. The significance of microfinance as an effective strategy to combat poverty in developing countries began with the pioneering work of Prof. Yunus, the founder of Grameen bank in Bangladesh. There is very little literature on the origin of microfinance as indicated in the following online discussion forum (devfinance@lists.acs.ohio-state.edu), Bengtsson (1998), a subscriber on 16 October 1998 asked:

> Does anybody know of good documentation on how it all [microfinance] started and evolved? Is Bangladesh the cradle of modern micro-finance from where it migrated to Latin America or did it pop up by itself in many parts of the world simultaneously? ...... have not yet found any publications taking the "historical" approach to microfinance........

Many researchers regard the Grameen bank in Bangladesh as the pioneer in microfinance or assume that microfinance originated from the Grameen bank. Boomgard (1998) in responding to Bengtsson made a clarification that Grameen did not invent microfinance. He noted that "A.H. Khan and the Comilla" Project which existed before Grameen, had used microfinance. In addition, Gonzalez-Vega (1998), who agreed with Boomgard (1998), referred to the existence of the *Juntas Rurales de Credito* in Costa Rica in 1914. Dowla (1998) also confirmed that Grameen did not invent microfinance. Dowla (1998) only hypothesized that Professor Yunus was the person who innovated the group lending approach. Moreover, Yunus called the activities "microcredit" and not "microfinance" since only loans were provided. Hollis (1996) discovered some form of activities related to saving-credit in Ireland in the 1720s. Dean Jonathan Swift was the name of a fund established to give loans to "poor artisans of Dublin". Between 1740 and the 1950s, the Dublin Musical society created loans similar to the system of Dean Swift. By 1756 several thousand families had been given relief in the space of a few years (Hollis, (1996):5-6). In Indonesia credit-saving activities for the poor have been in place since the 1800s. The concept of group lending had been introduced in Indonesia during the Dutch colonial rule long before the origin of the Grameen Bank (Suharto, 1988).

All discussed above, Yunus did not use the term of microfinance. The term "microfinance" was probably first used by Dieter (1998) in August 1990. Dieter wrote a letter to the director of the summer program of the Economic Institute in Bolder Colorado to request the creation of a "microfinance" session dealing with both microsaving and microcredit. Then the use of the term microfinance spread rapidly, and it was used first in East Africa in the early 1990's by USAID and the World Bank to describe moneylending activities (Campaigne, 1998).

CONCEPT OF MICROFINANCE

As can be seen from its name, a Microfinance Institution (MFI) has two key concepts: micro and finance. Finance means providing financial services or financing a project. However, micro has many interpretations. Some people interpret it as small-scale service providers. The providers of microfinancial services are relatively small in capacity in many aspects, including financial and organisational, compared to formal banking. Microfinance institutions undertake their activities supported by donors because their own financial resources are limited. Some financial service providers interpret the term micro as the scale of the services provided. This means that the fund provided for each project is limited. As such, the size of the loans are small. However, some interpret it as services for the poor to meet their economic circumstances. In this case the poor who are assisted are those who have small-scale business entities. Each of these interpretations has some aspects of microfinance. It relates to service providers, or services offered and service recipients. Each element of these programs has a micro or small attribute.

There are differences in approach of microfinance institutions. Many institutions provide financial services, either just credit or credit and saving, in small size to satisfy the poor's liquidity needs. Some provide the services personally to individual clients while others distribute them to clients through groups of clients. Some people claim that the former is an old approach while the latter is the newer approach to microfinance. Following the success of Grameen bank using group lending, the later paradigm is regarded as a breakthrough or innovation in the area of microfinanc. The group lending approach has become the focus of development of microfinance institutions in recent times. Since this study is about microfinance institutions using group-lending approach, this approach is particularly relevant.

The target group for microfinance institutions is the poor. Since the size of their financial needs is small, they have little or no services from the formal banking sector. The absence of these services is possibly due to the reluctance of banks to lend to the poor. The reluctance of banks to serve the poor could be due to the high costs of transactions or for other reasons such as lack of collateral. In addition, the poor may be reluctant to seek help from the formal banking sector due to their perceived negative impression of the banks.

In providing services to the poor, microfinance has grown fast, not only as an industry but also in the size of each service provider. The term micro referring to the scale of the provider's financial capabilities can not be constantly maintained. Thus, in this study, a microfinance institution is defined as any financial institution which provides its services in small scale to the poor through groups of members for financing their businesses. Since the poor have low economic capability, their size of businesses is also small leading to small sized financial service needs. This definition is based on the fact that microfinance institutions are not only economic agents but are institutions designed to help the poor.

Since the poor lack access to formal banking, their needs for financial services are fulfilled from various alternative sources such as borrowing from friends, relatives, neighbours or from informal moneylenders (IMLs). Obtaining credit from informal moneylenders (IMLs) results in high interest rates on loans, and evidence suggests that these have resulted in the poor being caught in a situation of debt-trap (Fruin, 1994; Schmit, 1994). Often in such a situation, their limited assets have been taken away by creditors for the redemption of a loan. The fact that the poor have to pay high interest rates compared to the non-poor on loans became an issue motivating the government to intervene in the market for small credit. It was expected that government provision of cheaper credit would eventually replace the IML as the poor took advantage of the cheaper loans. Unfortunately, what government expected was far from the truth. Government intervention, on the contrary, had no sweeping effects on the IML. In fact, certain segments of the financial market could not be replaced by the formal banking sector. This segment was characterised mainly by the poor. The fact that informal money lending activities were still prevalent among the poor meant they were open to continuous exploitation by the IML.

High interest rates, a large need for funds as well as the low capacity for saving mark the financial situation of the poor. Such conditions make it ideal for the existence and operation of an MFI. All services provided by an MFI are focussed on the poor. The entry of MFIs in the segment does not only aim to replace the IML but more fundamentally to help the poor meet their financial needs, to encourage them to be involved in any income generating activities, to assist the poor, the majority of whom are women, and to improve their living conditions.

Nature of MFI

MFIs are non-profit making institutions designed to assist the poor and improve their living standards. They operate beyond economic frontiers. MFIs provide cheaper credit and loans compared to the informal moneylenders (IMLs), and in addition provide other forms of non-financial support. MFIs base their operation on the basis of a non-profit but 'no-loss' principle. Even though the rates levied are lower than IMLs', the rates are designed to recover cost. Cost-recovery is not just to reduce the interest burden but operating costs as well. It is *sine qua non* for continuity, and it provides wider opportunity for the poor with lower productivity to be involved. Theoretically, the interest rates on loans were somewhere between the IMLs' rates and the rates in the formal banking sector.

The 'new' MFIs apply a group-lending approach[10]. This method is different from other MFIs or IMLs which provide credit direct to individual debtors. Hereafter, the term MFI refers to the type of MFI using group lending approach. MFIs provide loans to individual members through groups of members (peer groups). All individuals who would like to ask for credit have to gather in a small group. The group has certain characteristics: it is self-established, self-selected, and applies joint liabilities and reciprocal responsibilities. Self-established means that even though the guidelines for building the group come from the MFI, the group should be built by the members themselves and not by creditors (or staff of MFI). Thus, it is entirely a members' group created for the greatest benefit for the members. Groups are self-established to give members a sense of belonging.

Self-selected refers to the membership in the group. Members of the group select each other. Self-selection reflects the situation of knowing each other, trusting each other and the ability to cooperate. Knowing each other does not mean familiarity but rather knowing each other's characteristics such as honesty, hard working and economic productive activities. Accepting each other as members in the same group means mutual trust for each other. This is the foundation for the principle of joint liability.

The joint liability principle means that each member has the responsibility for her own loan repayment as well as any default caused by other members in the same group. The failure of a member in repaying the loan becomes the responsibility of others in the group. As a consequence, all members do their best to avoid failure by working hard, and help each other to overcome any of their business obstacles (called reciprocal responsibility). Joint liability is a prior commitment between members (or the group) and the MFI. It is not just a matter of repayment but more importantly it provides a sense of guarantee on repayment of the loan. The application of this principle simultaneously solves some fundamental problems such as the problem of information (selecting, monitoring, and evaluating), the problem of enforcement of repayment, and

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[10] The world·new is put in inverted commas because a few scholars in this field claim that the group lending approach is a new invention, in fact, it is not really new as described in chapter 4, the history of MFI in Indonesia.

the problem of collateral. A solution for these issues reduces a large portion of the operating cost of an MFI. Creditors also have extensive contact with members of the group in group meetings.

The group has a centre where group meetings take place. The centre is treated as an incubator for success, where many benefits such as training, evaluation, discussion, advice, and many other supporting services are transferred (Holcombe, 1995).

The group concept can also overcome diseconomies of scale. If each member has to use her own loan for her business, the fund is sometimes too small to finance the business. Thus, by pooling the funds of other members' loans, the amount of loan is likely to be large enough to finance a group investment.

Besides the strengths, this principle of joint liability has some potential weaknesses. Based on this principle, it needs to be clearly specified what will happen to the loan on the death of a member, whether it becomes the responsibility of the group, or members of the deceased's family, or whether the MFI will write-off the loan. Such an undertaking will avoid any related problems associated with loan repayments at a later stage. The other potential weakness is related to the success of some of the members. The first time members start a group they have the same situation but in the ongoing business activities, a few members often succeed significantly more than others. The less successful members tend to take it easy and become careless about failure due to the other successful members. This could also discourage the successful members from doing their best. Thus, the MFI has to arrange clearly how much each successful member has to bear for the failure of repayment from other members in the group. Thus, the homogeneity of the group, not only in their situation but also in their success, could increase the rate of repayment. Such a case also shows that those who succeed could avoid repaying if they know that many others can not repay it. Thus, an MFI has to anticipate the change in members' behaviour if they know that many members cannot repay the loan.

Graduated loans are a characteristic of MFIs. The first loan will be followed by a second which is bigger if the borrower can fulfil their responsibility or if they have a good credit repayment record from their previous credit provision. The graduated loan approach is an appropriate method to encourage members to repay the loan on time. It also acts as an incentive for members to fulfil their duties.

In order to ensure the members remain constantly aware of their responsibilities, continuous monitoring from other members is needed. The lesser the control, the lower the degree of care. The control could decline due to over trust. It could be possible that in the early period all members can monitor each other well, but since there is no problem of repayment, they tend to assume that each member already knows what he or she has to do and other members do not need to be aware. However, this assumption is often false; the less the control, the higher the moral hazard. Accordingly, procedures in the group in relation to credit realisation has to be arranged by MFIs in such a way that constant control can be maintained.

Rural Financial market

Theoretically, the high interest rates charged by a microcredit program, either in the formal or informal money lending sector, could be due to profit maximisation in a monopolistic market or high operating costs in a competitive market. The lenders could be monopolists because they have information about borrowers (Desai, 1976; Saleem, 1987). In the case of a monopoly, the entry of other institutions, either government or non-government is necessary to increase the degree of competitiveness. In this way, it is expected that creditors, including informal ones who cannot reduce interest rates to a competitive level, will exit, and the poor will benefit from lower interest rates on credit.

However, according to some economists, in particular from the University of Ohio, the rural financial market is a competitive one (Adams, 1984). Even though they are competitive, they could still charge higher interest rates because of the high costs of operation such as transaction costs, default rates, and the administrative cost of collection. Thus, even though government may intervene in the rural financial market by supplying credit with lower interest rates, the informal moneylenders can still successfully operate with higher interest rates. The small scale of transactions and sparse location of members all result in higher operating costs.

In order to reduce operating costs, lenders could divide potential borrowers into classes ranked according to lending costs. Suppose that there are two classes of borrowers: the less poor who are of lower risk, and the poor who are of higher risk. This model of segmented market introduced by Gonzalez-Vega (1976) can be illustrated as follows:

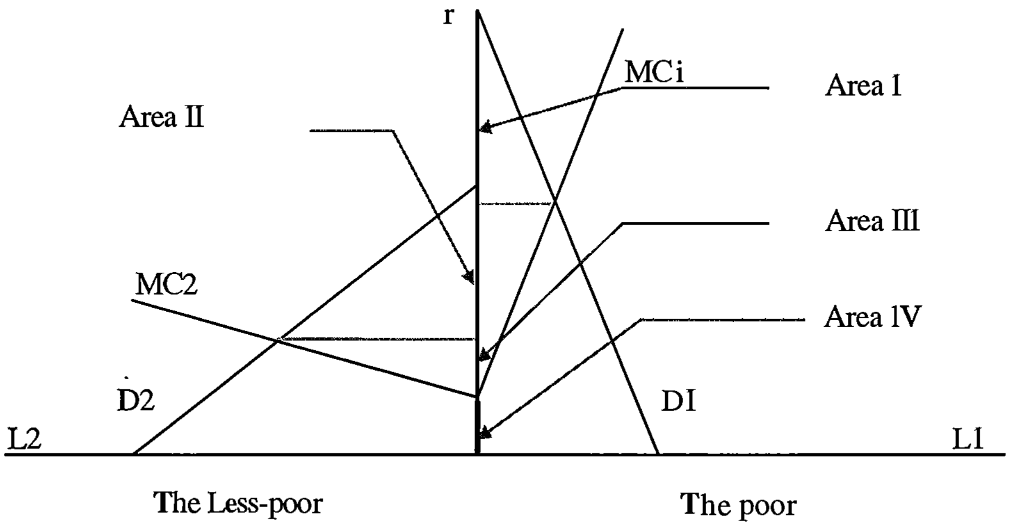

Figure 2-4 Effect of Interest Rate in a Segmented Market
Where:
r = interest rate
LI = loans for the poor
L2 = loans for the Less-poor
D1 = Demand of the poor
D2 = Demand of the Less-poor
MC1 = supply of funds to the poor
MC2 = supply of funds for the Less-poor.

The demand for loans from the Less-poor is more elastic because they have more sources of funds including access to formal institutions. On the contrary, the demand for loans from the poor as a group is less elastic because they have limited sources of credit. Similarly, the supply of funds for the less-poor is more elastic because of the lower risk involved, while that of the poor is less elastic since lending to the poor is more risky.

There are 4 areas where interest rates play different roles:

Area I : Where the interest rate is higher than the highest market clearing rates, that is, the rate of the poor segment. The market will contract if interest rate increases. In this area, increasing the fixed interest rate only leads to market contraction because less liquidity is demanded.

Area II : Where interest rates are between two market clearing equilibrium rates. In this area, if government imposes a ceiling interest rate, for instance the rate is reduced, there will be loan concentration to the less-poor group. There will be relatively fewer loans for the poor and more for the less-poor. This is the so called *Iron Law* .

Area III: The area where interest rates are below the lower market clearing rates. In this case the rates of interest for the less-poor are still above the lowest interest rates at which any lenders are willing to supply loans. If the interest rate decreases in this area, the market will contract due to less supply.

Area IV: The area where interest rates are below the lowest rates that lenders are still willing to offer credit. This means that the interest rate is below the minimum of average cost. In this area, there is no market because there is no supply.

Now, if the government intervenes by supplying a sum of cheaper funds to reduce the interest rate in the rural market, then the effect of the intervention can be explained as follows. Since the government randomly gives credit to all feasible projects as long as the return is greater than the concessional rate, all projects would have the same likelihood of being selected. The concessional rate is the rate below the market clearing interest rate. Projects that have a rate of return between the concessional and market clearing interest rates which would not qualify for credit under a competitive market rate, are now able to get loans based on the concessional interest rate. This has been criticised by many proponents of the Ohio group such as Adams (1984), who maintains that a concession rate leads to the use of funds for less productive activities. If the concession rate is situated in area II as explained above, then concentration on the wealthier will happen according to the Iron Law (1976; Gonzalez-Vega, 1984).

Based on the randomised principle and under an assumption of normal distribution, the projects selected will be proportional. The model can be illustrated as follows:

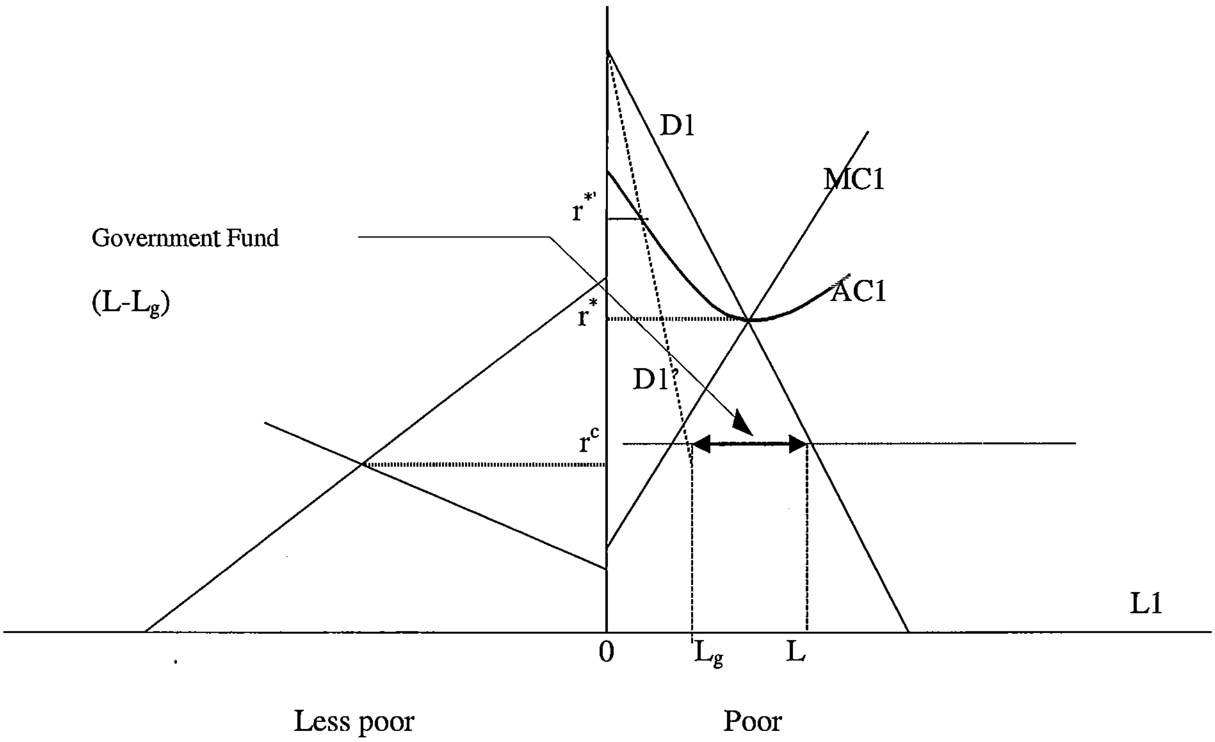

Figure 2-5 Government Intervention in a Competitive Market

Figure 2-5 shows that if there is no intervention, competitors will meet market-clearing equilibrium which efficiency allocation holds at r^*. Suppose that the government's credit fund is as much as (L-L_g) and the rest of the market is served by competitors, the equilibrium will be at least as high as $r^{*'}$, where $r^{*'} > r^*$, or there will be inefficient allocation. Since the government's fund is limited (L-L_g), the quantity of funds demanded at the concession rate (r^c) by feasible projects that can not be satisfied is as much as (0 - L_g) . This is the residual market, with the residual demand (D1'), and the 1MLs will compete in the residual market. Thus, whatever the role lenders play, there is no reason for a decrease in interest rates to be an effect of new entry. The number of players in the market does not determine the interest rates much, but influences factor costs, particularly the transaction costs of the players.

Transaction Cost

A high transaction cost is influenced by two factors, the small scale nature of transactions and the dispersed location of the population served. Small scale of transaction brings high costs for savers, borrowers, and lenders. Due to the small-scale of transactions the cost per transaction is relatively high. The distance from clients' houses to the bank where services are provided also affects the costs of transaction. The longer the distance the higher the cost. This applies to savers, borrowers and lenders alike. Many facts show that institutions can not survive if their transaction costs are very high.

The high costs of defaults and of transactions and collections contribute to the high interest rate. In order to help people to bear the heavy interest burdens, the interest is paid at short periodic intervals such as daily or on a weekly basis. However, the cost of collection also contributes to the high interest rate. The shorter the term period of a credit, the higher the cost of collection of repayment; and the more sparsely distributed the clients, the more expensive the collection process since this type of cost is associated with distance.

Lenders' Costs

Lenders also incur some administrative cost in setting up the loan process, for example the cost of collecting information about potential borrowers, monitoring the use of funds and collecting repayment. Many government-sponsored programs use village leaders as agents to reduce the costs of information. Village leaders are assumed to know best about local people in their areas and so are called on to assist in the screening, monitoring, enforcement and the loan collecting loan process. They are even given the right to decide if a household should obtain credit, and how much credit is appropriate for a household. Even though lenders have to pay for the agents' services, it is much cheaper than if they had to collect information about potential borrowers by themselves (Fuentes, 1996).

Beside those costs, there are other administrative costs such as paper and ink (Ladman, 1984). Tapsoba (1981) describes lending costs as all expenses spent by lenders, including salaries of staff, depreciation of building, vehicles and other instruments used, annual operating cost of project, interest cost of credit funds, and write-off on any bad loans. However these types of costs tend to be constant with respect to the size of loans made.

The group lending approach tends to transfer the transaction cost relatively more to borrowers. The cost of information is not very crucial in a group-lending approach due to the implementation of the principle of self-selection. Transportation costs for approaching the clients are also lower. Since lenders only have a connection with the group leader, the transaction cost is not high. The leader has to meet the members frequently in the group's meetings. This generates an operating cost, particularly the travelling costs for each meeting. However, all these costs in absolute value are relatively low compared to if each member had to come to the lender from the distant place in which they live. It is similar to if MFIs' staff had to go to each member's place. As a consequence, the bigger the group the less the cost borne by MFIs. However, the bigger the group the less efficient the transfer of knowledge, skills and technology to the members.

Borrowers' Costs

Ladman (1984) identified the borrowers' transaction costs arising from different component in the lending process. The components are: obtaining documents, paying commissions and bribes, travelling to and from the lender's place and also the opportunity cost of time spent. In the case of group lending, most transaction costs are made up of the travelling costs to each group meeting. However this type of cost is not a pure transaction cost. It is a joint cost contributed to by several activities: meeting for credit purposes, including counselling and discussion, and other social activities. All the transaction costs plus nominal interest become the cost of borrowing (Tapsoba, 1981).

THE ROLE OF MFI IN POVERTY ALLEVIATION

The role of MFI in poverty reduction can be explained in Figure 2-6 Interlikage between Microfinance, Employment, and Poverty Reduction below. The real market in the "Less-poor" segment is the line A-Ea-Ra, while for the "Poor" segment, it is A-Eb-Rb. Therefore, the frontier of the total real market for rural credit is the horizontal summation of both, or (A-Ea-Ra)+(A-Eb-Rb). If there is any intervention to reduce the interest rate from r_1 to r_2, the fund absorption will increase, and if the technology used is neutral, then the non-labour as well as labour input will increase. The use of more inputs means the increase in costs indicated by the shift of isoquant curve (from $Tech_0$ to $Tech_1$). However, by producing at minimum cost, the increase in costs means an increase in production. Thus, as explained by the following figure, the increase in production under the same price line will increase income and utility.

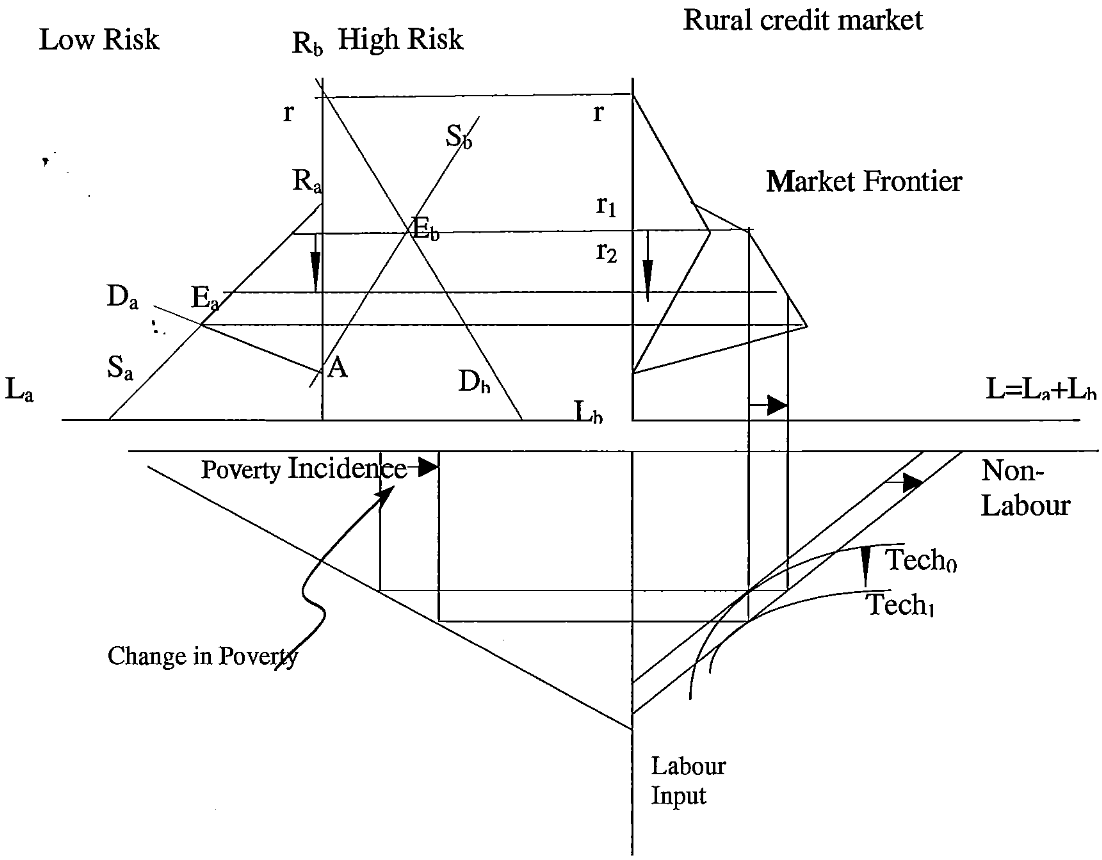

Figure 2-6 Interlikage between Microfinance, Employment, and Poverty Reduction

As the loanable funds are input in the production process, and assuming non-negativity, then the increase in this input will affect the increase in output. The expansion of the financial market for the poor will be followed by increasing their access to financial resources. This larger accessibility will make it possible for the use of more funds in their production and increase output. If the general prices are assumed constant, the increase in production will increase the revenue and, in turn, income. Suppose that without credit the poor can produce the combination of product Q1 and Q2 as much as shown by production frontier F_1, and the price line is PR_1, the optimum production that will provide the highest utility is the combination of Q1 and Q2 at point P_1 and the maximum utility afforded is U_1 (see Figure 2-7). Access to credit will help the poor to expand their production. Suppose that with the use of loans they can increase the production of Q1 and Q2 along frontier F_2, with the same levels of general prices PR_2 (where $PR_2=PR_1$), the poor can afford the higher level of utility as high as U_2 where $U_2>U_1$. Thus, the access to loanable funds can increase production and income, and thus welfare.

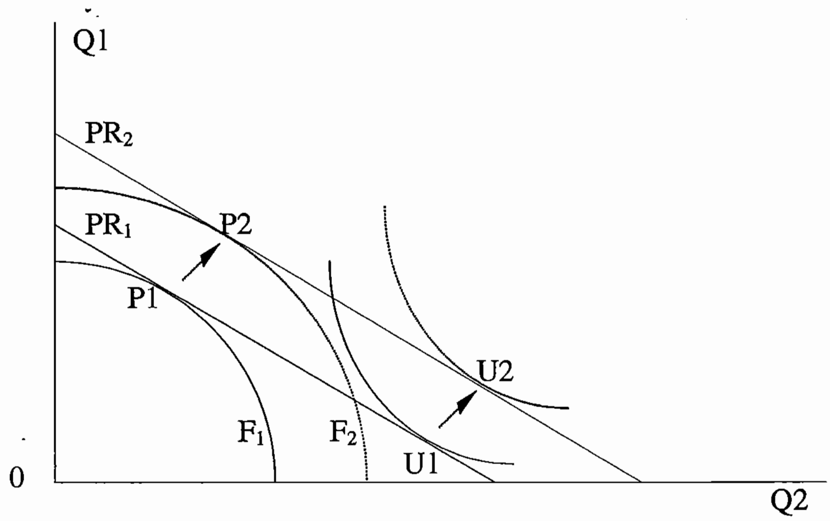

Figure 2-7 Production Frontier and the Increase in Welfare.

The increase in production implies the use of more inputs either, capital or labour or a combination of both. Therefore, the effect of credit is the creation of new employment in terms of the number of workers or the length of working hours and consequent increase in income.

Accordingly, the role of microfinance is to open the access for financial resources which is important for the poor to generate employment, production, and income, and their welfare. The market creation function becomes more important than the function of optimal allocation (Arndt, 1988)

The approach to intervention using concessional interest rate has been criticised by some scholars. Stiglitz (1990) argues that the coexistence of formal and informal banking is a proof of the failure of the formal banking sector to enter the segment of the financial market affecting the poor. This also means that the formal sector fails to help the poor financially. In contrast, the success of the Grameen bank has shown that an MFI has the capability to approach the poor appropriately. Since MFIs can enter effectively into the market affecting the poor, informal moneylenders (IMLs) directly or indirectly, will also be affected as they have to compete with MFIs.

IMLs have long been the main source of finance for the poor. Due to the high interest rate levied, many people presume that IMLs are monopolistic and exploitative in nature. Accordingly, many suggest that the practice of informal finance should be eliminated (Adams, Graham *et al.*, 1984). Adams (1984) criticises all these as non-arguments, because informal moneylenders do not get monopoly profits as often argued. On the contrary, they sometimes lose from their operations.

The group of thinkers from Ohio State University (called the Ohio group) who concentrate on financing the poor and MFIs, defend informal finance and criticise institutions applying subsidised credit and offering low interest rates to the poor. The market mechanism is still believed to be an effective tool for efficiency, including the issue of financing the poor. The group criticises subsidies and the application of concessional interest rates. According to this group, there are no arguments against high interest rates because the more flexible nominal interest rates would result in more equitable income distribution, more efficient allocation of resources, more output, and a more viable financial institutions (Adams, 1984).

The fact that MFIs apply a concessional interest rate, a rate below the market rate, on the assumption that the market controlled by IML is monopolistic, has also been criticised. The Ohio group claims that high interest rate charged by IMLs does not bring economic profit for creditors because of the high operating costs of the financial market for the poor.

They also claim that the availability of cheap funds is not a requirement for farmers to undertake investment. The decision to invest or not to invest does not depend on the interest rate alone but other factors like the rate of return on the capital. Moreover, the interest rate is only a small factor in the cost of funds. There are many other factors. If the interest rate is reduced, lenders' incomes are also reduced and these tend to discourage loan-deposit services. A low interest rate tends to create the concentration of loans among large borrowers.

The argument of income transfer through cheap credit is also disproved. According to the Iron Law (Gonzalez-Vega, 1976), a ceiling interest rate below the market-clearing rate will only create loan concentration to large farmers.

The argument of the cost-push inflation effects is also disproved. The interest rate could not increase prices significantly because it is only a small part of production cost, and agricultural prices have no strong link with overall prices. On the contrary, a high interest rate could encourage more deposits.

The main criticisms of the Ohio group criticisms as pointed out by Besley (1994:28) are: concessional rates create non-optimal allocation; this creates loan concentration among the wealthier; which in turn, will result in unsustainability.

Even though the Ohio group is critical of the use of concessional interest rates, they do not ignore the importance of microfinance as a source of finance for the poor. Governments around the world still consider government intervention through credit subsidy as an important element of anti-poverty strategies. The Government has the resposnibility to develop the economy as a whole, including the improvement of the poor, and a more equal distribution of income. Even though an MFI is not necessarily a governmental programme, support for the development of the poor and a concessional interest rate strategy are still needed to improve the income of the poor. There are at least 4 reasons for helping the poor as follows:

1. A high interest rate as levied by the informal moneylenders is a heavy burden on the poor. The rich getting lower rates while the poor being charged a higher rate will worsen the distribution of income. If there are two borrowers, one poor and the other rich, being charged different interest rates on credit, growth in income and wealth will be different[11].
2. The application of concessional rates creates loan concentration, but it can be overcome if assistance is targetted. An MFI does not serve the general market but it serves a particular target group.
3. Concessional rates reduce efficiency but they also create more employment and income generating activities. Development not only needs efficiency in resource allocation but also requires a creative market process (Arndt, 1988:227).
4. Due to imperfect information, not only do the informal lenders have information about borrowers, they also have market power and act like a monopolist. Here the market would be efficient if some sort of price discrimination is applied

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[11] Gonzalez-Vega formulates the following expression

Producer's net income (Y) is expressed by:

$Y=a(N+L)-iL$

where

a = average rate of return of the variable inputs employed,

N = producer's initial endowment (wealth),

L = size of the loan received and

i = rate of interest paid on the loan.

This formula could provide analysis of growth by assuming that all of the producer's net income is added to wealth each period; the rate of growth (g) through time of the producer's initial endowment is given by:

$$g=\frac{Y}{N}=\frac{a(N+L)-iL}{N}=a+R(a-i)$$

Where:

R = L/N is the leverage ratio.

From the above equation, interest rate has negative correlation with the rate of growth. The higher the interest-rate the lower the rate of growth. The less-poor's incomes grow faster than that of the poor. Thus it leads to more discrepancy.

among customers (Besley, 1994:43). The entry of other institutions into the credit market is important to break the monopoly. Price competition can benefit the consumers ultimately.

Measuring the Impact of Microfinance on Poverty Alleviation

All credit programs designed for the poor have the objective to alleviate poverty. Two alternative views are found in the literature for measuring the performance of MFIs in poverty alleviation. Borrowing Woller, Dunford *et al.* 's (1999) terms, the first is the institutionalist view which regards an MFI as successful if it can serve more people in poverty without incurring a permanent loss. The two main indicators used under this approach are outreach and sustainability. The second is the welfare view of the success of an MFI. According to this view, an MFI is regarded as successful only if the poor, the members, experience a significant change in their economic lives. If income is the target variable of the programme, then people who are assisted by an MFI must experience a significant increase in their income compared to those who were not involved in the programme. The two views will be discussed in more detail below.

Institutionalist view

Institutionalists argue that people participate in an MFI programme because they expect to benefit from the services provided. Thus the bigger the coverage, the more the spread of benefit, and the larger the benefit to the community as a whole. In addition, for the continuity of the benefit received, the programme should live longer or survive. Therefore, the two main aspects investigated to measure and evaluate the success of a credit programme are outreach and sustainability (Yaron, 1994a; 1994b; Gonzalez-Vega, 1997).

Outreach

Outreach, from MFIs' point of view, refers to the provision of a wide array of financial services they provide to a large number of poor people or, from the community's view, is the social value of the services provided by MFIs. Thus, in outreach, there are three related aspects: services provided as the output of MFIs, the delivery of the services to reach the poor, and the poor people's appreciation of the services. The services provided include the scope and quality of services in both credit and saving. The delivery of the services leads to a cost charged to clients, the number of clients reached and to what extent it reaches the poorest in the community. The appreciation of the services appears in several forms such as the length on involvement in the programme, and the willingness to repay the loan.

Thus, the measurement of outreach can be based on a number of criteria including breadth, depth, length, cost, scope and quality, and worth. The indicator for breadth could be the number of clients, or the number of loans disbursed no matter the cost. As long as the number of clients or the number of loans increases, the breadth of outreach also increases. It shows the coverage of the programme. Depth of outreach is the extent to which the programme reaches the poorest of the poor. Since social values put more weight on the poorer (Navajas, Schreiner *et al.*, 2000), the more the programme reaches the poorest, the greater will be the depth of outreach. This is not just measured by the number of poor people served, either in number or in percentage, but also in the degree of poverty the served poor experience. Length of outreach is measured by the length of time a member stays as a client of the programme. If clients appreciate the programme more than other alternatives, they will keep staying with the programme, unless they move to other sources that are more worthwhile for them. Cost of outreach refers to providing services with not only lower but also decreasing cost that clients have to pay. The costs that clients have to pay are interest payments and the costs of transactions. Furthermore, the scope and quality of outreach is shown by the type and quality of services provided.

The larger the number of clients, the higher will be the breadth of outreach of the institution. Breadth of outreach does not only depend on an institution's financial capability but also on its operating cost. The more the financial capability, the more poor the MFI can serve. Thus, the capability for coverage varies among MFIs. In Bangladesh in 1995, Hossain, Sakhawat *et al.* (2000) found that some MFIs had smaller coverage than others[12]. In the sample of 8 MFIs, some had low coverage, for example, MSFSCIP only had 1468 borrowers and 1713 savers, RDRS had 7877 and 18308 borrowers and savers respectively, while others, such as Grameen Bank and BRAC had large coverage. The Grameen had 1870371 borrowers and 2065661 savers. BRAC had 1059199 and 1510802 borrowers and savers respectively. In depth of outreach, all the MFIs claimed that their clients were only the poor, and that their clients were mostly (over 90%) women. However, the criteria of poor and non-poor used by most MFIs were means of the assets possessed. Two of these researchers (Hossain and Sakhawat), in their study in 1996, found that about 10% of the clients were non poor. Moreover, the MFIs did not reach the very poor. Most MFIs prefered to serve the less poor and moderate poor that constituted 78% of the poor while the extreme poor (22%) tended to be abandoned (Hossain, Sakhawat *et al.*, 2000:71). The picture is quite similar with that in India where MFIs did not reach many of the poor. Sinha, Samuel *et al.* (2000) found that the breadth of outreach of MFIs in India was generally smaller than that in Bangladesh. For instance, in March 1996, the coverage for SHARE was 1495 borrowers, Nari Nidhi had 2350 borrowers, SPSM had 2621 borrowers. All were women and poor.

In Nepal, Dev-Pant, Dhungel *et al.* (2000) found that the coverage of the MFIs included in their study sample was smaller than in India. The Bikas, a Grameen replicator, served as many as 26000 clients at the end of 1995, but others such as RSF and cooperatives served less clients. RSF (Vyccu) only served 49 borrowers and 313 savers. The loans were more to non poor than to poor. The pattern was similar for saving. The non poor constituted 65% of the borrowers and 76% of the savers. Moreover, it had fewer women than men in its clientele. RSF (Adarsha) gave loans to 87 borrowers and received savings from 160 savers, who were all non-poor. Only 38% among them were women. The Grameen replicator (Nirdhan) served as many as 1936 borrowers and 2131 savers. All were poor and women.

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[12] The study used a sample of 8 MFIs: Grameen Bank, BRAC, Rural Developmen Project-12 (RDP-12), the ASA, the Bangladesh Unemployed Rehabilitation Organization (BURO)-Tangail, the Shakti Foundation, the Rangpur Dinajpur Rural Service (RDRS), and the Marginal and Small Farm System Crop Intensification Project (MSFSCIP).

Breadth of outreach tends to increase following population growth. An increase in population means a higher population density. Thus, breadth of outreach can increase without much additional operating cost because many more people can be served in the same area. Beside that, financial innovation also has an important role to maintain outreach. .Innovation can be defined in three ways. First is lengthening the term structure of the financial market. This means that the time horizon for the maturity is extended. However, the problem is that the longer the term, the bigger the risk. Hence, management of risk is crucial in this case. Second is lowering transaction cost. The cost is borne by savers, lenders, and borrowers. If the cost is high, it disadvantages potential savers and borrowers. The third is refining the valuation process to filter the projects in order to decide the size of credit that should be given (Von Pischke, Schneider *et al.*, 1997).

The innovation should go beyond the financial frontier. It should extend into the real sector of the poor economy. The poor do not only need capital through credit, but also managerial skills, production skills and knowledge. Integrating these elements would encourage many more poor people to become involved in MFI programmes. The Grameen bank is one example of an institution that applies the above approach to reach the poorest, but still has a high repayment rate.

Von Pischke, Schneider *et al.* (1997:10-12) identify that the three points of innovation mentioned above are associated with social innovation that provides support for repayment and financial controls; economic innovation that increases incomes, broadens the markets and permits better management of the real risk; and institutional innovations that lower transaction cost and increase return on investment.

MFIs have also extended their services. Some still operate their basic service to offer a type of loan and to receive a kind of saving, while others have expanded it not only in size but also in variety. Grameen Bank, for instance, has expanded the variety of service from basic saving-credit to home loans, insurance such as health insurance, and deposits (Hossain, Sakhawat *et al.*, 2000:72).

Sustainability

Sustainability stipulates that revenue should cover all costs in all points in time assumed without subsidy. An organization can sustain if it is profitable or has the potential to be self-financing. Sustainability, which underpins a sense of permanency, generates compatible incentives for all involved in the organization including clients.

The concept of sustainability could be at 3 levels: member, branch, and program levels. The institutions sustain their member level if the income of the household increases from time to time. This situation persuades households to continue to become clients of the MFI. Sustainability at branch level means that at least each branch does not continue to sustain loss. This means that the number of members and amount of revenue in each branch steadily increase. Program sustainability exists if institutions can operate profitably and successfully in saving mobilisation programmes. Sustainability can be measured by investigating the repayment rate, or using Yaron's Subsidy Dependent Index (SDI)[13]. Most MFIs have high repayment rate. Hossain, Sakhawat *et al.* (2000) found that MFIs in Bangladesh, at least in the sample in 1996, showed a repayment rate above 90%. ASA and Shakti, for instance, had a 99.5% repayment rate. However, many MFIs were not sufficient either in operating. This

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13 Overall sustainability concepts can be stated simply as survival without subsidy. Thus, self-sustainability is frequently measured by using Yaron's Subsidy Dependent Index (SDI).

$S=A(m-c)+\{(E \times m)-P\}+K$

$SDI=(S/LP \times i)$

Where:
S= annual subsidy received by the institution
A= annual average outstanding funds borrowed by the organization at a concession rate.
m = interest rate the institution assumed to pay for borrowed funds if access to borrowed concession funds were eliminated.
c= weighted average annual concession rate of interest actually paid by the institution on its annual average outstanding funds borrowed at concession rates.
E= average annual equity
P= reported annual profit before taxes (adjusted, if necessary, for loan-loss provisions, inflation etc.)
K= the sum of all other annual subsidies received by the institution.
LP= average annual outstanding loan portfolio of the institution
i= weighted average on lending interest rate earned on the loan portfolio of the institution.
SDI=0 means the institution is fully self-sustainable.
SDI=1 or 100% means doubling the lending interest rate is required if subsidies are to be ended.
SDI=2 or 200% means tripling of lending interest rate is required if subsidies are to be ended.
SDI negative means the institution not only fulfils self-sustainability but also its annual profit minus its capital charged at approximate market interest rate, exceed the total annual value of subsidy, if subsidy was received by the institution. This means net profit.

means that their operating costs were higher than operating revenue.

In India, the repayment rate was not as good as in Bangladesh, at least in the study carried out by Sinha, Samuel *et al.* (2000). MFIs such as Nari Nidhi and Shanthidan had low repayment rates. In 1996, the two MFIs had repayment rates of 67.7% and 60% respectively. The study showed that Nari Nidhi lacked financial sufficiency, but Shanthidan had a good picture in financial sufficiency.

In Nepal, the Grameen replicator (*Purbanchal Grameen Bikas Bank* or PUGBB) had very good performance in repayment rate, (100%) in 1995, but it did not have sustainability because financial sufficiency was very low, as much as 15%. Other poverty alleviation programmes such as SFDP, IBP, and PCRW had low repayment rates (43.6%, 41.4%, and 82% respectively). They lacked sustainability. Their Subsidy Dependence Indexes (SDIs) were 1.35, 1.80, and 3.66 respectively. If the remedy for sustainability is a change in interest rate, then they had to increase their interest rates according to the dependency they incurred. The SFDP had to increase the rate from 18.1% to 42.5%, IBP from 15.55% to 43.5%, and PCRW from 15.55% to 72.4% (Dev-Pant, Dhungel *et al.*, 2000:110).

From these studies, it is obvious that repayment rate is important but it is not the all. It is a prerequisite but it cannot show whether the institution makes a profit or loss. Furthermore, if the MFI makes a profit, it cannot ensure that the MFI is sustained if it still receives much subsidy. Profit without subsidy is the ultimate measure of sustainability, which is shown by SDI.

Factors affecting sustainability, on the MFI side, can be identified as interest rate, client and gender orientation, and efficiency. Each of them separately or jointly could influence the sustainability of an institution. As discussed above, interest rates play a crucial role for the success of a financial institution. Too high a rate tends to lead to over saving and less borrowing and vice-versa. The rational interest rate is the market interest rate in competitive condition.

Clientele orientation is also important to maintain outreach and sustainability. This means that project design should be based on the information about clients, on their opportunity and capacity. The realistic approach is to see the viable opportunities rather than just to give credit to the poor. Clientele orientation is a basic characteristic of microfinance approach that pays attention to specific variables such as who the poor are and what they need for a successful investment activity. The orientation to clients could give some guarantee that the fund would be used appropriately and increase the likelihood that the borrower will repay the loan.

Efficiency is identified as a factor deternhning outreach and sustainability. The scope of efficiency includes efficiency in the financial institution and in the clients' investment projects. In financial efficiency, the MFI itself could be seen as a client of a bigger creditor (donor). It also uses external funds from other bigger institutions. The credit it gets from other institutions, theoretically, could increase wealth equity such as expressed in Baker and Hopkin's *(1969)*[14] formula. As the formula shows, equity will increase if the rate of return is greater than the interest rate paid for the loan. If the equity increases it will lead to achievement of the economies of scale. The improvement in the rate of return is a matter of efficiency and productivity. MFIs have to work efficiently to achieve high productivity.

The productivity in an MFI is not independent. It depends on its client's efficiency in production activities. Thus, by integrating activities beyond financial borders in MFI services, MFIs could increase productivity and efficiency in their clients' businesses. Productivity is defined as the output per unit of input, while efficiency is defined as

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[14] The credit model according to Baker-Hopkin:

$$\frac{\Delta E}{E} = \left[\frac{VL}{E}(r - i) + r\right](1 - c)$$

Where ;
E = Equity
Δ = discreet change
VL = amount of loan
r = rate of return of investment financed by the loan
i = rate of interest paid for the loan
c = MPC

output per unit of cost.

Efficiency implies operation at minimum cost. If clients can operate the enterprises at minimum cost, they would have more capability to repay all the loans.

Outreach and sustainability are also related to growth of the financial institution. Income growth of the institutions is important to achieve sustainability, while growth in products (services) supplied improves the quality of outreach. Growth of assets can help to reduce operating cost, since organizations can achieve economies of scale. This could increase outreach and sustainability. Even though growth is important in this situation, pursuing growth should be done wisely because of a number of reasons: firstly, expanding the portfolio too fast can be followed by an increase in loan arrears and losses. The reason is that the growth will attract many new clients, and commonly the newer are riskier than the older, well-established consumers. Secondly, growing fast will result in many clients at a further and further distance from the location of the lender. The further the location, the more difficult it is to control and monitor. A lack of control will increase the rate of default; however increasing control means increasing the cost. Thirdly, growing rapidly needs speedy adjustment in organizational structure, human capital, skills and technology in such a way to maintain their consistency. Failure to keep the consistency leads to a deterioration of communication, and MFIs have to pay high costs. All the above mentioned could lead the institutions to a worse performance in outreach as well as sustainability.

Welfarist View

Welfarists are reluctant to pay much attention to the performance of the institutions of microfinance.. They presume that MFIs are not just social institutions but also institutions for economic profit. MFIs do not provide charity but conduct economic transactions. Accordingly, they will put themselves first and operate in such a way to secure their economic survival. The question is whether their clients get benefit from MFIs' activities. Therefore, welfarists focus their attention directly on the welfare of the poor clients (Woller, Dunford *et al.*, 1999).

Welfarists have not set up a fixed format of evaluation of MFIs' impact such as the institutionalists have. Any systematic methodology of impact assessment to evaluate the effect of MFIs on the clients' welfare is welcome. Many methods are available but Hulme (2000) classifies them all into 3 paradigms: scientific, humanistic, and participatory. The scientific paradigm usually uses statistical analysis, either regression or descriptive statistics in comparing the outcomes of the clients who are the treatment group and other non-clients who the control group. In order to get a proper comparison and to minimise the bias of selection, both groups should come from a similar economic background. Many statistical tools have been developed, such as by Heckman, Ichimura *et al.* (1997; 1998a; 1998b). The treatment and control groups have to be matched (Jalan and Ravallion, 2000; Sianesi, 2001b). Some recent studies using this method include Jalan and Ravallion (2000), Sianesi (2001a), and for poverty related cases; Cameron (2000) and Alatas (1999).

The humanistic paradigm usually uses key informants. Information from these informants is analysed by using an inductive approach to get something more general. Sociologists and anthropologists prefer this approach and the participatory paradigm, while many economists use a scientific paradigm in their study. However due to many difficulties related to data in the case of microfinance, there are still few studies applying the scientific paradigm.

APPENDIX CHP.2.1 POVERTY INDICES

The Head Count index (HC) has weaknesses, as does the Poverty Gap Index (PG). On the one hand, HC is weak because it neglects the income change of the poor unless it changes the status of the poor. Technically it is said that HC violates the axiom of monotonicity. Furthermore if there is a transfer of income among the poor, HC does not respond. It also fails to respond to the transfer from nonpoor to poor people as long as the poor are still in a poor situation. This means that HC violates the axiom of transfersality. On the other hand, PG is insensitive to the number of people below the line and it neglects the income distribution among the poor. PG satisfies the axiom of monotonicity because if one poor person's income increases while the others are unchanged, the poverty gap will reduce as there is a reduction in the income gap of the person. However PG does not satisfy the axiom of transfersality. If there is any income transfer among the poor, the distribution changes but the poverty gap, among other things, is still the same.

The weaknesses mentioned above become the points in which Sen's criticism is addressed. Sen criticises HC and PG as non-axiomatic indexes. Thus, Sen formulates his index based on a number of axioms:

Monotonicity Axiom: Ceteris paribus, if the income of an individual poor increases, the poverty prevalence must decrease and vice versa, if the income of the poor individual decreases.

Tranfersality Axiom is based on the idea of inequality. The inequality will reduce, among other things, if there is an income transfer from a person to another person who has a lower level of income. Here, Sen points out that poverty is not only the problem of the income distribution in relationship to the poverty line but also the distribution among the poor. A poor person will feel poorer if the difference of the levels of income of others surrounding her is bigger. Thus the higher the inequality, the larger the poverty intensity. Thus Sen highlights the axiom as:

Transfersality Axiom: Ceteris Paribus, if there is an income transfer from poor person i to poor person j, where i>j and all the poor are in non-decreasing order, then the poverty measure must decrease and vice versa.

Sen then formulates his index of poverty on the basis of 3 more axioms:

Normalisation axiom: If all the poor have the same levels of income, then the poverty measure will be

$$P = HC * PG = \frac{q}{n}\frac{(\vartheta - yi)}{\vartheta} \qquad \text{for } y_i = y_2 = \dots = y_i$$

Rank Order Weight Axiom: The weight $v_i(\vartheta, \underline{\underline{y}})$ on the income gap of person i equals the rank of i in the interpersonal welfare ordering of the poor.

Since the number of poor people at least having the level of welfare as high as that of the person i is expressed as $q-(i-1)$ or $(q+1-i)$. This is used as the weight of person i.

Thus this axioms is written as:

$$v_i(\vartheta, \underline{\underline{y}}) = (q+1-i)$$

This leads to the axiom of relative equity that:

Relative Equity Axiom: the relative welfare levels are in reverse order to the order weight. For any pair i,j:

$$w_i(\underline{\underline{y}}) < w_j(\underline{\underline{y}}) \text{ then } v_i(\vartheta, \underline{\underline{y}}) > v_j(\vartheta, \underline{\underline{y}})$$

Then Sen comes to the following poverty index[15]:

for a limited sample:

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[15] How Sen derives the index of poverty based on several axioms is clearly described in the Sen's (Sen, 1976) article.

$$PS = HC\left[1-(1-PG)\left\{1-\gamma\frac{q}{q+1}\right\}\right]$$, where γ is Gini ratio.

For a large number of poor people, q, the index will be:

$$PS = HC[1-(1-PG)\{1-\gamma\}]$$

This index satisfies all the above axioms, especially monotonocity and transfersity. It is increasing in HC, PG and γ. PS's characteristic is that it lies between 0 and 1. If PS=0 it means no poverty and if PS=1, it means people have no income at all.

Drawbacks and other derived indexes

Even though Sen's index is a huge improvement over the old poverty measurement (Head-count and Poverty gap), it still suffers from some drawbacks.

1. The weakness due to the use of the Gini ratio.

The Gini index, in measuring inequality, is insensitive to equidistant-equivalue transfers wherever they happen, although it is known that the transfers have impact for the poor around the place where these occur. To solve the problem, Kakwani (1980) suggests that the rank weight applied to each individual should be increased by power k where k>1. This makes Sen's index more sensitive to any equidistant-equivalue transfers.

2. Relative deprivation.

Sen's index includes relative deprivation, that is the income gap among the poor. However the feeling of relative deprivation most often does not come as a result of the comparison of incomes among the poor but with the whole society, including non poor people's incomes. Takayama (1979) has found a breakthrough for this case by defining censored income distribution in such a way that all incomes above the line are put equal to the line. Then the index of poverty is derived by applying the Gini index to the censored distribution. Thus, the Takayama index can be stated as:

$$PT = HC[(1-\varsigma)PG + \varsigma\gamma], \text{ where } \varsigma = (1-(1-HC)(\frac{\vartheta}{\bar{y}}) \text{ and } \bar{y} \text{ is the average value of } y_i$$

Takayama's concept of relative deprivation, and particularly the index derived, unfortunately violates the axiom of monotonicity proposed by Sen. The different concepts of relative deprivation of Sen and of Takayama have been used by Clark, Hemming, *et al.* (1981) to build 2 other indexes of poverty.

$$PC1 = 1 - (y^*/\vartheta)$$

$$PC2 = 1 - (y^*/\bar{y})$$

Where $y^* = \{HC[(1-B)\bar{y}_p]^\alpha + \vartheta^\alpha(1-HC)\}^{1/\alpha}$

$$B = 1 - (\frac{y^*_p}{\bar{y}_p})$$

y^*_p is equally distributed equivalent income just for the poor group.

$\bar{y}_p$ is average income of the poor (y_p)

Kakwani (1980) extends Sen's analysis with adjustment on some axioms. Kakwani (1980) adds the sensitivity axioms and sets the power of k to the weight in the axiom of rank order as mentioned above. The important axiom of sensitivity is related to monotonicity or it is called the monotomicity-Sensitivity axiom. This axiom emphasises that if there is a change in poverty as a result of a small reduction in the poor individual's income, the change is bigger if it happens to a poorer individual than to less poor one.

$$\frac{\Delta P_i}{\Delta y_i} > \frac{\Delta P_j}{\Delta y_j} \qquad \text{for } j>i \text{ and } \Delta y_i=\Delta y_j$$

Rank Order Axiom: For any individual who lies below the poverty line,

$$v_i(\vartheta, \underline{y}) = (q+1-i)^k$$

As discussed above, this is the way Kakwani solves the problem of equidistance-equivalue transfers among the poor.

To satisfy all above indexes, Kakwani derives a poverty Index as:

$$PK = \left(\frac{q}{n\vartheta \sum i^k} \right) \sum (\vartheta - y_i)(q + 1 - i)^k$$

Some time after the publication of the works of Sen, Kakwani, Clark *et al*, and Takayama, Thon (1983) criticises all above indexes on the grounds that they still suffer the drawback of satisfying the transfer axiom. Thon states that the axiom can be violated if and only if, as the result of the transfer from the poor to the less poor, the recepient's income exceeds the poverty line.

Thon (1979) himself established an index of poverty as:

$$PTh = \left(\frac{2}{n\vartheta(n+1)} \right) \sum (\vartheta - y_i)(n + 1 - i).$$

He modified Sen's index by changing the weight of the income gap, which is not based on the distribution of the poor but of the entire population.

APPENDIX CHP.2.2 FUZZY APPROACH TO POVERTY INDEX

This approach can be written as follows: Suppose that there are n number of individuals x_i in a community X. The set X has a subset H (the poor group). A Fuzzy subset of H of X can be written as follows:

$H = \{x_i, \mu_H(x_i)\}$ for $\forall x_i \in X$

The membership of each individual x into the subset H is between 0 and 1. The membership function of individual i of the subset H can be stated as follows:

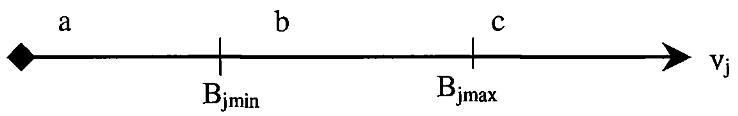
$\mu t_H(x_i)$ for $i = 1,2,\ldots,n$

$$\mu_H(x_i)\begin{cases} = 1 \text{ for individual } i \text{ entirely poor} \\ = 0 \text{ for individual } i \text{ certainly not poor} \end{cases}$$

$0 < \mu_H(x_i) < 1$ means the individual i is partially poor.

In the membership, function many variables representing aspects of poverty can be included. Miceli (1998) highlights that 3 categories of variable: dichotomic, polytomic or continuous can use the same form of membership function.

Cerioli and Zani (1990) define membership function in relation with the above categories of variable as follows:



For continuous and polytomic variables, suppose that the value (v) of the variables is in increasing order where the higher means better-off, then there should be a certain level where an individual beyond the point is entirely not poor (B_{jmax}). There is also a certain level where a person below the point is regarded as poor (B_{jmin}).

The Sub-membership of an individual with respect to a single indicator :

$\mu_{Hj}(x_i)$ =0 if $(v_{ij}) \geq B_{jmax}$ or v_{ij} lies in segment c

$\mu_{Hj}(x_j)$ =1 if $(v_{ij}) \leq B_{jmin}$ or v_{ij} lies in segment a

$\mu_{Hj}(x_i) = (B_{jmax} - v_{ij})/(B_{jmax} - B_{jmin})$ if $B_{jmin} < (v_{ij}) < B_{jmax}$ or v_{ij} lies in segment b

For the dichotomic variable, there is no region b. So the membership function will be:

$\mu_{Hj}(x_i)$ =0 if (v_{ij})=1

$\mu_{Hj}(x_i)$ =1 if (v_{ij})=0

In order to establish a single index consisting of some indicators (Supposing that there are k indicators):

Grand-Membership:

$\mu_{Hj}(x_i)=f(\mu_{H1}(x_i),\mu_{H2}(x_i),\ldots, \mu_{Hk}(x_i))$

There are many possibilities of f formula. But whatever the form taken, it should provide a value of $\mu_{Hj}(x_i)$ between 0 and 1. It can take the generalised weighted average form:

$$\mu_H(x_i) = \left[\sum_{j=1}^{k} w_j(\mu_{Hj}(x_i))^\rho\right]^{(i/\rho)}$$

for $p \neq 0$ and $\Sigma w_j=1$. W is the weight for the corresponding indicator of poverty. It is crucial. If p=1, $\mu_H(x_i)$ becomes a simple weighted average.

Let the proportion of individuals belonging to the category of the poor with respect to variable j be the average value of membership function based on the indicator j.

Cerioli and Zani (1979) write the proportion of population deprived due to a certain variable as:

$$z_j = \frac{1}{n}\left(\sum_{i=1}^{n} \mu_{Hj}(x_i)\right)$$

Thus the weight can be formulated as

$$w_j = \frac{\ln(1/z_j)}{\sum_{j=1}^{k} \ln(1/z_j)}$$

Then, Cheli and Lemmi (1995) improved the function for the qualitative polytomic and continuous variables.

The Fuzzy approach is more general because by adjusting the membership function other indexes can be met.

The index for the individual and the grand index are:

$$\mu H_j(X_i) = \left(\frac{B_{j\max} - V_{ij}}{B_{j\max} - B_{j\min}} \right)$$

or

$$\mu H(X_1) = \left[\sum_{j=1}^{k} w_j \left(\frac{B_{j\max} - V_{ij}}{B_{j\max} - B_{j\min}} \right)^{\alpha} \right]^{1/\alpha}$$

The above formula can include some of the above discussed indexes:

Head Count Index (HC) can be met by supposing $\alpha = 0$, B_{max} is the poverty line and $B_{min} = 0$, V_j is personal income and $w_1 = w_2 = \ldots = w_j$.

Poverty Gap (PG) can be met by supposing $\alpha = 1$, B_{max} is the poverty line and $B_{min} = 0$, V_j is personal income and $w_1 = w_2 = \ldots = w_j$.

Foster, Greer, *et al.* (1984) index can be found by still keeping α varies.

If B_{max} is norm value and V_j is the value achieved by individual i then it can meet the Index of Poverty based on the Basic Needs Achievement.

CHAPTER-3: METHODOLOGY

INTRODUCTION

An important part of this thesis is to investigate the impact of KUKESRA, a government microfinance programme, on poverty alleviation, particularly among its recipients. In order to evaluate the characteristics and performance of KUKESRA, it will be compared to a non-government run programme called Mitra Karya East Java (MKEJ).

This chapter is divided into two parts. The first part deals with the process of sampling and data collection. It explains the research method used in this study. The second part discusses the models used to analyse the data. The models provide the framework for the analysis in the subsequent chapters of the impact of the above mentioned microfinance programmes on the poor.

PART I: THE RESEARCH METHOD

The research methodology describes the process dealing with sample selection, data and variable selection and the process of collecting the data. All these will be adjusted depending on the situation in the field.

POPULATION, SAMPLE AND LOCATION

KUKESRA is a nationwide government microfinance programme. When it was first created in 1996 the aim was to help the poor living in non-backward villages[16]

[16] The Government has divided all villages in Indonesia into poor villages called 'backward villages' and non-poor villages or 'non-backward villages'. In 1993 (the first time it was conducted), the criteria and the assessment process of how villages were divided into these groups was based on 27 variables used for villages in the urban areas and 29 variables for those in rural areas. In 1994, it was improved to

financially, in all islands of Indonesia. Then it was expanded to serve the poor not only in the non-backward villages but also in backward areas.

The reason why the backward villages were not part of KUKESRA initially was because they had been served under a different scheme, widely known as IDT[17]. When IDT was subsequently cancelled, BKKBN, the owner of KUKESRA, also considered helping the poor in backward villages by providing KUKESRA. For the purposes of this study, only the non-backward villages, which were the initial target of the KUKESRA programme, will be considered. The backward villages will not form part of this study.

The poor, who are targeted by BKKBN through its KUKESRA programme, fall into two categorises: Pre-welfare group and Welfare Level I group - the criteria used for these classifications can be found in BKKBN (1996). Those in the Pre-welfare group are assumed to be deprived in all aspects of life, both economic and non economic, while those who are in the Welfare Level I group are divided into those who are poor because of economic reasons, and those who are poor because of non-economic reasons. While the entire Pre-welfare group is part of the targeted group; only those who are categorised as poor for economic reasons in Welfare Level 1 are part of the target group. These two combined groups then formed the relevant population for this study. From this population, the regions/provinces and respondents were chosen.

Initially, it was decided to include both North Sulawesi and East Java for the following reasons:

East Java is a representative sample of the more advanced and densely populated

include 17 and 18 variables for villages in urban and rural areas respectively. Some of these variables were hew, and not used in the previous year assessment. The complete procedure and the formula used are presented in BPS (1996:568).

[17] IDT stands for *Inpres Desa Tertinggal* (Presidential Instruction for financially supporting Backward Villages). This was a special policy to help poor villages all around the country implemented long before the creation of KUKESRA. It was then transformed to another form. Discussion with DR. Boediono the former Head of BAPPENAS under the Soeharto regime held at the Embassy of the Republic of Indonesia in Canberra revealed that IDT failed to achieve the desired targets.

provinces, while North Sulawesi from the outer islands, is less urbanised and less developed compared to East Java. The objective here is to cover regions with different levels of development and population density.

Both these provinces/regions had a long and sustained period of experience with the KUKESRA programme. This would help with the availability and analysis of data.

Unfortunately, the situation in the field was beginning to change just as the process of data collection was about to begin. There were rumours that riots were likely to occur in North Sulawesi after the riots in Ambon and some other places in Indonesia.[18] The fear of this occurrence forced me to cancel the use of North Sulawesi as one of the sample regions. The study then decided to focus on East Java as the only region in the sample. In addition to the above, other reasons for this choice were as follows.

East Java is a region where not only is the government involved in policies to reduce poverty, but also many other organizations have taken a keen interest in this issue. Brawijaya University is one such organization. After the government mapped the villages and classified them into backward and non-backward ones and then decided to provide support to only the poor in backward villages through IDT, some academics in the Economic Faculty of Brawijaya University initiated a microfinance institution (MFI) called 'Mitra Karya East Java' (MKEJ), to help the poor in the non-backward villages. This was some years before the government actually initiated KUKESRA. Unfortunately, since MKEJ was privately funded, its pool of funding has remained somewhat limited. Hence, its operation is limited to East Java. MKEJ is an attempt to replicate the Grameen Bank in Bangladesh. In its development process, as explained by DR. Jumilah Zein, the founder of MKEJ, it was transformed into a non-governmental MFI because not much attention was paid to it by the university. Since MKEJ is a non-

[18] The riots were identified as controlled and organised by a certain elite political group (which could not be identified). They occurred in some parts of Indonesia such as West Kalimantan, Ketapang Street Jakarta, Kupang, East Java, and Ambon. The riots in West Kalimantan took the form of an ethnic battle, Ketapang was a gang fight, Kupang and Ambon were between fights Christians and Moslems while in the case of East Java the killing was of the Moslem leaders, were mostly from the *Nadhlatul Ulama* (NU) sect.

governmental MFI, its inclusion in this study will enable the author to provide a comparative assessment of the two schemes – MKEJ and KUKESRA. Thus, the appropriate region to focus in this study was therefore East Java.

In order to make an appropriate comparative assessment, this study further narrowed its focus on certain sub-regions of East Java, where both government and non-government MFIs have been in place. This thesis adopts a case study approach.

Based on the above reasoning, the district (*Kabupaten*) of Malang was chosen as the sub-region for the case study. Malang district is one among 37 districts in East Java Province[19]. The district of Malang is the largest among the districts in the province. It has as many as 35 sub-districts (*Kecamatan*), however, not all sub-districts have both the programmes. MKEJ was available in only five of the sub-districts. These are Kepanjen, Ngajum, Wonosari, Sumber Pucung, and Kromengan. Thus, this case study was restricted to these five sub-districts.

[19] East Java Province is one of the provinces included in the regional group III (out of 5 groups classified by BKKBN) of the National Programme of KUKESRA (BKKBN, 1997:1-5). The regional Group III is the region showing a moderate level of absorption. The regional grouping process implemented by BKKBN was based on the absorption capability in each province. However, the regional grouping did not show any difference in household recipients' characteristics and capabilities. The scenario also predicts that the recipients in East Java had to reach stage V by October 1998, the last stage in the cycle of KUKESRA.

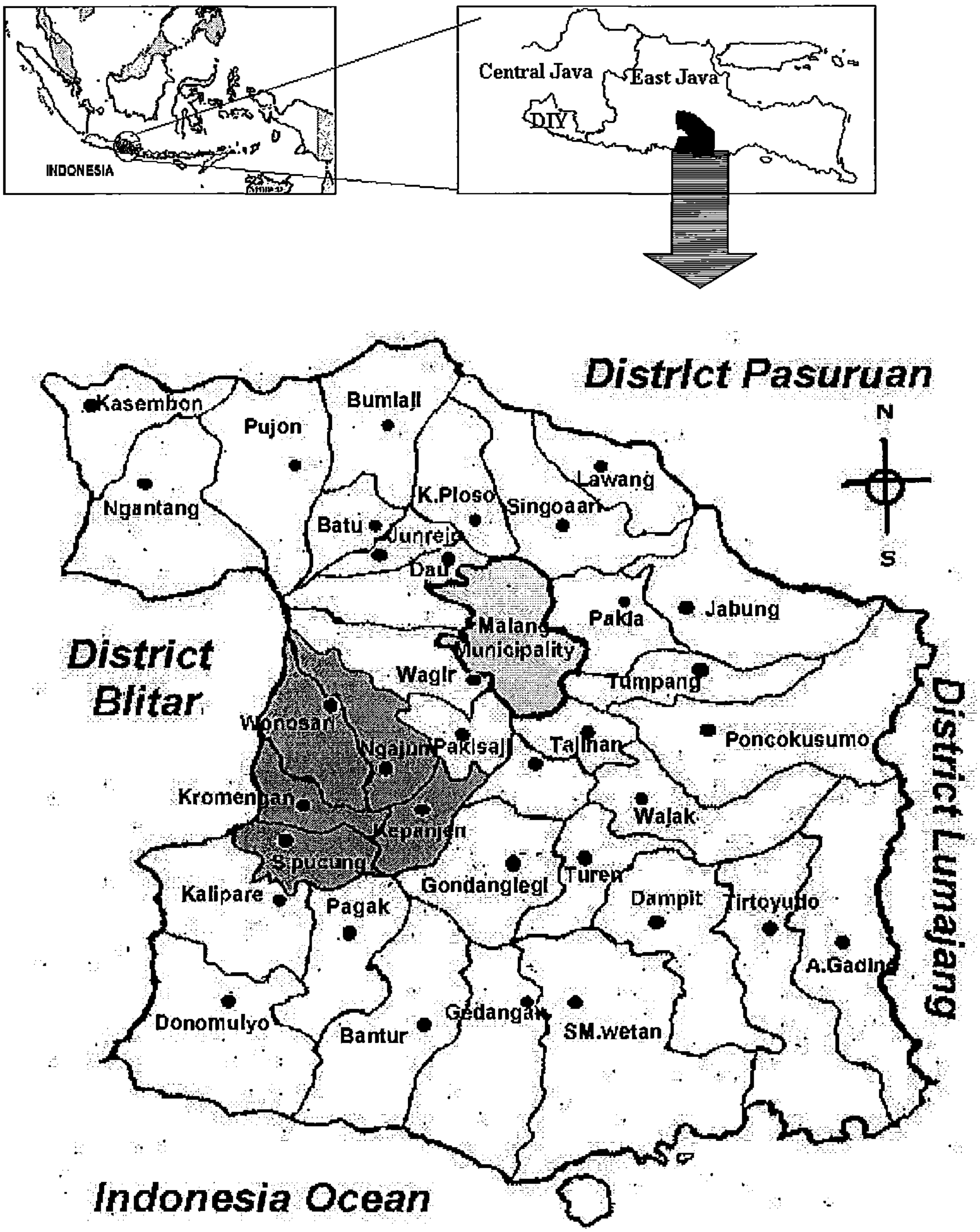


Figure 3-1 Location of the District in the Sample

As is evident from the map, the area included in this study is located in the middle southern part of East Java.

The characteristics of the area studied

The relevant characteristics examined of the five chosen sub-districts are geography, total population, population density, and socio-economic condition of the population.

The five sub-districts are situated next to each other. In the north they are bordered by the sub-districts of Dau and Wagir; while in the south the adjoining sub-districts are Pagak and Kalipare. In the east the area studied is bordered by the sub-districts of Bululawang, Gondanglegi and Pakisaji, while in the west by sub-districts in another district (Blitar district). The five sub-districts are in one part of *Pembantu Bupati* (vicar of the head of the district) in Kepanjen. This is a highland area. On average, this area is situated about 300 to 450 metres above sea level. The annual temperature in this area ranges between 23.8 C^0 and 38.5 C^0, with an average of 31.2 C^0. The temperature reaches its peak in April and its trough in October. Humidity in these sub-districts is in the range of 57% to 97% (BPS Kabupaten Malang, 1999).

Information about the population and its density in the chosen sub-districts is presented in the following table:

Table 3-1 Population and Families

Regions	Area	Population		Density		Family size	
	(Sq. Km)	1989	1998	1989	1998	1989	1998
Malang district	3072.19	2128991	2346710	670.54	764	4.5	4.17
Sub-districts:							
Kepanjen	46.25	79729	86318	1745.7	1866	4.44	3.19
Ngajum	60.12	88246	48252	716.1	803	4.51	5.27
Wonosari	48.53	n.a	45151	n.a	930	n.a	4.24
Sumberpucung	35.9	88480	53550	1188.1	1492	4.51	4.13
Kromengan	38.63	n.a	38076	n.a	986	n.a	4.26

Note: n.a means that the corresponding data is not available because in 1996 the sub-district of Wonosari was still a part of the sub-district of Ngajum and the sub-district of Kromengan was a part of the sub-district of Sumberpucung.
Sources: BPS Kabupaten Malang (1989) Table 3.1.2 and Table 3.1.3 and BPS Kabupaten Malang (1999) Table 3.1.1 and Table 3.1.2

In 1998, the population of the district of Malang was 2.3 million, with a population density of about 764 people per square kilometre (sq.km). In the chosen sub-districts, the population density is relatively larger than other sub-districts in that district. Among these five sub-districts, the highest population density of 1866 people per sq.km was recorded in Kepanjen and the lowest of 803 people per sq.km. in Ngajum. The areas with high densities tend to have smaller family size; a phenomenon observed in other countries, such as India. Kepanjen and Sumberpucung have smaller family sizes than Ngajum, Wonosari, and Kromengan. Ngajum, with the lowest density, had the largest family size with an average of 5.27 persons in 1998.

Land Use

The people of Malang district used the land for many purposes. The land use of the area is as presented in Table 3-2 below.

Table 3-2 Land Usage

Regions	Percentage of Land Usage						Total Area (Ha)
	Dwelling	Rice-farming	Dry-farming	Cash-crop	Forest	others	
District Malang	14	15	35	5	26	5	330182
Sub-Districts:							
Kepanjen	17	56	16	0	0	10	4565
Ngajum	22	22	32	8	9	7	7904
Wonosari	21	18	25	22	11	3	4887
Sumberpucung	31	58	4	0	1	6	3101
Kromengan	11	48	31	8	0	3	3562

Source: BPS Kabupaten Malang (1999) Table 1.1.1

The land is used for dwelling, rice farming, dry farming, cash cropping, producing forest products, and others. The chosen five sub-districts can be divided into two types based on the availability of water for agriculture. Those that have relatively abundant water for agriculture are Kepanjen, Sumberpucung and parts of Kromengan. They also have a larger share of land under rice farming. Wonosari, Ngajum and parts of Kromengan are relatively scarce in water and therefore rely more heavily on dry farming.

Income and livelihood

The sectoral contribution to the gross domestic regional product (GDRP) of the district of Malang in 1996, 1997, 1998 is as shown in the table below:

Table 3-3 GDRP of District Malang based on Constant Prices of the 1993

Sectors	1996	1997	1998
Agriculture	816033.42	806498.85	713845.42
Mining	18016.79	19738.08	20452.24
Manufacturing	377909.13	422903.05	391271.63
Water and Electricity	39339.07	45029.12	49052.80
Building	53732.36	63376.82	65656.90
Trade, hotel and Restaurant	637761.66	672962.08	624112.05
Transport and Communication	215452.28	233808.67	226075.74
Finance, Renting and corporation	158440.85	171470.13	153150.67
Services	384311.36	397925.24	395299.50
GDRP	2700996.92	2833712.04	2638916.97

Source: BPS Kabupaten Malang (1999) Table 10.1.2

The agricultural sector is the largest sector in Malang district. The contribution of this sector to GDRP was about 30% as presented in Table 3-3. However, this sector's contribution to GDRP has been on the decline. The decrease in this sector means that the other sectors' contribution to GDRP is increasing. The shift in the year 1996 and 1997 shows that the decrease in agriculture was followed by an increase in the secondary and tertiary sectors such as manufacturing, trade-hotel-restaurant, finance-renting-corporation, and services. This was in line with the general trend in rural development in Indonesia. However, from 1997 to 1998 when the crisis affected the economy, all the sectors' contribution dropped except for the mining sector. This is obviously due to the nature of the crisis, which affected Indonesia in 1997.

However, the decline in production among the sectors varied, which led to the change in the structure of the GDRP for the Malang district. Sectors that declined were manufacturing, trade-hotel-restaurant, and finance- renting-corporation as presented in Table 3-4.

Table 3-4 GDRP Structure of District Malang based on Constant 1993 Prices (Percentage)

Sectors	1996	1997	1998
Agriculture	30.21	28.46	27.05
Mining	0.67	0.70	0.78
Manufacturing	13.99	14.92	14.83
Water and Electricity	1.46	1.59	1.86
Building	1.99	2.24	2.49
Trade, hotel and Restaurant	23.61	23.75	23.65
Transport and Communication	7.98	8.25	8.57
Finance, Renting and corporation	5.87	6.05	5.80
Services	14.23	14.04	14.98
GDRP	100.00	100.00	100.00

Source: BPS Kabupaten Malang (1999) Table 10.1.2

Even though the trend in the agricultural sector showed a continuous decline, it is still by fact the largest sector in the regional economy. This sector contributed most in the form of food crop as shown in Table 3-5. Its share was about 72% of the total agriculture product in Malang district as shown in Table 3-6. The share did not change even after the crisis.

Table 3-5 Agriculture Sector Share of GDRP based on Constant 1993 Prices (Absolute Values)

Sub-Sector Agriculture	1996	1997	1998
Food Crop	588806.22	576996.08	513583.91
Cash Crop	141102.93	140536.40	114040.76
Livestock	73480.12	75503.39	73408.44
Forestry	6605.21	6892.31	6841.88
Fishery	6038.94	6570.66	5970.42
Agriculture GDRP	816033.42	806498.84	713845.41

Source: BPS Kabupaten Malang (1999) Table 10.1.2

Table 3-6 Agriculture Sector Share of GDRP based on Constant 1993 Prices (Percentage)

Sub-Sector Agriculture	1996	1997	1998
Food Crop	72	72	72
Cash Crop	17	17	16
Livestock	9	9	10
Forestry	1	1	1
Fishery	1	1	1
Agriculture GDRP	100	100	100

Source: calculated from BPS Kabupaten Malang (1999) Table 10.1.2

Since the crisis, prices have increased significantly. All sectors experienced price increases. However, the agricultural sector was the most affected compared to the other sectors in Malang district. Table 3-7 shows the inflation rate in the agricultural sector during 1996-1998. Before the crisis, inflation in the sector was less than the average in the district, but after the crisis, this increased much more than the other sectors. The sub-sectors most affected were livestock and food crop. Due to the higher prices, the per capita income fell as shown in Table 3-8. Since the crisis in 1997, growth in regional income and regional per capita income has declined sharply.

Table 3-7 Inflation Rate in the Agricultural Sector 1996-1998

Sub-Sector Agriculture	Inflation in Each Sector (%)		
	1996	1997	1998
Food Crop	4.51	22.14	160.00
Cash Crop	6.08	3.78	95.00
Livestock	5.14	38.90	163.59
Forestry	5.20	16.93	93.16
Fishery	6.65	27.35	88.32
Agriculture Sector	4.87	20.68	151.32
GDRP	5.31	13.89	130.51

Source: BPS Kabupaten Malang (1999) Table 10.1.10

Table 3-8 Per-capita GDRP 1996-1998

	GDRP Per-capita in Constant Price (1993=100) (Rupiah)			Growth of GDRP Per-capita in Constant Price (1993=100) (%)		
Yearly:	1996	1997	1998	1996	1997	1998
GDRP*	2700997	2833712	2638917	6.88	4.91	-6.87
GDRP Pcpt	1179698	1217060	1128334	5.05	3.17	-7.29
Regional Income*	2459527	2598076	2530439	7.19	5.63	-7.29
Regional Income Per capita	1074233	1115856	1074233	5.36	3.87	-3.04
Monthly:						
GDRP Pcpt	98308.2	101421.7	94027.9			
Regional Income Per capita	89519.4	92988.04	89519.4			

* In Million Rupiah per year

Source: BPS Kabupaten Malang (1999) Table 10.1.11

Malang district is dominated by the agricultural sector, and almost half of the population is living in poverty. Based on BKKBN poverty criteria the proportion of the poor in the district and sub-districts are as shown in Table 3-9. The figure roughly shows the extent of poverty in the sample regions.

Table 3-9 Proportion of the Poor of Total Population in the District

	1995	1996	1997
Malang district	0.517	0.544	0.553
Sample Region	0.520	0.545	0.532
Sub-Region:			
Kepanjen	0.521	0.546	0.506
Ngajum	0.498	0.574	0.558
Sumberpucung	0.534	0.526	0.525
Kromengan	0.500	0.562	0.534
Wonosari	0.538	0.500	0.576

Source: Calculated from Malang district BKKBN's database

In this table the proportion of poor people is based on the BKKBN's concept of poverty. It is not just pre-prosperous but the pre-prosperous plus families in KS-1.

SAMPLING METHOD

The focus of the study is to evaluate the effects of the government credit programme on the recipients, on the one hand, compared to the recipients from a similar non-government programme, on the other, and with non-recipients. Therefore even though the time spent on the survey was limited, the sample selection process is of particular importance. The important zone includes different levels of development, status in the group, and participation in credit activities. The difference in the level of development is represented by near and remote areas with respect to the distance to the main market where members undertake business transactions. Areas near the market are associated with higher level of development. In this area, the intensity of economic activities is assumed to be higher than that in remote areas. Status in the group can be ordinary members or leaders. The choice of ordinary members and leaders is to capture the different implications of the programmes to the recipients besides the special role of the leaders as individuals who knew better about the groups they led. Participants and non-participants were chosen to have a better comparison between the factual and counter-factual outcomes of the programmes. This is to check the impact of the programmes on the recipients.

Among other things, the bigger the sample, the more representative the information provided. However, it also means that the bigger the sample, the larger the costs, which is a constraint in many research projects, including this study. In view of these constraints, two common compromises are made. The first is to take a large number of respondents in a sample frame but the data collected relates to major indicators or parameters and not details. This means that a large sample tends to sacrifice the depth of detail in the study. The next compromise is to reduce the sample size in order to investigate more details. The latter approach was adopted in this study.

The method of sampling used was purposive and random. Purposiveness was used in relation to the choice of location, sub-districts and villages. The sub-districts were chosen to capture the areas where KUKESRA and MKEJ coexisted. Since at the time of survey MKEJ just operated in 5 sub-districts in Malang district while KUKESRA was in operation in all sub-districts, the 5 sub-districts where MKEJ existed were chosen.

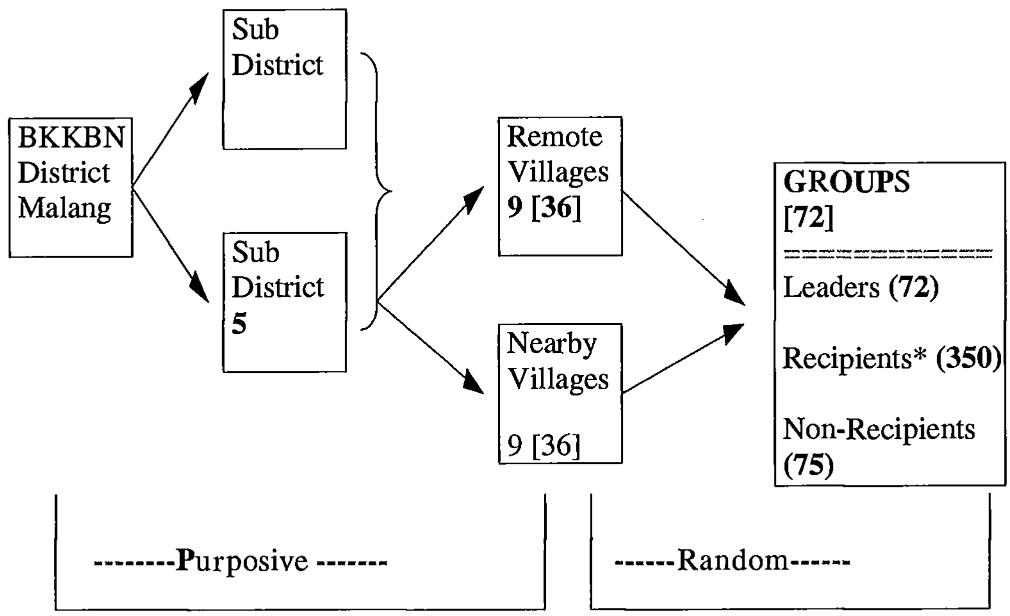


Figure 3-2 Sampling Method

From the chosen sub-districts, several villages were then chosen. Some were from remote areas while others were those near the local market. The variable distance is based on the accessibility to local market where the majority of the people from the villages undertake transactions. In this stage, the information from BKKBN staff in each sub-district was used. From both the categories, a number of villages were randomly chosen.

At the village level, several groups of members existed in each village. From there, a number was chosen randomly. Then, from the groups three categories of respondents, leaders, ordinary members as recipients, and members as non-recipients, were taken. However, since all members of MKEJ were recipients, the non-recipient respondents came entirely from KUKESRA members.

Table 3-10 The Study Sample

Sub-District	Villages		MKEJ		KUKESRA			Respondents		
	Remote	Nearby	Leader	RCPs*	Leader	RCPs*	Non-RCPs	Total	Valid	Valid (%)
Kepanjen	2	2	8	30	5	31	15	76	75	98.36
Ngajum	1	1	5	19	4	25	9	53	52	97.88
Kromengan	2	2	7	26	6	38	14	78	66	84.82
Sumber-Pucung	2	2	12	45	10	62	21	128	118	92.55
Wonosari	2	2	8	30	7	44	16	90	82	90.95
Total	9	9	40	150	32	200	75	425	393	92.50

* Recipients (RCPs) including leaders who were acting as recipients
Source: survey data

Each group had a leader and a number of members. In KUKESRA, there were 10 to 30 members including the leader, while in MKEJ the group consisted of 5 members including the leader. Thus, in each chosen group, the leader and several members were taken as respondents.

Furthermore, those who were chosen as respondents can be classified as recipients and non-recipients. Recipients are those who received loans, while non-recipients are those who did not receive a loan. By this method, recipients and non-recipients were those who were supposed to get loans because they had acted as members of KUKESRA.

The Respondents

Thus, for the six-month survey, the respondents from the groups were as follows: 200 KUKESRA recipients, 150 MKEJ recipients, and 75 non-recipients based on the same initial condition. The number chosen was based on resources available for the survey as described under the heading 'Survey Period' below. In each group, respondents were chosen randomly spread across the five above-mentioned sub-districts. The distribution of the effective sample after the unreliable respondents were excluded was 75, 52, 66, 118, and 82 respondents for the sub-districts of Kepanjen, Ngajum, Kromengan, Sumberpucung and Wonosari respectively. A hundred and ninety seven respondents were involved in KUKESRA, 145 in MKEJ and as many as 51 were non-recipients. The non-recipients were members of KUKESRA who did not receive loans offered. The characteristics of the respondents were as presented in Table 3-11 below.

Table 3-11 Some Characteristics of Respondents

Characteristics	Microfinance programme		
	KUKESRA	MKEJ	Non-Recipients
Member's status			
Just member	175	107	41
Group leader	22	38	10
Wife's Age			
Less than 20 years	2	0	0
20 - <30	39	30	16
30 - <40	77	80	20
40 - <50	56	28	9
50 and above	23	7	6
Wife's highest Level of education			
Never attended school	11	8	3
Primary School	103	106	27
Secondary School	60	23	18
High School and above	23	8	3
Family size			
Small (1-4)	129	81	35
Medium (5-6)	49	49	11
Large (>6)	10	11	2

Source: Survey data

Table 3-12 Percentage Distribution of Sample Characteristics

Characteristics	Microfinance programme (Row Percentage)			Total (Row)	Microfinance programme (Column Percentage)		
	KUKESRA	MKEJ	Non-Recipients		KUKESRA	MKEJ	Non-Recipients
Member's status							
Just member	54.18	33.13	12.69	100.00	88.83	73.79	80.39
Group leader	31.43	54.29	14.29	100.00	11.17	26.21	19.61
Total (Column)					100.00	100.00	100.00
Wife's Age							
Less than 20 years	100.00	0.00	0.00	100.00	1.02	0.00	0.00
20 - <30	45.88	35.29	18.82	100.00	19.80	20.69	31.37
30 - <40	43.50	45.20	11.30	100.00	39.09	55.17	39.22
40 - <50	60.22	30.11	9.68	100.00	28.43	19.31	17.65
50 and above	63.89	19.44	16.67	100.00	11.68	4.83	11.76
Total (Column)					100.00	100.00	100.00
Wife's highest Level of education							
Never-attend. Sch.	50.00	36.36	13.64	100.00	5.58	5.52	5.88
Primary School	43.64	44.92	11.44	100.00	52.28	73.10	52.94
Secondary School	59.41	22.77	17.82	100.00	30.46	15.86	35.29
High School +	67.65	23.53	8.82	100.00	11.68	5.52	5.88
Total (Column)					100.00	100.00	100.00
Family size							
Small (1-4)	52.65	33.06	14.29	100.00	68.62	57.45	72.92
Medium (5-6)	44.95	44.95	10.09	100.00	26.06	34.75	22.92
Large (>6)	43.48	47.83	8.70	100.00	5.32	7.80	4.17
Total (Column)					100.00	100.00	100.00

Sources: Survey data

The total respondents was made up of 272 ordinary recipients and 70 leaders who were involved in either KUKESRA or MKEJ and the other 51 respondents who did not receive any loans from the 2 programmes, but stated as members of KUKESRA. Therefore, the latter were regarded as non-recipients. The respondents lived nearby or far from the main market where they usually did their transactions. There were 205 respondents who lived near the market and 188 who lived far from the market. All respondents were in the productive age group, with a majority in the age range 30 to 40 years. The majority of the respondents had primary school or secondary school level of education. Those who never attended school or had attended high school and above were few. With respect to family size, 245 out of the 393 respondents had small family size (that is, four or less family members).

DATA COLLECTION

Data was gathered using several methods. Primary data was gathered using the survey method from leaders and ordinary members, with in-depth interviews of key persons, and focus group discussions with recipients of the programmes. Besides the primary data, secondary data was obtained from historical records from the BKKBN database, BNI 1946, and Post Offices in the District of Malang.

Primary data

Primary data was gathered on several important aspects: variables related to the indicators of the success of MFI for helping the poor, respondents' (individuals and family) characteristics, credit related variables, family economic conditions, business related variables, the type of programme involved, and some other aspects such as location. These data were collected from all respondents through a questionnaire. The purpose of this type of data was not only to get up-to-date figures but also for crosschecking the available historical records.

In order to improve the validity of the data, the following actions were taken:

Before the respondents answered the questions, the interviewer had to ensure that the respondents had understood precisely what was asked.

As well as having the same perception of the concepts which were being asked about, they also had to have the same agreement about the time frame being asked about.

To overcome the problem of the vagueness of the income concept, the measure taken was the amount of expenditure incurred. Since the majority of the respondents' incomes were from the agricultural sector, the monthly expenditure considered was the average expenditures for 4 months. This is based on the fact that one cycle in farming lasts for about 4 months. Total monthly income equals the monthly average of the total expenditure in the 4 months plus the market value of stock differential (current stock of food minus the stock at the beginning of the last four months).

In order to avoid any bias of over or under statement of the figures, the interviews were conducted by two trained university students under the direct control of the researcher.

A pilot sub-sample was then chosen to repeat the interview process for double-checking for consistency and as proof of reliability.

Besides gathering data through questionnaires, in-depth interviews of some key persons were undertaken together with some focus-group discussions to complement other data and for a deeper understanding of some issues. The in-depth interviews involved key persons from BKKBN staff from the village to the top level, as well as the staff of MKEJ. Thirteen key persons were interviewed as described in Table 3-13. The interviews focused on various institutional aspects of the programmes.

Table 3-13 Key Persons

Key persons (Staff)	BKKBN	MKEJ
Top Level	1	1 (top manager)
District level	2	1 (assistant manager)
Sub-District Level	2	2
Village level	4	

Source: Survey data

Focus group discussions captured the community norms in relation to the basic-needs consumption that they felt as the minimum standard. Furthermore, they were used to crosscheck and gather scattered information related to the implementation of the programmes. Six groups were established: 3 groups were from members having problems in regard to repayment of credit and 3 others were from those who had no problems with repayment of credit. Each group contained 8 to 12 people from different villages, and they were not known to each other. They came from different places but had the same criteria. In order to capture their real experiences, the discussions were done informally. No staff of the programmes were present during the discussion. The absence of the staff gave the members the freedom to tell their experiences, including any problem they had with the staff administering the programmes. The discussion started with a short introduction in order for the participants to become familiar with each other and to realise what was involved in the discussion.

Secondary data

Secondary data relating to historical financial records were gathered from several organizations. For KUKESRA, the relevant institutions were BKKBN, BNI 1946, Post Offices, PPLKB and the recipients' groups. For MKEJ, the data were gathered from the headquarters in Malang. These data would show the progress and performance of the MFI in the past.

It should be noted that some data from BKKBN's records were probably inaccurate. Thus, using this data for analysis had to be done with some caution. The low level of accuracy of the data is described below under the heading 'barriers on the ground'.

Survey Period

As the Indonesian economy was experiencing a crisis, beginning from the international financial sector in 1997 and spreading to the economy as a whole, it was assumed this would have affected the economy, especially small-scale enterprises and microfinance institutions (MFIs). Even though the crisis was not the main focus of the study, it was included since its effect could intervene in the subject matter of the study.

The survey period lasted from December 1998 to June 1999. This period was characterised by political instability that had lasted since the beginning of the crisis. Due to this instability the design of the original research plan had to be adjusted. Then, based on the latest situation, the plan was changed to fit the situation on the field as described above.

BARRIERS ON THE GROUND

Finding target respondents is a challenging job in rural areas. Besides the sparse nature of the dwellings, the best time for interviews is limited. Many of the poor have multiple jobs such as farmers combining with petty trade. If they deal with petty trade, reselling vegetables for example, they get up early in the morning to buy some baskets of vegetables for reselling. They have to go to other markets in the early morning long before dawn to get the produce from the sellers who bought the vegetables from the farmers in the farms. They buy the vegetables at wholesale prices, which are much lower than retail prices. This wholesale market is usually located quite far from their places of residence or their local market where they have to resell the vegetables. The time for reselling lasts until about 9 to 10 am. After that, they continue with their normal jobs as farm labourers on an hourly pay. Their spare time is usually between 3 to 6 pm before the *maghrib*[20] praying time. Dinner will take place soon after the praying time. Most of the respondents did not want to be interviewed in the evening. In the leisure time available for interviews, some, especially the women, have to prepare meals for their families. Many cases of planned interviews could not take place at the time arranged and a new schedule had to be rearranged, very often.

Apart from the time, the condition in the family where the interview took place in some cases was not suitable. The interviews were interrupted for various reasons such as the crying of babies or a visit from their neighbours to see what was happening in the interviews, which they found as something funny and often entertaining. The presence of the neighbours was unwanted but was difficult to avoid. It could influence the interviewee response, especially when the interviewer had to ask sensitive questions such as the relationship with the informal moneylenders. Often the neighbours would interrupt by offering some unwanted comments. In this case, the interviewer had to ask them politely and patiently to stop interrupting the interview. This approach had to be chosen because it was essential that the interview be conducted in an informal fashion. The informal nature of the interview was necessary to obtain an accurate response to the questions.

The interviewer found many groups where the respondents involved did not have or had lost their document records. They had lost the record because there had been no meeting or there had been no KUKESRA activities for a long period since they

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[20] The Moslems pray 5 times a day. The times are known as *Isya, Subuh, Lohor, Ashar* and *Maghrib*. All are Arabic terms. *Maghrib* is the praying time at 6 pm in Indonesia (in particular in survey region).

redeemed their debts and no new loan had been provided or at least they had to wait for an uncertain time period[21]. There was no problem of communication except with respect to a few respondents who preferred using the local language they used in daily conversation. The respondents could communicate well. Formal education seemed to have not had much influence on the communicating process during the interview.

There were a few types of errors encountered in the database of families held by BKKBN. These errors could reduce the validity of the data recorded in some cases. The errors made were not only at the cadre level but also at the staff level[22]. At the *Cadre* level, it was found that there was some mixing of data of different individuals. For example if there were two pages of listing the poor, the first page might end with nth person, while the continuation on the second page referred to the n-1th person. Matching the data for the appropriate person was difficult since there were no clues available. Without any unique code for each person listed in the table, it was difficult to know which one had un-matched data. Even the cadres became confused when they were questioned.

At the staff level, the staff made summaries of the raw data that were often found to be inaccurate. It was also found to be unreliable due to non-matching. The summary figures provided by the staff tended to be different if the summary was done strictly from raw data based on the stated criteria. However, the staff were quite intelligent because usually the summary figures were calculated in such a way to keep consistent. Therefore, just by comparing figures in the summary, it seemed consistent but if the summary was done from the raw data, the inconsistency became obvious. The welfare status, for example, should be based on certain stated criteria but when staff decided the status of the families, they tended to ignore the criteria but just based it on their personal

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21 Many groups, after redeeming the debts and requesting a new loan had to wait for a long period for further credit realisation. For them, KUKESRA was not a poverty alleviation measure as such but merely a government programme which they felt had to be involved.

22 *A cadre* is a trained or un-trained person who becomes the mediator or the extending hand of BKKBN to always keep in touch with local people. The staff refers to BKKBN village level staff who not only handle TA-KUKESRA but also other programmes related to welfare as well as family planning. Here the errors could not be said due to lack of knowledge but other factors such as too much work to do by the staff, and the intention to adjust the data to provide information that the programme is successful.

impression of the family or on their relationship with them. They tended to give a certain status for their families or neighbours just based on judgment. They would feel uncomfortable if they had to state their neighbours as poor even though the neighbours were really poor. The status as poor is seen as inferior, and those who were poor are members of the lower social class.

Some higher level staff (village staff coordinators) acknowledged that the databases for the years 1994 and 1995 were much better than those in later years, even though they still had some deficiencies. The former were compiled to capture the facts, while the latter was just used to satisfy what the higher levels of government. Since the top government under Soeharto's regime had a political will to show only the success of the programme, the data had to be modified to show the expected outcome. Consequently, people had to sacrifice the truth in order to satisfy the government's officials. Due to the above deficiencies, the use of the secondary data had to be cautious. In some cases recalculating, crosschecking and confirmation were required.

PART 2: METHOD OF ANALYSIS

The effects of a credit scheme on the recipients' economic situation can be analysed using a two-stage process. The first stage is the analysis of the performance of the credit institution and the second is that of the recipients' performance. The reason for that is due to the fact that institution and recipients' performances are interrelated. Institutional performance depends on the performance of the recipients. Institutions' performance can be seen using two main indicators, namely sustainability and outreach. Sustainability means the ability of the scheme to run continuously without any subsidy from the government. Outreach relates to the number of recipients, the number and size of loans, the length of time the members were involved in the programmes and the quality of services reflected by lower transaction costs. The recipient performance is of two types, namely the performance by the group of recipients and the performance by household recipients. Performance of the recipients can be analysed by examining the change in their incomes and theh capability to fulfil their basic needs. The recipient performance is much related to the continuity of the scheme.

Poverty alleviation, an ultimate objective of a credit programme aimed at financing the poor, can only be achieved if the programme can survive and cover as many poor as possible over time.

POVERTY ALLEVIATION IMPACT OF MFI

All credit programmes for the poor have similar objectives, that is, to continuously alleviate poverty. Two views on how best to measure the performance of MFIs on poverty alleviation have been discussed in the literature. The first is the institutionalist view which views an MFI as successful if it can serve a large number of poor without incurring a permanent loss. The two main indicators used here are outreach and sustainability. The second is the welfarist view of the success of an MFI. According to the welfarists, an MFI is successful only if the poor, the members, experience a significant change in their economIc lives. If income is the target variable of the programme, for example, then the members should have a significant increase in their income compared to those who were not involved in the programme. These two views are discussed below.

INSTITUTIONALIST VIEW OF MFIS' PERFORMANCE

Institutionalists argue that the decision of individuals to get involved in the programme is because they receive benefit from the services provided. They also benefit by joining the programme. Thus the larger the number of poor covered, the more the benefit spreads, then the more benefit the community as a whole receives. In order for the benefits to be long lasting, the institution or programme should also exist for a long time. Thus, the two main aspects investigated to measure and evaluate the success of a credit programme are outreach and sustainability (Gonzalez-Vega, 1977; Yaron, 1994a; b). The performance of KUKESRA and MKEJ programmes will be measured using these two measures.

Outreach:

To what extent MFIs' services reach the poor can be seen from several indicators. The indicators used in this study relate to borrowers, loans borrowed, savers and saving, credit institution's development especially in the delivery system, and the participation of women (Martokoesoemo, S. B., 1993; Yaron, J., 1992).

For KUKESRA and MKEJ the indicators of analysis used are as follows:

Breadth

Since KUKESRA and MKEJ deliver their loans to their recipients and carry out saving related transactions through groups, it is important to measure growth by looking at some aspects such as the number of groups, members, loan value, and saving/withdrawals. The growth is expressed as follows.

$$GX_{b.} = \frac{\Delta X_b}{X_b} \qquad \textbf{Equation 3-1}$$

b is the subscript for variables, members of the programmes, groups, loan outstanding, saver, saving, and withdrawals.

Since all recipients have to save a compulsory proportion in a saving account, known as TAKESRA which at the same time acts as collateral for getting KUKESRA, the recipients of KUKESRA were only those who had TAKESRA. Due to this, the relevant variable to analyse is those who had saving (SR) in TAKESRA and only those who had voluntary Saving (VS). The total value of voluntary saving, and the withdrawals of voluntary saving are the indicators used.

Depth

PG and HC against the recipients of the programmes.

$$\mu H(X_i) = \left[\sum_{j=1}^{k} w_j \left(\frac{B_{j\max} - V_{ij}}{B_{j\max} - B_{j\min}} \right)^{\alpha} \right]^{1/\alpha} \qquad \text{(see Equation 3-18)}$$

$\mu H(X_i)$ represents the Poverty Gap (PG) and Head Count (HC) ratio.

$$PG_{BPS\,j} = \frac{\vartheta_{BPS} - y_j}{\vartheta_{BPS}}$$

Here the value of $B_{max} = \vartheta_{BPS}$ and that of $B_{min}=0$. Also some other parameters are $\alpha=1$ and $w_i=w_j=1$.

Using the fuzzy formula, we use $\alpha=0$ for HC and $\alpha=1$ for PG.

Woman Participation

The number of women (WM) involved in the programme can be seen from the Woman Participation Rate (WPR) as follows:

Woman Participation Rate (WPR)

$$WPR_t = \frac{WM_t}{B_t} * 100\% \qquad \textbf{Equation 3-2}$$

where B_t refers to the number of borrowers.

However, this ratio is irrelevant for both programmes since all members are women. Thus, the ratios for both the programmes are the same and equal 1.

Scope and Quality

The scope and quality of services can be seen from the types of services offered and the relative number of the field staff available to handle their recipients.

The increase in the number of staff (STF) used in field level activities can be seen as an indicator of market expansion. However, the relative number of staff available to handle the recipients is better observed by a comparison between the number of staff and the number of borrowers (B) served particularly the number of groups (GRP).

Staff to Borrowers ratio (STB)

$$STB_t = \frac{STF_t}{B_t} \qquad \textbf{Equation 3-3}$$

or

Staff to Group ratio (STG)

$$STG_t = \frac{STF_t}{GRP_t} \qquad \textbf{Equation 3-4}$$

Costs

The decision by recipients on whether to take the credit or not, depends much on the cost considerations and the benefits from the corresponding credit. If benefits overweigh the costs they tend to take it, otherwise it is rejected.

However, many studies have shown that recipients of a concessional credit programme are usually unresponsive to concessional interest rates (Tapsoba, 1981; Dat, 1998). Many poor, besides borrowing from a concessional credit source, still use informal credit even though the interest rates are much higher. This phenomenon leads to the question of whether the poor are irrational or what cost components they take into consideration. The irrational phenomenon hypothesis is debatable. Some researchers have found that even small farmers are rational.

A number of researchers have hypothesised that the nominal interest rate is not the dominant factor affecting the decision to obtain credit. There are a number of real and hidden costs that sometimes are forgotten by researchers but directly affect the poor. Tapsoba (1981) defines the real cost of borrowing as all costs that borrowers incur in the process of obtaining the loans. The cost of borrowing (TCB) consists of transaction costs (TRC) and nominal interest payment (INTP). Transaction costs (TRC) include all non-interest payment such as service fees, closing costs, purchase of other lender services, compensatory balances, transportation costs to visit the lending institution, time lost in travelling and hidden costs such as frustration, etc. For the poor who are usually illiterate, complicated procedures and paper work could become the main cost factor affecting their decision to obtain credit.

The Cost of Borrowing (TCB) can be expressed as:

$$TCB = TRC + INTP \qquad \textbf{Equation 3-5}$$

Rate of the Cost of Borrowing (RCB)

$$RCB_t = \frac{TCB_t}{VL_t} x100\% \qquad \textbf{Equation 3-6}$$

Where
TCB = Cost of borrowing
TRC = Transaction costs
INTP = Nominal interest rate
VL =Value of loan borrowed

Length of time in the programme

The longer the recipients remain in the programme the more benefits they receive. Thus, drop out rate can be seen as an indicator of dissatisfaction, if there are no clear reasons for exiting the programme.

Worth

This shows how the recipients appreciate the services offered by MFIs. This can be seen from the proportion of recipients who fulfil their duties on time (or at least less than 3 months late), and the participation of recipients in the activities, including credit and saving related activities. Thus, the ratios of borrowers fulfilling their duties and number of active borrowers are used as an indicator of appreciation.

Sustainability

In order for the programme to be self-sustainable without any external support, the programme's revenue, excluding any support received, must be at least sufficient to recover all the costs incurred. Thus, the important indicators to observe are profitability and dependency.

The use of funds

The use of funds can be identified by investigating the sectors where the recipients are involved. In addition, it can be identified from the activity of the recipients, whether they have small business activities or not. This indicates whether they are using the funds for productive purposes or just for consumption purposes.

New Starts Business (NS)

Rahman (1994:49) uses the following indicators to evaluate the change in poverty: employment effect such as women's participation rate and self-employment. Wahid (1994:4) evaluates women's participation, employment, productivity, income, housing, and nutritional status as the relevant indicators. In this study, self-employment generated by the services provided by MFIs is the one considered.

New starts business rate (NSR) can be written as:

$$NSR_t = \frac{NS_t}{B_t} * 100\% \qquad \textbf{Equation 3-7}$$

Where NS is New Start of business
B is the number of borrowers
t is the sub-script for time period.

Profitability and financial performance

Other measurements to evaluate the profitability are the analysis of efficiency and repayment performances. The efficiency can be measured by some ratios related to costs and the achievements of the institution. Tapsoba (1981:76) points out that the efficiency of disbursing done by a financial institution can be seen from indicators of real costs such as Real Cost Rate (RCR).

Real Cost Rate (RCR)

Real cost rate (RCR) is a ratio to show the efficiency in terms of each unit of loanable fund. Cost per value of loan (CPV) is simply a ratio of total real cost of loan (TCL) to total value of loan outstanding (VL) and RCR is simply CPV in percentage.

They are written as:

$$RCR_t = \frac{TCL_t}{VL_t} * 100\% \qquad \textbf{Equation 3-8}$$

$$TCL = LC + DP + OC + INT + WO \qquad \textbf{Equation 3-9}$$

where:
t stands for period.

TCL is defined as the summation of all elements of costs.

a. Salaries and wages of labours used in the institution in the range of top manager to field level workers. This includes overheads and all bonuses (LC).
b. Depreciation of building and equipment including vehicles (DP) when this value can be approached by rent value (RV)
c. Operating cost in the period (usually annual) such as office supplies, maintenance and repair cost of the factor of production (OC)
d. Interest cost that the institution has to pay for the credit fund it borrowed (INT)

Losses due to write-off of bad debt (WO)

Repayment Performance:

Repayment performance can be captured by paying attention to some other indicators. Repayment is an important variable to observe, since it determines the income of MFIs. Many scholars such as Martokoesoemo (1993), Von Pischke (1977), and Tapsoba (1981) have proposed several indicators showing the repayment performance. Some indicators used in this study are as follows.

Collection Ratios are indexes showing the proportion of volume of the loan due that is really collected. This describes actual repayment and the overdue or unpaid instalment.

The ratios are obtained for different periods to show how the collection performance changes over time. The ratios applied are as follows:

Simple Collection Ratio (SCR):

$$SCR_t = \frac{\sum Coll_t}{\sum Inst_t}$$ **Equation 3-10**

where,
$Coll_t$ is the collection at period t
$Inst_t$ is instalment at period t

Unfortunately, as Tapsoba (1981:107-112) discusses, the ratio faces problems related to includibility of interest, pre-repayment, partial repayment or multi-period partial repayment. Tapsoba included interest payment into the nominator and denominator of the above ratio, but he did not solve the problem of repayment in advance (pre-repayment).

World Bank Collection Rate

This ratio is preferred by the World Bank in order to evaluate repayment performance of microfinance projects in developing countries (Bolnick, 1988:509). The World Bank collection rate (WCR) is just the ratio of total collection at current period to total debt at the period. Total debt is the total arrears plus instalments maturing in the period.

$$WCR_T = \frac{\sum Coll_T}{\sum_{t=1}^{T} \sum Debt_t} * 100\%$$

Equation 3-11

$0 \leq WCR$

Theoretically, WCR has a positive value (above zero). WCR = 0 if there is no collection in the period. WCR=1 means that on the average all debt has been repaid on time. However, it does not mean that there is no debt left. If prepayment is included, the WCR can be greater or equal to one and at the same time it is possible that some instalments are still unpaid.

Cumulative Collection Rate (CCR)

For time series analysis, the analysis of cumulative measures is increasingly important. The CCR shows the overall repayment performance in the life of the programme over a period of time. If there is no prepayment of instalment in period t_f (where t_f>T)[23], the value of CCR will be between 0 and 1. However, if there is any prepayment, CCR could be greater than 1.

$$CCR_T = \frac{\sum_{t=1}^{T}\sum Coll_t}{\sum_{t=1}^{T}\sum Inst_t} * 100\% \qquad \textbf{Equation 3-12}$$

Analysis of Arrears

The other issue related to repayment is arrears. Two indicators of arrears used are the cumulative rate of arrears to portfolio (CRAP) and that of instalment (CRAI). Both are measured at the end of periods.

Cumulative Rate of Arrears to Portfolio (CRAP)

$$CRAP_T = \frac{\sum_{t=1}^{T} AR_t}{\sum PRF_t} * 100\% \qquad \textbf{Equation 3-13}$$

PRF is portfolio consisting of all arrears and all loans that have not yet matured.

[23] T is current period to which the evaluation relates, while t_f is any future period after period T.

Cumulative Rate of Arrears to Instalment (CRAI)

$$CRAI_T = \frac{\sum_{t=1}^{T} AR_t}{\sum_{t=1}^{T} Inst_t} * 100\% \qquad \textbf{Equation 3-14}$$

Mobilisation of Saving

An important aspect of MFI to examine is to what extent the institutions can mobilise saving as a precondition for self-financing. KUKESRA, as well as other credit programmes in many developing countries is aimed to teach people to save. The direct instrument to do this is to apply a system of compulsory saving where each borrower has to plough back a certain proportion of the loan into a saving account at the same institution. KUKESRA, for instance, takes 10% of the loan to be ploughed back in advance into the member's saving account, known as TAKESRA.

Even though compulsory saving is a good instrument for teaching people, it cannot measure how far the recipients' saving habits have grown since compulsory saving is a prerequisite. In order to evaluate to what extent the saving habit has been formed, the measure to use is the extent of voluntary saving.

Total saving (TS) consists of compulsory saving (CPS) and voluntary saving (VS). The indicators of importance are growth rates of total saving (Gs), voluntary saving ratio (VSR), and growth rates of voluntary saving (Gv). Each of them is expressed as below.

$$GX_{st} = \frac{\Delta X_{st}}{X_{st}} * 100\% \qquad \textbf{Equation 3-15}$$

where, subscript s stands for the balance of total saving (TS) and of voluntary saving (VS)

Self-finance

To what extent the programme can self-finance its operation can be seen from the ratio of total saving (TS) to total loan outstanding (LO).

$$SF_t = \frac{TS_t}{LO_t} * 100\%$$ Equation **3-16**

Subsidy Dependence Index (SDI)

Even, though the above ratios are important, they cannot prove that the institution is sustainable. All the above ratios do not count the subsidies exclusively, therefore, another measurement is still needed to sharply analyse whether the institution is self-sustainable or not. Yaron (1992) suggests that evaluation of the sustainability of an institution should use the Subsidy Dependence Index (SDI), which takes into account all external support such as subsidies. The SDI can be written as follows.

$$SDI = \frac{SUBS}{LP * INTLR}$$

Equation 3-17

$$SUBS = OUT(INTm - INTc) + [(E * INTm) - P] + K$$

where;
SUBS =Annual subsidy received by the institution
OUT = Institution's concessional borrowed funds outstanding (annual average),
INTm = Interest rate the institution would be assumed to pay for borrowed funds if access to borrowed concessional funds were eliminated,
INTc = Average annual concessional rate of interest actually paid by the institution on its annual concessional borrowed funds outstanding,
E = Average annual equity,
P = reported annual profit (adjusted, when necessary, for loan loss provisions, inflation, etc.)
K = The sum of all other types of annual subsidies received by the institution (such as Partial or complete coverage of the institution's operational costs by state).
LP = Average annual outstanding loan portfolio of the institution
INTLR = Average on-lending interest rate of the institution

WELFARIST VIEW: ECONOMETRICS MODEL

As the ultimate objective of the study is to investigate the effect of KUKESRA on poverty alleviation, the study focuses on the reduction of poverty among the recipients. Recipients of KUKESRA programme are household or families[24]. Households have no direct relationship with the credit provider but interact through groups in which the recipients are involved. The providers just have direct contact with the groups in terms of providing credits and receiving repayments and savings.

To evaluate the effect of MFI on poverty alleviation, some measure of poverty, like the poverty line is required.

INDEXES OF POVERTY

Many poverty indexes established are for national evaluation of the incidence of poverty. Such methods are often not appropriate to measure poverty at the micro or household level. In order to fit household analysis and data, some adjustments are needed. Ignoring intra-family distribution, the single family poverty index implies that the Gini ratio of the family equals zero or all family members consume as much as they need. When the aspect of distribution is ignored, indexes of poverty such as the indexes of Sen (1976), and Kakwani (1980) become a simple poverty gap index. This index, together with some other approaches to measuring poverty at the micro level, will be described using the fuzzy set theorem.

Fuzzy Index of Poverty

Carbonaro *et al* (1990) showed that the fuzzy approach is more general. Many poverty indexes could be met by adjusting membership function in a fuzzy model. The general

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[24] Even though BKKBN has a definition of family, where a family consists of husband, wife and children, the inclusion of the respondents in the programme is not so strict. People who have divorced have the opportunity to be involved. Thus, if there are some families living together as a household, they can get a separate loan for each family.

membership function is written as follows:

$$\mu H_j(X_i)=\left(\frac{B_{j\max}-V_{ij}}{B_{j\max}-B_{j\min}}\right) \text{ for indicator j, individual i}$$

or

$$\mu H(X_j)=\left[\sum_{j=1}^{k} w_j\left(\frac{B_{j\max}-V_{ij}}{B_{j\max}-B_{j\min}}\right)^{\alpha}\right]^{1/\alpha} \qquad \text{Equation 3-18}$$

for each individual i

The indexes can be built from the membership function.

A. Poverty Gap (PG)

Based on the membership function, poverty indexes can be formulated based on BPS's poverty line as:

$$PG_{BPS\,j}=\frac{\vartheta_{BPS}-y_j}{\vartheta_{BPS}}$$

Here the value of $B_{max} = \vartheta_{BPS}$ and that of $B_{min}=0$. Also some other parameters are $\alpha=1$ and $w_i=w_j=1$.

B. The lack of Household Basic Needs Consumption:

Navajas, Meyer *et al.*(1996; 2000) using another approach to investigate poverty at household level, divided the population according to poverty micro-criteria called Unsatisfied Basic Needs (UBN). The UBN approach is commonly applied in Latin America to determine some of the physical and non-physical requirements for a meaningful life. This approach is quite similar to that applied in the Indonesian microfinance programme, KUKESRA. Aspects of basic needs included in poverty evaluation in Bolivia were housing, access to public services, education, and access to health services. In Indonesia, according to BKKBN (1996), the government included some other aspects of basic needs: psychological needs, and social needs with some modification. The UBN approach implies that if a household fails to meet at least one of the criteria of a certain class, the household belongs to a lower class in which all criteria for the class are satisfied.

Basic Need Poverty index is based on Basic Needs Consumption (BNC) or Basic Needs Achievement (BNA). These terms can be used exchangeably since achievement refers to affordability to consume. Both terms are used when the basic necessities are seen as input and not output. It refers to consumption and not to the result of the consumption. The household poverty index based on Basic Needs Consumption can be calculated as:

$$PBN_i = \left(\frac{I}{m}\right)\sum_{j=1}^{m}\left(\frac{X_{js} - X_{ij}}{X_{js}}\right)$$

The index for each item of basic needs is discussed below.

a. Education.

The government has proclaimed 9 years of schooling as a compulsory education. Since this is the government's requirement, the poor have adopted this value as a minimum standard of education for their children. A household that cannot achieve this level of education for the children due to economic motives such as for earning additional income for the household can be categorised as poor. Thus, school age is 15 years or less, assuming that children begin school at the age of 6 years and never repeat any of the grades.

The index of achievement in Education can be calculated as:

$$ie_{if} = \left(\omega_{e1}\frac{e_{if}}{e^*} + \omega_{e2}\frac{a_{if}}{a^*}\right) \qquad \textbf{Equation 3-19}$$

Since the normal age for children to go to school is 6 years old (after 5 years old), the norm value for education can be calculated as:

$$e^* = (\text{Age} - 5) \,|\, \text{Age} \le 15$$

$$a^* = 1$$

$$\text{FIE}_i = \frac{1}{F}\sum_{f=1}^{F} e_{if} \qquad \textbf{Equation 3-20}$$

Where
f=1,2,...,F (number of family members)
j=1,2,...,q (number of poor families)
ω= weight (Σω =1)
* refers to norm value
e= length in school
a= attending school currently (1= yes, 0= no)

In respect to consumption of educational services, this study considers that the length in school is more important than the current situation of attending school, so the weight of the former is higher than that of the later (ω_{e1}=0.6 and ω_{e2}=0.4).

b. Food/Nutrition

The minimum number of calories required for people of different ages is based on the minimum requirement as recommended by the FAO (Food and Agricultural Organization).

Nutrition sufficiency for individuals in a household:

$$\text{ANut}_{if} = \frac{\sum_{l=1}^{L} \text{Nut}_{ifl}}{\text{Nut}^*} \qquad \textbf{Equation 3-21}$$

Index of achievement in nutrition is:

$$FIN_i = \frac{1}{F}\sum_{f=1}^{F} ANut_{if}$$ **Equation 3-22**

l=1,2,...,L refer to the type of nutrient.
Nut is the number of calories in each nutrient.

c. Health Services.

Modern treatment for the sick is assumed as the norm for people. In Indonesia, where the availability of doctors in rural areas is limited and people are encouraged to go to clinics (*Puskesmas*), the accessibility to *Puskesmas* could be used as a minimum requirement. For rural people and for most of the poor, health services can be obtained from *Puskemas* or traditional healers (using alternative medicine), assuming that all can cure the sick, albeit with different qualities. The norm value for health services can be calculated by combining (weighted average) the source of services provided.

Index of household achievement in health services:

Equation 3-23

$$FIHS_i = \left(\frac{s_i^p(tr)^p + s_i^h(tr)^h + s_i^a(tr)^a}{s_i(tr)^*} \right)$$

$$s_i = s_i^p + s_i^h + s_i^a$$

$$(tr)^p = 1$$

$$(tr)^h = .5$$

$$(tr)^a = 0$$

$$(tr)^* = 1$$

where
s_i^p is number getting sick in household j and the sick were brought to *Puskesmas* or a doctor in the last year.
s_i^h is the number getting sick in household j and the sick were brought to a traditional healer in the last year.
s_i^a is the number getting sick in household j but the sick did not get any treatment from *Puskesmas* or even traditional healer in the last year.
(tr) is treatment from corresponding sources of health services.

d. Housing

Indicators of housing are floor, wall, roof, toilet, and density. Index of achievement in housing is:

$$FIHG_i = \frac{1}{5}\left(\frac{h_f}{f^*} + \frac{h_w}{w^*} + \frac{h_r}{r^*} + \frac{h_t}{t^*} + \frac{h_d}{d^*}\right) \qquad \text{equation } \mathbf{3\text{-}24}$$

Where
h is polychotomic variable (f=floor, w= wall, r=roof, t=toilet)

e. Water consumption.

Water can be used for drinking or washing and bathing. The quality of water depends on the sources of water supply.

The indicator of water is the source of the water. Index of achievement in water is:

$$FIW_i = \left(\omega_d \frac{W_a}{W_a^*} + \omega_b \frac{W_a}{W_a^*}\right) \qquad \textbf{Equation 3-25}$$

Where
W is source of water
d and b refer to the use of water for drinking and bath/washing respectively.

Household Index of Consumption (HIC):

$$HIC_i = \frac{1}{5}\left(FIE_i + FIN_i + FIH_i + FIHG_i + FIW_i\right) \qquad \textbf{Equation 3-26}$$

Poverty Index for Household (PBN)

$$PBN_i = 1 - HIC_i \qquad \textbf{Equation 3-27}$$

PROGRAMME IMPACT

Parametric Approach

One can investigate the impact of the programme on those who are involved and supposedly affected by the programme. In order to decide whether the programme has benefited the members, the outcome of members and of non-members of the programme needs to be examined (Hulme, 2000).

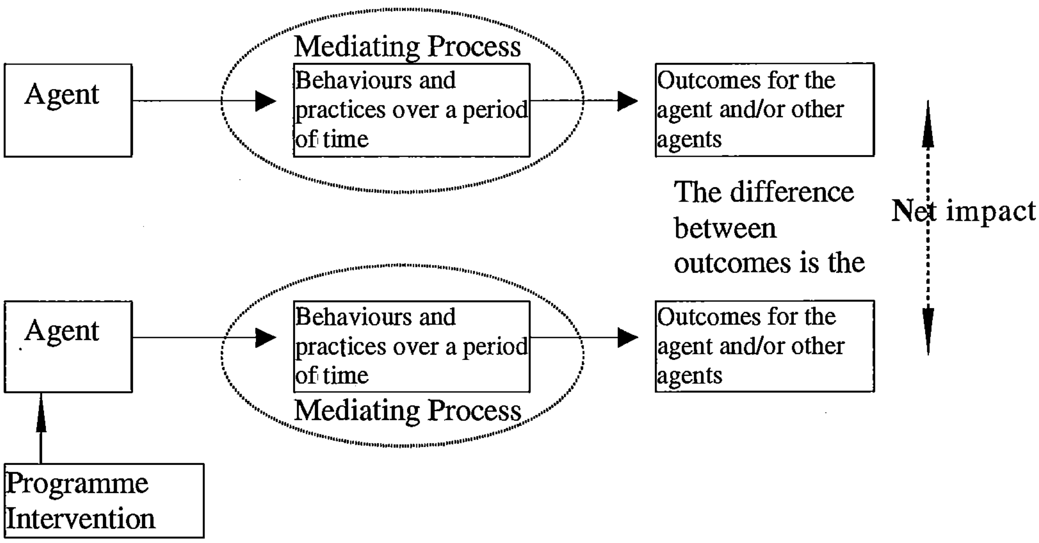

Figure 3-3 Scheme of Impact Assessment (Hulme, 2000).

Table 3-14 Impact Assessment

Before	After		Net Impact
$Q0_{wo}$	$Q1_{wo}$	Without	$(Q1_{wo} - Q0_{wo}) \; \gtreqless \; (Q1_w - Q0_w)$
$Q0_w$	$Q1_w$	With	

The Net Impact $[(Q1_w - Q0_w) - (Q1_{wo} - Q0_{wo})] = (Q1_w - Q1_{wo}) + (Q0_{wo} - Q0_w)$

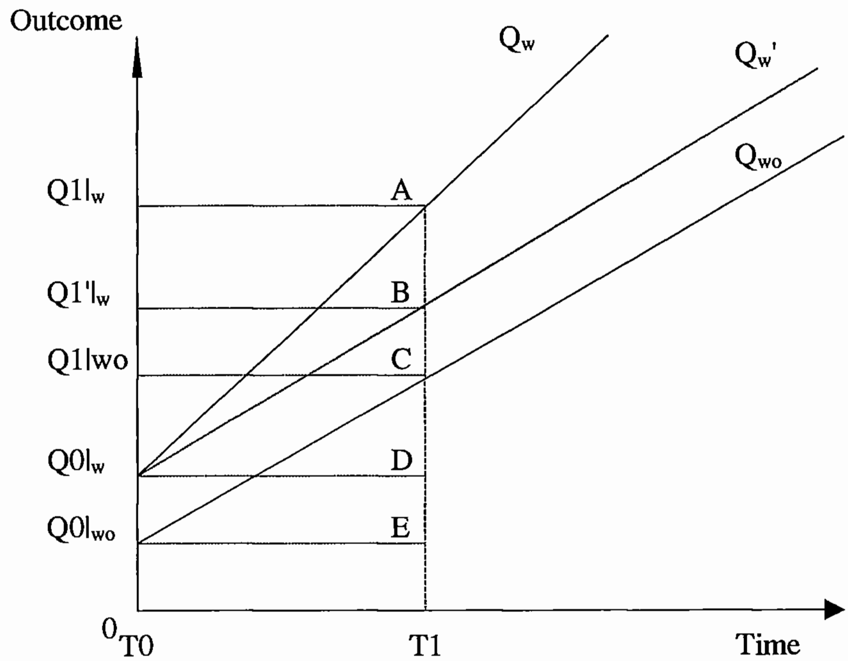

Figure 3-4 Impact of a Programme

Let the outcome be income.
The cross-section study when the evaluation held at time T1:

Change of Income of the participant = AD
Change of income of non-participants = CE
Impact = AD - CE

If they start from the same situation or with no bias, Q1'|w which is the outcome of the participant if they were in non-participating state will be assumed equal to the outcome of non-participant if they start from the same condition.

Change of income of non-participants = BD
Impact = AD - BD = AB

Thus, at time T1 where the project or programme has been implemented, the total difference of income between participant and non-participant is AC, which can be decomposed as follows:

AC = AB + BC

In words, total difference equals the impact plus the bias.

If people have freedom to chose whether they want to join in a programme or not, the model of the effect can be analysed by the choice model approach or self-selection model. The self-selection model has been investigated since Roy (1951) did an analysis on how individuals made a choice between hunting and fishing based on their productivity in each job. Since then many more scholars have applied the self- selection model in many social disciplines. Hagan and Parker (1985) used this method to analyse white-collar crime and punishment, while some others used this method in education studies such as Goldhaber et al (1999), Quisumbing (1997). Many more economists now use this method for example Lalonde (1986), Schafgans (2000), Ashenfelter (1978), Heckamn and Hotz (1989), Gronau (1974), Hoffman and Link (1984). This approach has also been applied in risk analysis such as by Shanmugam (n.d) in relation to job and compensation, and Perraudin and Sorensen (2000) in relation to assets and household portfolios. Luo *et al.* (1990) used a similar type of model, switching regression, to analyse the effect of credit on the productivity of input in agricultural production in Northeast China. However, fewer studies of the impact assessment of poverty alleviation programmes have used this method of analysis.

Study on the evaluation of impact could apply an experimental or non-experimental method, even in social programmes. In the experimental method, a control group is designed to be made of individuals who are not involved in the programme but have the same underlying characteristics as the members of the programme. In the experimental method, the control group can be designed by randomly choosing those who are eligible for the programme before the programme starts but do not become members. By this way, those included in the control group would have the same characteristics as the members of the programme.

In the non-experimental method, it is difficult to get character equalization between the control group and the group of members (or treatment group, or non-control group). Judgement that the control group is comparable with the non-control group is needed, but if the comparability is not satisfactory, then biases may arise. The case of credit for the poor in poverty alleviation programme is an example. Evaluations for pro-poor programmes by using the non-experimental method often found that the majority of members belonging to the treatment group were poor and of the control group were non-poor. This type of bias is known as *selection bias* (Heckman and Hotz, 1989:862). Heckman and Hotz (1989:862) affirmed that due to the bias, several non-experimental studies yielded different results of the effect for the same programme. In addition, in many cases the results provided were different from the results obtained from the experimental method.

In the experimental method, on the one hand, the bias can be minimized, however this method is costly. On the other hand, even though the non-experimental method is weakened by the selection bias, it is cheaper. In order to measure the real effects of the programme under the non-experimental method, the bias should be eliminated or, at least, there should be a model which is designed to distinguish between the bias and the real effect of the programme. Heckman's model has proved that the non-experimental method can also provide the same unbiased results as provided by the experimental one (Heckman and Hotz, 1989).

The effect of the programme can be roughly estimated by analysing the difference in performance of those involved and those not involved in the programme. Suppose that the performance measured is Y (where Y_1 is the performance of those involved in the programme and Y_0 is the performance of those who are not involved), and a dummy variable of the selection of participation is Z (where Z=1 for an individual participating in the programme and Z=0 for an individual not participating), then we can define the terms in a cross-section study as follows:

$Y1|_{Z=1}$ is the actual performance of a participant.

$Y0|_{Z=1}$ is the expected performance of the participant if he/she is situated in non-participating state.

$Y0|_{Z=0}$ is the actual performance of a non-participant.

$Y1|_{Z=0}$ is the expected performance of the non-participant if he/she is situated in participating state.

The actual difference in performance between the participant and non-participant can be decomposed according to Heckman (1995:88) as follows:

Total gap:

$$Y1|_{Z=1} - Y0|_{Z=0} = (Y1|_{Z=1} - Y0|_{Z=1}) + (Y0|_{Z=1} - Y0|_{Z=0})$$ **Equation 3-28**

$(Y1|_{Z=1} - Y0|_{Z=1})$ is the expected change in performance for the participant. Let us say it as *gross effect*, or in Maddala's (1983:261-262) language *gross benefit*, which relates to cost-benefit analysis. If Y is income from production, this component shows the productivity differentials between both states for the participants.

The participant will choose the state participating $(Y1|_{Z=1})$ if in this state he/she can get some extra benefit compared to the non-participating $(Y0|_{Z=1})$ situation. Thus, it is expected that if the selection is on the basis of comparative advantage, then the gross benefit or gross effect must be positive.

$(Y0|_{Z=1} - Y0|_{Z=0})$ is the bias, the initial condition if there is no programme. This is to show if participant and non-participant have the same performance if they are situated in the same non-participating state. The value in the bracket will be zero if there is no bias. If the value in the bracket is positive, then this means that the participant of the programme is better off indeed, while if the value is negative, this means that the non-participant is better off.

Thus for the existing total gap of performance between the two groups, the size of gross effect will depend on the degree of bias. If a positive bias existed, then the real effect would be lower and vice versa.

The above analysis of impact implies that the model has a selection equation and an outcome equation. The selection equation is to measure how individuals decide to participate or not participate while the outcome equation is to see the variables explaining the variation in the performance achieved.

Outcome general function can be written as:

$Y_i = a + bX_{yi} + e$ for whole sample including Z=0 and Z=1.

Where $e=N(0,\sigma)$

This equation can be divided into two sub-equations as proposed by Garen (1984) as follows:

$Y_i = Y_{0i} = a_0 + b_0X_{yi} + e_0$ if $Z = 0$ **Equation 3-29**

$Y_i = Y_{1i} = a_1 + b_1X_{yi} + e_1$ if $Z = 1$ **Equation 3-30**

Equation 3-29 is the function for the non-participating state, while Equation **3-30** is for the participating state.

The choice (Z) between 0 and 1 follows the function of unobserved variable Z* as:

$Z_l^{*} = cX_{zl} + u$ **Equation 3-31**

$Z=1$ if $(cX_z + u)>0$

$=0$ otherwise

The Z=1 or they will choose participating if $Z^* >0$, unless they will choose non-participating (Z=0).

For simplicity, we drop the index of individual (i) and let equations 3-29 and 3-30 be written as:

$Y_1 = a_1 + b_{y1}X_y + e_1$ for $Z = 1$

$Y_0 = a_0 + b_{y0}X_y + e_0$ for $Z = 0$

where

$E(e_1) \neq 0$	$E(e_1,e_0) = 0$	$Cov(x_y,e_1)=0$
$E(e_0) \neq 0$	$E(e_1,e_1) = \sigma_1^2$	$Cov(x_y,e_0)=0$
$E(u) = 0$	$E(e_0,e_0) = \sigma_0^2$	$Cov(x_z,u)=0$
$E(u,e_1) = \sigma_{ue1}$	$E(u,u) = \sigma_u^2$	
$E(u,e_0) = \sigma_{ue0}$		

The assumption of the covariance between unobserved variables in the selection equation and that in the outcome equation is based on the following reason. Since the choice is the participation in the pro-poor programme and the outcome is the variables of measurement of poverty, it is most likely that unobservable variables in the selection equation and in the outcome equation are correlated. However, the sign of the correlation cannot be predicted.

Exploring equations 3-29, 3-30 and 3-31, the expected value of equation 3-29 and 3-30 will be:

$E(Y_k|_{z=l}) = a_k + b_k X_{yl} + E(e_k|_{z=l})$ **Equation 3-32**

For k,l = 1,2

$E(e_k|_{z=l}) \neq 0$

The conditional error can be written as (Heckman, 1979; Maddala, 1983; Breen, 1996):

$E(e_k| _{z=l}) = \sigma_{uek}\,\lambda_l$

Where:
$\lambda_1 = -\phi(cX_z)/\Phi(cX_z)$
$\lambda_0 = \phi(cX_z)/\{1-\Phi(cX_z)\}$

$\phi(.)$ and $\Phi(.)$ are density function and cumulative density function (cdf) respectively.

From the expected values, we can reconstruct the functions as:

Equation 3-33

$Y_1| _{z=1} = a_1 + b_1X_Y + \sigma_{ue1}\,\lambda_1 + u_{11}$	$u_{11} \sim N(0,\sigma_{11}^2)$	Equation 3-33a
$Y_1| _{z=0} = a_1 + b_1X_Y + \sigma_{ue1}\,\lambda_0 + u_{10}$	$u_{10} \sim N(0,\sigma_{10}^2)$	Equation 3-33b
$Y_0| _{z=0} = a_0 + b_0X_Y + \sigma_{ue0}\,\lambda_0 + u_{00}$	$u_{00} \sim N(0,\sigma_{00}^2)$	Equation 3-33c
$Y_0| _{z=1} = a_0 + b_0X_Y + \sigma_{ue0}\,\lambda_1 + u_{01}$	$u_{01} \sim N(0,\sigma_{01}^2)$	Equation 3-33d

Even though by assumption all the functions mentioned (3-32a to 3-32d) are independent and can be calculated by applying ordinary least square method, in fact only 2 among them are computable (3-32a and 3-32c). The other 2 equations can not be computed since we have no data on $Y_1| _{z=0}$ and $Y_0| _{z=1}$. However, all of them are important for the analysis on the impact of a programme.

From the model, the impact of a programme can be calculated through a decomposition analysis of variance of the total gap:

Total variance:

$$Y1|_{Z=1} - Y0|_{Z=0} = (a_1 - a_0) + (b_1 - b_0)X_y + \sigma_{ue1}\,\lambda_1 - \sigma_{ue0}\,\lambda_0 \qquad \textbf{Equation 3-34}$$

Real effect (gross impact):

$$Y1|_{Z=1} - Y0|_{Z=1} = (a_1 - a_0) + (b_1 - b_0)X_y + (\sigma_{ue1} - \sigma_{ue0})\,\lambda_1 \qquad \textbf{Equation 3-35}$$

Selection bias:

$Y0|_{Z=1} - Y0|_{Z=0} = \sigma_{ue0}\,\lambda_1 - \sigma_{ue0}\,\lambda_0 = \sigma_{ue0}\,(\lambda_1 - \lambda_0)$ **Equation 3-36**

Estimation:

$\phi(.)$ and $\Phi(.)$ are computed from probit analysis of equation 3-31. The probability of participating and not participating are as follows.

$Prob(z_i=1) = Prob(u_i > -cx_i) = Prob(u_i \leq cx_i) = F(cx_i)$

$Prob(z_i=0) = 1\text{-}Prob(z_i=1) = 1\text{-}F(cx_i)$

Using Maximum Likelihood for probit, we can write:

$$L = \prod_{z=0} (1 - F(cXz)) \prod_{z=1} (F(cXz))$$ **Equation 3-37**

$$\hat{\lambda}_0 = \frac{\phi(\hat{c}x_i)}{(1 - \Phi(\hat{c}x_i))}$$

$$\hat{\lambda}_1 = \frac{-\phi(\hat{c}x_i)}{\Phi(\hat{c}x_i)}$$

The actual values of λ_i and λ_0 are unknown and for a proxy the predicted values are used.

Using these values in equations 3-32a and 3-32c, the effect of the programme can be measured. However, this approach only uses sub-samples. In order to use the whole sample, equations 3-32a and 3-32c should be calculated simultaneously. The model is modified as follows.

Operational Model

Equation 3-29, 3-30, and 3-31 can technically be modified as:

$E(Yi)=E(Yi|z=0)\ Prob(z=0) + E(Yi|z=1)\ Prob(z=1)$

$$= [a_0 + b_0 X_{Yi} + \sigma_{ue0}\, \phi_i/(1-\Phi_i)](1-\Phi_i) + [a_1 + b_1 X_{Yi} - \sigma_{ue1}\, \phi_i/\Phi_i]\Phi_i$$

$$= a_0 + b_0 X_{Yi} + [(a_1-a_0) + (b_1-b_0)X_{Yi}]\Phi_i + (\sigma_{ue0} - \sigma_{ue1})\phi_i$$

$$Y_i = a_0 + b_0 X_{Yi} + [(a_1-a_0) + (b_1-b_0)X_{Yi}]\Phi_i + (\sigma_{ue0} - \sigma_{ue1})\phi_i + \omega_i \qquad \textbf{Equation 3-38}$$

where ω has a zero mean and variance, σ_ω^2, by construction.

From the above models, the coefficients of interest are:

(a_1-a_0)

(b_1-b_0)

$(\sigma_{ue0} - \sigma_{ue1})$

The (a1-a0) is the coefficient which shows the level of effect of the programme. This indicates whether the programme has any impact on the level of the outcome measured. The (b1-b0) is the coefficient showing the impact of the programme on the productivity or marginal effect of each corresponding explanatory variable. The $(\sigma_{ue0} - \sigma_{ue1})$ is the coefficient showing whether there is a comparative advantage for the respondents, irrespective of whether they choose to be participants or to be non-participants. If this coefficient is positive, this means that there is comparative advantage for each group.

Integrating these coefficients into the equation of real effect of the programme, we can find the impact of the programme on each individual and the average effect for the whole society.

CHAPTER-4: HISTORY OF MICROFINANCE IN INDONESIA

INTRODUCTION

The history of MFI in Indonesia began when Indonesia was a Dutch colony and it continued after the colonial period. Today's MFIs have their origin in *lumbung*[25] where credit and saving transactions were undertaken in kind, while others had their origin in *Priyayi* bank. History also shows that as MFIs, these institutions were motivated to liberate the poor from the services of the informal moneylenders (IMLs). The role of the Dutch colonial government and non-government bodies as well as of endogenous people, significantly contributed to the establishment of MFIs.

Besides the sequence of events relating to the development of the institutions, this chapter will also try to determine whether credit delivery approaches, both individual and group lending, have their own roots in the history of MFIs in Indonesia. The history of Indonesian MFIs will be divided into 2 periods: colonial and postcolonial, and they are discussed consecutively below.

THE COLONIAL PERIOD

Prior to the Dutch colonial administrators' involvement in village banking, there were some Chinese and Arabs who provided money-lending services for the poor on an informal basis. As a result, many villagers depended on the Chinese or Arab informal moneylenders (IMLs) as the only financial source for obtaining credit when needed.

In 1888, a Christian missionary, namely Jellesma, established "*Spaarbank voor*

[25] *Lumbung* is a rice credit institution for helping people in time of crisis, such as the planting season or in time of *paceklik* (food shortage).

Inlanders" (Saving bank for Indonesian) in Mojowarno East Java. This institution showed that Indonesian villagers could save. This became the primary reason for the church to establish another saving bank in Kendalpayak East Java, in 1894 (Suharto, 1988). As such, the Church played a significant role in helping the poor, just as in many other countries. However, the capacity of the churches to finance was limited and consequently their activities did not expand significantly and were confined to a relatively small number of clients.

Before 1895, the Christian missionaries had established some village level trade banks (Schmit, 1994:1). Unfortunately, there is no clear record to indicate when this began. Nevertheless, even though MFIs in some form had existed before 1895, this was an important year in the history of Indonesian MFI and banking. In this year, Raden Wiriaatmadja, an Indonesian *Priyayi* (Javanese aristocrat), struggled to help the poor, neighbours and friends, by establishing *Priyayi* bank. Thus, the bank was motivated by a social responsibility rather than being a profit making institution. In Whaadmadja's observation, not only the poor but also his friends were trapped in a debt situation because they lacked cash at the time when they needed it badly. When they had to fulfil their social obligations, such as *slametan*, they needed more funds than they had and the only source of additional funds was the IML. Unfortunately, in many cases they did not have the capability to repay a big loan from IML which charged high interest rates.

The high interest rate could be explained as follows. According to Stikker, the high rate was due to a lack of knowledge of its consequence in the future. Therefore, whatever the rate charged by the informal moneylenders (IMLs), the borrowers accepted it. Boeke, in contrast, argued that the high interest rates were due to the high-risk in providing credit, especially without guarantee. Both arguments were also explored by Djojohadikusumo (1989). Boeke's argument reflected the high cost of operation including risk and transaction costs., Stikker on the other hand touched on the poor's appreciation for the future. The rate of interest charged by IMLs ranged between 100% and 200% per year because of these two factors (Suharto, 1988). Thus, the first *Priyayi* bank was established on 16 December 1895, with the objective of helping the poor using the savings fund formed from the contributions from rich Indonesian citizens. Other *Priyayi* bank were then established.

Many people in the target group of the *Priyayi* banks benefited from this, but unfortunately, the management of the banks was poor. In many cases, decisions about the amount of the loan, for example, were just made by the borrowers. This, together with many other weaknesses such as corruption, meant that the banks did not perform well (Suharto, 1988). As a result, some of the *Priyayi* banks disappeared while some others were converted to *volksbank* (popular credit bank). However, before the conversion took place, this idea had attracted the attention of the Dutch administrators. Sieburgh became involved in creating the credit bank "*Poerwokertosche Hulp-Spaar en Landbouwcredietbank*" in 1896. In 1897, De Wolff was appointed to be the director of the bank. De Wolff, who was influenced by Raiffeisen's idea of cooperatives, decided to establish a central institution for village credit cooperatives. After that, the idea of a cooperative became known, and several *Priyayi* banks established subsequently took this form. However, generally, *Priyayi* banks failed to reach their goal: to teach people about financial allocation and management. Consequently, some of these banks had to be abandoned, or were converted to *Volksbank* (Suharto, 1988).

According to De Wolff s observation in the 1900s, the need of the Indonesians for credit, particularly among the Javanese farmers, was mainly for paying taxes. This was because when the Dutch government instructed them to do "*cultuur-stelsel*" in 1830, the taxes were paid in kind but after the people were given freedom to grow any kind of plants they preferred, the taxes were no longer paid in kind but by cash. Thus, the people needed money to pay the taxes (Suharto, 1988:12). Djojohadikusumo (1989) describes that since cash was needed for tax payment, people tried to save money periodically or even grew plants to sell for tax purposes. When the crop failed or if they did not have enough money, they borrowed the rest from IMLs.

Money at that time was also important as a means of transaction. People needed money to buy other goods but in times of food shortage, food was more important. De Wolff emphasised that for *paceklik*, what the people needed more was not money but rice and seed. De Wolff also supported Fokkens' observation that credit was not just driven by tax pressure but that, in fact, life style contributed to debt making. The Indonesians experienced a lack of money not because of the lack of income or products but due to unwise spending of the income. They tended to hold great festivities that cost more than the level of income they had. Fokkens (as cited by Suharto, 1988:13) sald that the Indonesian farmers fell into a debt trap because: a) they had no saving and b) they obtained credit with a high interest rate. The reasons the poor were still dealing with high interest rates were explained by Djojohadikusumo (1989) as a result of a combination of factors from supplier and demander. A debt trap was also caused by the fact that the credit was not directed to productive sectors but many times just to satisfy people's daily needs or, in Suharto's (1988) terms, static loans (see also:Wolters).

THE STORY OF *LUMBUNG*, VILLAGE BANK, AND POPULAR CREDIT BANK

Lumbung was not a traditional institution but created (encouraged) by the government when the governor-general Johannes van den Bosch introduced *cultuur-stelsel* In 1830 (Encyclopedia-Britannica, 2001). Thus, it lived long before De Wolff established some *Lumbung* in Purwokerto in 1897. In the period of *cultuur-stelsel,* all farmers had to grow export crops such as sugar, coffee, and indigo, and one fifth of the produce had to be given to the government as directed by the colonial government. Then, in order to anticipate food shortages, the government established *Lumbung*. When the government cancelled *cultuur-stelsel*, people were no longer forced to be involved in *lumbung*. As a result, many *lumbung* were dissolved and with only a few left, fewer sources described the story of *lumbung* after this period.

When the Christian missionaries observed in their working area that there were many poor and very poor such as widows, orphans, and disabled persons living there, the church started to help those people through their own community. This initiative started in 1890 in Malang, East Java, when the missionaries established a *Lumbung Miskin* (*Lumbung* for the poor). Donations were made in the form of rice in this rice capital, especially when the harvesting period was over. The *lumbung*, as its name implied, aimed to help the poor. It arranged the use of rice as follows (Suharto, 1991: 8):

1. Some was used as a grant for the poorest, such as widows, orphans, disabled persons, and others in great suffering such as in serious sickness or troubles who were unable to work.

2. Some of the rest was used as credit for others who were poor but had capabilities to work and earn an income.
3. The rest was lent to farmers who had some difficulties, such as crop failure or personal reasons such as sickness. In this case, the interest rate charged on loans was 25%.

When the government saw that *Lumbung Miskin* could work well for the community, Steinmetz, the assistant to the government in Jombang, replicated this type of *lumbung* and established the *Lumbung* Desa (Village *Lumbung*) in Jombang, East Java. Unfortunately, not long after establishing the *lumbung* Steinmetz moved from Jombang, and consequently, the *lumbung* also disappeared.

When De Wolff came to Indonesia and found that the Indonesian people were living in a closed economy he decided to build a *lumbung* which, according to Suharto (1988), De Wolff simply just reorganised in 1898.

Lumbung and Cooperatives

De Wolff, who became the director of the bank in 1897, conceptualised his idea of a village credit institution as follows:

> "If the making available of agricultural credit in Java is desired by its people, is to be in line with its needs and be educative, then this must come from small village banks, managed by the most intellectual and respected persons in the villages, completely acquainted with the needs and the creditworthiness of its clients, able to appraise the urgency of each requested loan and to control the correct use of the funds and products issued. Only from such local banks, tied together by a central popular credit bank, which also acts as a fund for savings, current accounts and deposits and for regulating the lending of the village banks (that is transferring funds to banks with shortages from banks with surplus funds), does the reporter see any benefit for agricultural credit in the future. As long as the tutelage, the role of the popular credit bank shall be prominent, but when the situation improves the relationship with the village banks can become closer until in the end when they will have merged together" (see:Fruin, 1999:17).

In 1897, De Wolff started in Purwokerto by establishing as many as 250 *lumbung*. Their rice capital could possibly be accumulated by *Zakat* (Moslem religious donations for the poor particularly in the month of Ramadhan) such as it was in Purwokerto, or through grants such as the *lumbung* in Cirebon initiated by Mesman in 1901 (Wolters, n.d). In Purwokerto, the *lumbung* was managed by a village committee consisting of village head, village clerk, village priest, and two other village farmers chosen by the sub-district's *naib*[26]. There were two types of supervision: general supervision conducted by the local government administrator and daily supervision conducted by the sub-district's *naib*. Even though there were many *lumbung* in villages, the need for cash was not entirely met. Some *lumbung* sold their surplus of rice stock at the time when the price of rice was quite high and the proceeds were then used as loanable funds for cash credit. In addition, due to the increasing need for cash, many popular credit banks were opened in many villages.

The common procedure to establish a *lumbung* was as follows. An administrator organised a discussion with the village head and representative of villagers about development in the villagers' economy. From the discussion, an agreement was reached by which villagers were requested to donate/contribute funds, materials such as rice and labour, either in terms of a deposit or grant. It was possible to accumulate the capital through *zakat* and grants from prominent villagers or rich people, or even the village council. *Lumbung* created by De Wolff were based on Raiffeisen's cooperative principle, but the *lumbung* created by Mesman in Cirebon in 1901 were based on local characteristics, such as using *zakat* (Suharto, 1988).

A *lumbung* was from and for the village community. Once the fund or capital was formed, it belonged to the *lumbung*, and the contributors had no particular ownership rights because all village members were owners or had a common ownership. Even when the contributors died or moved, the contributed fund could not be returned to the contributors. Therefore, the rice stock and interest-payment were still in the *lumbung*. Since there was no personal ownership, any profit was therefore not distributed.

Even though it was initiated and encouraged by the government, the latter did not intervene in the running and management of *lumbung*. The government acted merely as a facilitator. This was to give the opportunity to the village council to learn how to

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[26] Naib is a mosque official or deputy of local religious affairs.

manage the *lumbung* by themselves. The government just monitored the programme to prevent any mismanagement.

The development of *lumbung* was faster than that of village banks because *lumbung* could give credit in rice or in cash as well. In 1938, some *Lumbung Cooperatives* were created. These institutions provided credit in cash and repayment in kind. This was for combating *Ijon*[27] and the IMLs as described above.

Lumbung Cooperatives

It seems that in order for the cooperatives to flourish, it needed sufficient time for people to be convinced that it was an appropriate institution to meet their needs. Even though as mentioned above, *volkscredietwezen* can never be cooperatives, it does not mean that the idea of cooperatives had died. Some Village banks and *lumbung* have used cooperative principles in their management, and some have become cooperatives. *Lumbung* cooperatives were first established in 1938. One year later, the number of *lumbung* cooperatives was 32. These did not just help people during the *paceklik* period but performed other functions. The purpose of the establishment of these institutions was to save the people (members) from the debt trap of IMLs and to avoid *Ijon*. In this regard, they provided credit in cash or in kind but received repayment in rice. The rice was then sold when the price was high to obtain cash (Suharto, 1991:10-14).

Lumbung cooperatives could be divided into 4 forms based on their aims: *Lumbung Ijon*, *Lumbung* of seed, Credit *Lumbung*, and Tax *Lumbung*. Some of the *lumbung* cooperatives were managed by the government, while others were managed privately or by the community.

The Failure of *Lumbung*

The failure of some *lumbung* was due to the following factors:

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[27] Ijon is the practice of selling crops before harvesting.

1. The provision of money at very low cost. Providing cheap credit at times made the situation worse especially when the funds were not used wisely. Fruin (1999:21) said, "Social improvement can not be achieved just by attacking the existing wrongs but by removing its causes".
2. Lack of control. The failure of several *lumbung* at that time and subsequently was due to the lack of control and supervision. Some of the problems of *Lumbung* were caused by a corrupt village head, or *Pamong* who became the single borrower for further lending for villagers, and many were forced to take credit. The interest charged was high as much as 25-40% or even 50% per year (Suharto, 1988)
3. *Lumbung* relied much on the condition of the agricultural harvest and the demand for rice in the area. It could close down if the demand was less. Crop failure could create arrears and lack of stock.

Some *lumbung* performed well but could not cover all their costs, and consequently had to be closed down.

Village Banks

In 1902, a village bank system was established by Mesman, an administrator. The village banks developed rapidly and, by 1906, the system had a network which included 7424 *lumbung padi* conducted by 33 popular credit banks and 300 village banks. Then in 1912, the government replaced this system by *Volkscredietwezen* or a popular credit system and *Centrale Kas* or Central Funds. By this year, the system had established 75 popular credit banks, 12424 *lumbung* and 1336 village banks. In 1925, there were 89 popular credit banks, while the number of *lumbung* had dropped to 6453, and 4307 Village banks. The Village banks charged an interest rate as high as 40 to 50 percent. In this period the village bank was very profitable. The profit margin of the bank was 60% of the revenue. The costs of administration were about 3% of the total loan or a total 0.9 million guilders. The number of customers increased from 0.9 million in 1920 to 1.3 million in 1925. The average of number of clients in each bank was about 200, and 1 in 6 of the total population or as many as 8 million rural households obtained loans from the village banks (see:Fruin, 1999:17).

Suharto (1988:94) pointed out that in 1904 some village banks were created under the assistance of *volksbank* in Wonorejo[28]. This was established particularly in the villages which had *lumbung desa*, which provided loans in cash. Village banks were established after rigorous observation on the need for credit in cash in a region. Village banks obtained capital from the rice stock of *lumbung*, or village fund and from borrowings from *volksbank* (Suharto, 1988:97; Wolters, :6). In Java, there were two types of village banks based on the target group: *bank dagang desa* (village trade bank) and *bank tani* (farmers bank).

Village banks usually provided bank credit (without collateral) based on the familiarity between officials and the borrowers. Before 1910, village banks, provided credit based on trust or on the basis of a verbal guarantee from the borrowers. It had been observed that the poor in Indonesia could be trusted and they repaid all the loans. If the repayments were late, it was due to their inability and not due to dishonesty. They would repay the entire loan (also see:Cramer, 1929:27; Djojohadikusumo, 1989:69). Wolters (n.d:8) explained that since the villagers felt that the institution was their own, they repaid the entire loans.

Similar to the development of *lumbung*, the growth of village banks took place until 1938, and reached a maximum of 7714 banks before its number declined. In the beginning, the village banks were useful for helping the poor. The number of IMLs operating in the areas serviced by village banks reduced. However, since the bank was independently managed it could at times not bear its own financial problems. De Wolff wanted to link all village banks with *Afdeelingbank* (*volksbank*) so that it could redistribute funds from village banks with surplus funds to those which were short of funds. Unfortunately, this idea again did not materialize because *volksbank* and the village banks had no cooperative links. In fact, funds went to *volksbank* but not the other way round. Besides this problem, in a relatively short period, the village banks had other problems which forced the borrowers to return to IMLs. The failure of some

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[28] Suharto (1988) based his information on an article in "*systematische overzicht der verrichtingan en bevindingen inzake het landbouwcrediet voor inlanders*". In contrast, Wolters (:6) says that the village bank was created after 1910 as a branch of *afdeeling* bank (*volksbank*). However, since the source of Wolters (n.d) was not clear, the author prefers to use the version from Suharto (1988).

banks was caused by the fact that village heads managing these banks belonged to the IMLs, and there were assertions that the banks' funds were taken and redistributed through IMLs. Thus, as Krafft (1929) pointed out, since the village banks were imposed on the villagers, they failed to integrate with the lives of the farmers. The banks failed to teach the people, and as a result, they failed.

Village banks and cooperatives

Village banks were like trading banks at the village level. Some were village banks while others were created by *Afdeelingbank* to provide small loans to petty traders in the market region and repayment was to be done weekly or fortnightly basis. Providing loans to traders had existed since 1908 but the bank itself was established only in 1910 (Suharto, 1988:107).

After 1920 and beyond, the concept of cooperatives became more widespread. Boeke (see:Schmit, 1994:9) observed that there were two social economic groups in the community. The first was those who had an aggressive market-oriented mentality, such as the Chinese, and the second was the indigenous people, who were just oriented to satisfying their social needs. In the light of Sombart's theory, this type of society was assumed to exist in the pre-capitalist situation. Boeke then formulated his idea of the economy as made up a "dualistic economy", a concept which has been highly popularised in the literature on economic development. Due to the two-group society, the indigenous people needed another institution to develop their economy; like that of cooperatives. However, Boeke realised that the situation in Indonesian society at that time was not ready to run a cooperative system of credit because almost half of the loans from the village banks were spent for consumption[29].

In 1926, there were many political parties that did not want to cooperate with the government. They struggled for independence. *Parindra* (Great Indonesia Party) was

29 Even though most of the loans were used for consumption, Djojohadikusumo (1989) says that it was not relevant to distinguish consumptive or productive credits such as the distinction in more developed countries where the use of the credit could be easily distinguished. The situation in Indonesia at that time should call credit just credit for the poor or for farmers because the usage was difficult to control.

one among the many. *Parindra,* in alliance with the *Boedi Utomo* movement in Surabaya, and the Indonesia National Education Club established Bank Nagara Indonesia (BNI) in 1928 (Schmit, 1994:19). In order to build a better relationship, Boeke had an idea to convert some village banks in Malang and Surabaya, both regions are in East Java province, into a cooperative form and then subsequently transfer them to be part of BNI. Unfortunately, before the idea could be realised, Boeke left for the University of Leyden.

Volkscredietbank

In 1905, the *Priyayi* bank established by Raden Wiriaatmadja in 1895 in Purwokerto was converted to the *volksbank* . Due to corruption and mismanagement, many other *Priyayi* banks disappeared and others were converted to *volksbank* . Following the first conversion in 1905, and from 1907 to 1911, there were some cases of conversion of *Priyayi* bank in Purwakarta, Magelang, Jepara, Indramayu, Cirebon and Sidoarjo. In order to coordinate *volksbanks*, there was a need to create a central financial institution. Accordingly, the *Centrale Kas* or Central Funds was established in 1920. The *Centrale Kas* was then replaced and improved by "*AlgemeneVolkscredietbank*" ("AVB.") in 1934 by the Dutch colonial administration (Suharto, 1991:91). AVB therefore came after *lumbung*, the village bank, and *Volkscredietbank.* In fact, after the establishment of AVB, all the above mentioned institutions came under the control of AVB. AVB took over the offices of *volkbanks,* a total of 93 offices in many regions and converted them to be branch offices of AVB. The puıpose of this bank was to monitor and provide consultation services and advise banks at the lower level including the cooperatives. In spite of its advice, the banks still provided huge loans for villagers, creating an over supply of money in the village at times, but at other times the officials delayed the approval of credit proposals. Consequently, when the proposals were finally approved the borrowers did not need the funds anymore.

In addition, in 1926, the *P*opular Credit System formed a partnership with the Agricultural Information Service. Both had the same focus: farmers. The relationship between them continued, and paved the way for Bank Rakyat Indonesia (BRI). In 1928, the Popular Credit System had 90 popular credit banks, 6071 *lumbung*, and 5569 village banks. Outside the system, there were 110 cooperatives, of which 53 were in Java and

Madura.

Even though the development of cooperatives did not occur as fast as that of village banks and *lumbung*, the idea was still supported by the government and its followers because they believed that the Javanesse had basic cooperative skills such as *gotong royong* (community self-help).

Unfortunately, this idea was still difficult to realise, and the popular credit banks could never become cooperatives (Suharto, 1991:53). The issue of the appropriate form of village bank led to a debate between Middendrop and Margono Djojohadikusomo. In the debate, Middendrop defended the cooperative form while Margono Djojohadikusomo said that joining an AVB-bank was better because of the lack of integrity of village heads and their weak capacity to manage banks or cooperatives. Then through a ballot, the bank administrators decided to amalgamate with AVB-Bank.

Cooperatives were not well regarded during that time because some popular credit banks applying cooperative principles found that people did not have much interest in cooperatives. An example is that of *Volkscredietbank* in Garut in 1898. The experience of this bank showed that the interest in cooperatives was low. Many officials did not want to be members. The members wanted only to borrow money and they would exit if they did not require any loans (Suharto, 1991:53). Since the program was initiated by the government, the participation of members tended to be low because they did not have a sense of belonging to the organisation (Wolters, n.d:8). The story of the cooperative movement shows that it was not smooth and some of the cooperative institutions actually collapsed. Sclmit (1994) summarised the causes of the failure of cooperatives as follows:

1. The concept of a cooperative itself was not fully accepted, not only by the Dutch administrators but also by some of the members of the management board of the popular credit banks. Fokkens and Van Deventer were among those who supported government role and intervention while De Wolff, in contrast, opposed it and saw it as a factor causing the failure of local credit cooperatives.
2. De Wolff's system of cooperatives also failed due to the lack of daily supervision and the corruption of the committee ruling the cooperatives since

many of them also belonged to IML groups. Therefore, according to De Wolff, as few people were dedicated to improving the situation of the villagers, the process of village community development could not be smooth and was very difficult.

3. The assumption made about people's habits was inappropriate. Margono Djojohadikusomo criticised De Wolffs assumption of *gotong-royong* (community self-help) as the basic characteristic for cooperatives. According to De Wolff, the fact that the rural people always lived in the spirit of *gotong-royong*, for example, when a member of a community was going to build a house or have a feast, other people provided assistance voluntarily, was sufficient reason for the success of the cooperative movement. On the contrary, people helped others only when they had difficulties. Therefore, the principle of *gotong royong* was suitable and could not be transformed into a formal cooperative that would be useful for their economic upliftment permanently. As Margono Djojohadikusomo pointed out, this characteristic was just motivated by their ties as members of the community, and therefore they needed and depended on each other. However, there was no motive to form cooperatives or to change their economic way of life.

As mentioned above, not only did De Wolff believe in cooperative principles but also Dutch administrators after him. Consequently, although the idea of cooperatives was difficult to realise in the early period, it did not disappear entirely.

Suharto (1991:54) pointed out that the Dutch administrators after De Wolff still requested all the officials of the *Volkscredietbank* to help the people who were willing to establish cooperatives in any form, either credit cooperatives, production cooperatives, or even consumption cooperatives. In addition, the cooperative principle was encouraged in the application of village banks and *lumbung*, particularly those managed by the government, in such areas as decision making, management, and in the process of choosing the directors of the bank or *lumbung*.

Group Lending

The group lending approach is not a recent phenomenon in Indonesia. The history of

MFI in Indonesia shows that people have been familiar with it ever since De Wolff reorganised *Lumbung*. Loans were provided to groups of farmers. The major factor behind the group lending approach was the tradition of *gotong-royong* and the people's high level of communal solidarity. Thus, credit was provided under the joint liability principle as undertaken by De Wolff and Carpentier Alting. They realised that this approach had lower risk, lower operating costs, simplicity of operation, and ease of control and monitoring. The weakness was the difficulty of finding good group leaders who would take the responsibility to collect and repay the groups' repayments and arrears. Often the leaders were corrupt and misused the groups' funds. One way to avoid the corruption was to allow members to repay their debt directly by themselves. However, this reduced the administrative simplicity of the programme. During that time, it was difficult to build groups based on voluntary will. The groups were not well formed and often the joint responsibility for group arrears did not succeed. Eventually, this group lending system failed (Suharto, 1988).

MFI DURING THE 1930 DEPRESSION

The great depression of 1929-1936[30] had an impact not only on the macro economy of many countries but also the MFIs in Indonesia. The impacts of the great depression on Indonesian financial institutions were as follows. The initial impact of the depression was to increase the value of the loan outstanding. This was caused by, on the one hand, the high demand for new loans and, on the other hand, due to the reduced repayment of loans. There was also a high default rate on loan repayment. Factors which contributed to this included the long drought in 1929 resulting in crop failures. However, at the same time people felt it increasingly difficult to get money income. The circulation of money, particularly in rural areas, declined. The latter factor far outweighed the effects of the long drought. Consequently, the effects of the great depression were felt by the majority of the people after 1930 (Djojohadikusumo, 1989:48).

The impact of the scarcity of money in rural areas on the difficulty to repay loan

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[30] The depression started in 1929 and the Indonesian economy experienced it at least until the 4th quarter of 1936, when the conjunctur changed (Djojohadikusumo, 1989:55).

instalments forced the lenders to change their credit policy. New credits were provided only for borrowers who had a permanent cash flow, such as pensioners or civil servants. This policy was put in place to avoid arrears, but the main drawback was that the credit for this group of people had little impact on economic development. This group of people generally used their credit for consumption purposes or for buying an asset. It did not have much impact on the productive sector. The other group of people who could make the credit more dynamic were the farmers, traders, and producers, but the lenders were reluctant to supply credit for them since they were deemed to be very risky as their income flow was uncertain during this period.

Such discrimination in credit provision had three effects:

1. There were many new borrowers. As explained above they were those who had a permanent flow of income. Before the crisis, they did not borrow money from the bank but when the crisis developed, the money supply fell, the prices of many goods and assets declined and people needed money to buy cheap assets. Other new borrowers were big business people. Before the crisis, they did not borrow because they had enough capital. When the crisis started, they needed credit and the banks preferred to lend to more well-to-do borrowers.
2. Consequently, those who did not have assets or small creditors were abandoned. The banks were concerned with the ability to repay loans.
3. For efficiency reasons, *volkscreditbank* provided relatively larger loans. The number of loans reduced but the value of the loans increased. For those who needed smaller loans they were redirected to the village banks.

Besides the discriminatory effects, the crisis also contiibuted to demoralisation. The willingness of the borrowers to repay the loans tended to diminish. The fact that many people had difficulty in repaying the loans due to their inability, led others who were capable to pretend to be incapable of repaying loans. This was a collective phenomenon arising from the crisis.

The moral crisis became a dilemma for the popular credit banks. On the one hand, the government realised that the economic burden of the people was heavy and the people had trouble repaying the loans. Therefore, the banks were obligated to take part in helping the people by writing off some of their arrears. However, on the other hand, the banks were reluctant to takeover the burden because by helping one person, all the clients would ask for the same treatment.

The issue of default was debated during the crisis. In the early part of the crisis, many agreed that loan repayments had to be reduced, or entirely stopped, to prevent more defaults until the crisis was over. The generally accepted approach was not to provide new loans but to intensify the collection of outstanding loans and arrears.

There were two methods used to overcome the problem of arrears: the "August System" and the "Krawang System". The August system tried to encourage the borrowers individually to repay the loans while the Krawang system did it through community ties. Borrowers were asked to come for a community meeting where the best way for them to repay their arrears was discussed and arranged. However, both methods would be effective only if the borrowers still had the capacity to repay. In many cases, the arrears raised were due to the fact that they did not have the capacity to repay. Fruin proposed a new method for loan recovery. The borrowers who needed funds for their businesses could get a new fresh loan, but for a smaller amount while the old loan was gradually written off. Based on this idea, about 30% of the old loans were written off by the Popular Credit Banks.

Table **4-1** ***Volksbank*** Performance in Java

Year	**loan disbursed** (000 **Guilder**) (a)	**Repayment** (000 **Guilder**) (b)	**Ratio b/a**	**Yearly Changes of** a	b	**% to** 1929 **figure**
1929	62737	68479	1.09	-	-	-
1930	60510	60645	1.00	-0.04	-0.11	-0.04
1931	41876	49680	1.19	-0.31	-0.18	-0.33
1932	20520	31139	1.52	-0.51	-0.37	-0.67
1933	14119	20143	1.43	-0.31	-0.35	-0.77
1934	12861	17292	1.34	-0.09	-0.14	-0.80
1935	14217	14494	1.02	0.11	-0.16	-0.77
1936	15946	14825	0.93	0.12	0.02	-0.75
1937	17615	15872	0.90	0.10	0.07	-0.72

Source: Djojohadikusumo (1989:183) Table **4.6**

The disbursement of loans decreased drastically between 1931 and 1933. The pattern was the same for repayment. During the period of the crisis, banks tried to reduce arrears by collecting all the instalments due and at the same time limited the availability of new credit. Consequently, during the period, repayment tended to be higher than new credit. After 1935, banks began to increase the amount of new credit. Between 1935 and 1937, (as indicated in Table 4-1) new credits outweighed repayment. The number of borrowers reduced since many of the small borrowers had no more loans, while new credit was limited to a number of big borrowers who had permanent sources of income. The smaller borrowers, even though they had a good reputation in repaying the instalments, were directed to go to the village bank for help. Consequently the *volkscredietbank* lost about two thirds of its customers and about 12 banks had to be closed (Fruin, 1999).

Table 4-2 Saving And Credit in *Lumbung* in Java

Year	Number of *lumbung*	Number of borrowers	Credit (00,000 kg)	Arrear (00,000 kg)	Arrear to outstanding loan
1929	5874	1081	1066	19.9716	1.87%
1930	5761	1193	1076	13.8264	1.28%
1931	5682	1089	1052	12.5004	1.19%
1932	5582	1087	1062	18.4206	1.73%
1933	5545	1115	1061	29.3885	2.77%
1934	5551	1115	1069	74.3834	6.96%
1935	5579	1196	1061	54.1163	5.10%
1936	5587	1187	1062	36.8742	3.47%
1937	5585	1115	1060	25.1325	2.37%

Note kg refers to kilogram
Source: Djojohadikusumo (1989:183) Table 7.1

Table 4-3 Performance Of *Lumbung* in Java

Year	Number of *lumbung*	Showing Profit (00,000 kg)	Showing Lost (00,000 kg)
1933	5874	2465	3060
1934	5761	2752	2712
1935	5682	4135	1435
1936	5582	4158	1415
1937	5545	4085	1498

Source: Djojohadikusumo (1989:198) Table 7.9

Even though it was not as obvious as the change in village banks, the number of ***lumbung*** also decreased in the period 1929 to 1933 before slightly increasing again. The trend in the number of borrowers was also unclear. The amount of credit was relatively unchanged but the arrears increased in the period 1929 to 1934 before reducing gradually (see Table 4-2). In 1933 about half of the total number of *lumbung* experienced losses (see Table 4-3).

Table 4-4 Saving and Credit of Village Banks in Java

Year	Number of Bank	Borrowers (000)	Credit (in Thousand Netherlands Guilders)				default	Loan structure		
			weekly	monthly	other	total		weekly	monthly	other
1929	5666	1087	39813	4838	313	44964	8049	0.885	0.108	0.007
1930	5986	1121	35243	5406	239	40888	7743	0.862	0.132	0.006
1931	6144	1090	28122	3962	162	32246	5382	0.872	0.123	0.005
1932	6246	953	18621	1858	51	20530	3424	0.907	0.091	0.002
1933	6284	940	14927	1481	32	16440	3122	0.908	0.090	0.002
1934	6284	919	14132	1244	41	15417	2805	0.917	0.081	0.003
1935	6223	851	12425	1225	70	13720	2586	0.906	0.089	0.005
1936	6255	856	12657	1301	97	14055	2694	0.901	0.093	0.007
1937	6538	942	15181	1414	109	16704	3062	0.909	0.085	0.007

Source: Djojohadikusumo(1989:203) Table 7.11 and some further calculation.

As shown in Table 4-4, the number of village banks continuously increased, but the number of borrowers decreased. The total credit for each year during the period of the crisis decreased. The decline was caused by the fewer number of borrowers and smaller sized credit. In this period, the banks preferred to give short-term loans. Weekly loans increased while monthly loans decreased. The shorter the term the lesser the risk. About 90% of the loans were short term with full repayment within a period of about 5-7 weeks. The average size of loan fell from 46 guilders in 1929 to about one thhd of this in 1933. The profits of the village banks fell from 1.4 million in 1929 to 0.1 million in 1933, but about 65% of the banks still made some form of profit (Fruin, 1999).

POST-COLONIAL PERIOD

After Indonesia became independent on 17th August 1945, major changes were put in place on those which existed during the period of Dutch colonial rule, in order to fit the new era. In 1934, AVB was established and took over the functions of central funds. It was then replaced by Ginko in 1942, based on the regulation "*Oendang-Oendang*" No.39/Osamu Seirei No.8, dated 3 October 1942. After obtaining independence, the government launched a statement in February 1946, *Peraturan Pemerintah* No.l, that AVB and *Syomin Ginko* were to be converted to the *Indonesian People's Bank* (BRI). BRI was to provide counselling for BKDs (Village Corporate Boards including village banks and *lumbung*) and other credit institutions.

An evaluation of BRI in its early years showed that there was a need for greater improvement of BKDs than what was possible under the control of BRI. Thus, in 1951 the Indonesian government launched regulation, No.25 dated 20 April 1951, also called the shift plan, which stated that all credit institutions, including village banks and *lumbung* under the control of BRI would be shifted to the Cooperative Bureau, under a joint agreement of the ministry of domestic affairs and the ministry of agriculture (Suharto, 1991:55).

Under the above agreement, BRI just provided credit for the middle class and reduced its credit to the agricultural sector. Consequently, small enterprises, particularly in the rural areas, experienced a lack of credit because during the period when BRI no longer provided small credit to the rural areas, the Village Corporate Boards (BKDs) including the village banks and *lumbung* did not take over the function adequately. This was due to the fact that BKDs were also affected by the second War World and had to struggle to restore their services. Many village banks and *lumbung* disappeared in this period. When the villagers lacked credit, the cooperatives existing at that time could not overcome the situation. The Cooperative Bureau was unable to open credit cooperatives in a large number of areas over a short period of time. However, for the villages that previously had village banks or *lumbung*, these institutions were restored. Then the above joint agreement was cancelled, and only West Java, particularly Ciamis applied the shift plan. In 1967, the Indonesian government launched the first banking regulation: *Undang-Undang* No.14 1967, which came into effect on 1st January 1968. In this regulation, it was stated that *lumbung*, trade banks, *Priyayi* banks and other such kinds of banks were categorised as secondary banks or rural banks. All were then called BPR explicitly in the banking regulation of the year 1988. As *lumbung* and village banks were of BKD, they were called *Bank Perkreditan Rakyat* (BPR)-BKD, while other BPRs were called BPR Non-BKD. Beside BPR-BKD, there were many BPR Non-BKDs owned privately or owned by the local government. In August 1970, the ministry of finance launched a regulation (*Surat Keputusan*) No.8 – 331/IV/1970 to stop the establishment of new BKDs. This regulation came into effect on 1st September 1970. In order to fulfil the need for credit, local governments created some non-bank credit institutions such as Credit for Small People (KURK) in East Java, Sub-District Credit Board (BKK) in Central Java, Sub-District Credit Institution (LPK) in West Java, and *Lumbung "Pitih Nagari"* (LPN) in West Sumatra (Suharto, 1991:57-58).

The monitoring task also had its own problems due to the regulation of 1967. Under the regulation, the monitoring of BPR had been put back into the hands of the BRI including advises and consultation. This mechanism was criticized by BPR because BPR and BRI were competitors; they had the same target group. Consequently, if they competed with each other, given their different status, the weaker were unable compete against the stronger or there would be unfair competition (Suharto, 1991:76).

This criticism resulted in the launching of other regulations. On 27th October 1988, the government promulgated another bank regulation *Keputusan Presiden* No.38, which stated that the Central Bank (BI) would take over the functions of the BRI over BPR except BPR-BKD. Under the regulation the former non-bank credit institutions such as BKK, LPK, KURK, and LPN are treated as banks under the supervision of BI. There were 5819 BPR in Indonesia established before independence and 240 other banks during the independence era (Suharto, 1991:42).

However, as Suharto (1991:45) describes, many of the BPRs did not serve their target group. In order to obtain higher profits, the loans were given to the rich or big enterprises. A study conducted by a team from LPPI (Indonesian Institute for Banking Development) in July 1986 covering the regions of Jakarta, Bogor, Tangerang and Bekasi (JABOTABEK), found that many trade-banks did not supply credit for small enterprises or for informal sectors as they were supposed to do, but provided it for big traders and large enterprises. In addition, the size of credit was about Rp 500 million, which was considered a large sized loan.

Since the end of the 1980s and the beginning of the 1990s, the issues of income disparity and poverty have been intensely discussed. As a result, many more credit programs have been established to address the needs of the poor and small-scale industries. Some are through and part of the banking system, such as KIK, KMKP while others use the cashier facilities of banks, such as KUKESRA , while others such as MKEJ are privately funded.

SUMMARY

In summary, the history of MFI began in 1888 with the establishment of a saving bank in Mojowarno, East Java, and *Lumbung Miskin* in Malang, also in East Java, in 1890, and in Kendal Payak, East Java, in 1894, all by Christian missionaries. The *lumbung* model was then replicated in Jombang in 1890 by Steinmetz and in Cirebon in 1901 by Mesman, who then in 1902 established the village bank system. *Lumbung* was also replicated in Purwokerto in 1897 by De Wolff, who in 1938 tried to incorporate the Reiffaisen cooperative principle into *lumbung*. De Wolff and Carpentier Alting introduced group lending to farmers joining the *Lumbung*. Almost at the same period, in 1895, Raden Wiryaatmadja established *Priyayi* bank to help friends and relatives escape the debt trap of the IML.

Volksbank were created in 1896 by the Dutch administrator, Sieburgh, and were headed by De Wolff in 1897. In 1905, some of the *Priyayi* banks were converted into *volksbank*. In 1910, *volksbank* were transformed into *Afdeelingbank*, which was subsequently replaced by *volkscredietwessen* consisting of the popular credit system and *Centrale Kas* in 1920. This was then changed to AVB, which was transformed into BRI in 1946. *Lumbung* still existed, and in 1938 became *lumbung* cooperatives.

This discussion of the history of MFI has highlighted some of the factors which contributed to the failure of MFIs. Most of the causes were related to weakness in management, such as the lack of control leading to corruption. On the other hand, it pointed out some characteristics of the poor that are necessary for today's MFI such as that of honesty. Historical analysis has shown that government intervention in MFI was dominant compared to the role played by non-governmental organizations. All MFIs were designed to help the poor and not based on profit motives. The historical analysis has therefore given some insight for those running MFI and thus can help them to avoid a repetition of the failures of the past.

CHAPTER-5: ORGANISATION AND MANAGEMENT OF KUKESRA AND MKEJ

INTRODUCTION

TA-KUKESRA and MKEJ are government and non-government microfinance institutions respectively, aimed at assisting the poor by providing small sized graduated loans. The history of MFIs as discussed in Chapter four has higlighted the fact that the performance of both government and non-government MFIs depends to a large extent on how these instititutions have been managed. Thus, it will be of interest to analyse here the organization and management aspects of the these two institutions, KUKESRA and MKEJ, and a comparison made to see whether the difference in management led to the gaps in their performance. This chapter will discuss the organization and management aspects of the two programmes.

The history of TAKESRA-KUKESRA (TA-KUKESRA) and Mitra Karya East Java (MKEJ or Mitra Karya) has to be seen in the context of government programmes to eradicate poverty. Even though poverty has been declining and inequality in the distribution of income has improved since the government started its REPELITA (*Rencana Pembangunan Lima Tahun* or Five Year Development Plans), the issue of poverty is still an issue of major government concern.

Poverty, including regional poverty, has become the topic of many discussions. These have prompted the government to do more to alleviate poverty. The government created a programme package called PROKESRA in 1993. To implement this prosperous family programme package, the government has undertaken a number of measures.

Firstly, the government has mapped all Indonesia villages in the rural and urban areas in order to understand deeply about the dynamics of the Indonesian villages and to find ways to develop these villages appropriately. The mapping has resulted in the classification of all villages into backward and non-backward villages. The backward villages are poor villages, which are to become the target of its *Inpres Desa Tertinggal* (IDT) programme.

Even though IDT, based on *Inpres No.5 1993,* is directed to help backward villages, it is still far from adequate to deal with poverty. Realizing that the poor are found in both categories of villages, another annual family survey in 1994 was undertaken in order to identify the families in poverty. This provided information on households which were poor. Based on the annual family survey, families were classified into one of the following 5 categories based on the levels of welfare specified[31]. The higher the level the more prosperous the family. Based on this classification, people are regarded as poor if households fall in the bottom two classes. Accordingly, the bottom two classes become the target group of the governmental poverty alleviation programme, namely TA-KUKESRA[32].

Before the creation of IDT and KUKESRA, there were many institutions dealing with the poor, particularly financing of the poor. Mitra Karya is one such other programme.

This chapter will first discuss the organizations of KUKESRA and Mitra Karya individually, followed by a discussion of the strengths and weaknesses of these two anti-poverty programmes.

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[31] In Indonesia a family is defined as prosperous if it can fulfil its spiritual and non-spiritual needs, plus has harmony with society and the environment. There are some levels of prosperity that should be taken into account; *Keluarga Pra Sejahtera (KPS), Keluarga Sejahtera I (KSI), Keluarga Sejahtera II (KSII), Keluarga Sejahtera III (KSIII), and Keluarga Sejahtera III Plus (KSIII-Plus)* for Pre-Welfare, Welfare I, Welfare II, Welfare III, and Welfare III+ respectively. The mapping of families into these categories has been made by BKKBN. The method used to map the families is largely based on an Unsatisfied Basic Needs (UBN) approach (Navajas, Meyer *et al.*, 1996:3). The criteria used for this categorisation are described in BKKBN (1996).

[32] TA-KUKESRA is the short form of TAKESRA-KUKESRA (Saving-Credit schemes).

KUKESRA

BACKGROUND

Between 1993 and 1996, the government's attempts to alleviate poverty increased rapidly. Many policies and programmes were created to complement each other in order to ensure that the programmes were successful. The common theme of all these schemes is *Keluarga Sejahtera* or prosperous family.

In 1993, the government, through the BAPPENAS (*Badan Perancang Pembangunan Nasional* or National Planning Board), took a concrete step to help the poor by mapping all Indonesian villages and classifying them into backward and non-backward villages. In the following year, the government, through the BKKBN, carried out an annual survey of families to group all Indonesia families into 5 separate classes based according to welfare stratification as mentioned earlier.

On the 29th June 1994, the Indonesian president, Soeharto, introduced the *Gerakan Pembangunan Keluarga Sejahtera* (the prosperous family development movement) in order to improve the quality of life for families, in particular poor families. Families living in poverty were mostly in the rural areas and therefore the rural regions had to be developed in order to lift people out of poverty. However, to develop villages in the rural areas had a number of problems. It needed productive human resources, for instance, but many of those in the productive age groups were migrating to the urban areas. Thus, urbanisation was a major challenge for rural development. On the 29th June 1995, the president introduced a new movement called *Bangga Suka Desa* (pride of living in rural village). The purpose of this scheme is to slow down the process of urbanisation by encouraging people to be proud of living in the rural areas. This needed some basic pre-conditions for villages to be attractive for living. It was expected that the movement could create a modern urban life in the rural areas. One of the requirements for this programme is that families have to have savings, and in addition, the capacity to undertake sustainable development at least at the same level of capacity as those living in the urban areas (BKKBN, 1996:2-3). The government emphasises the importance of financial saving. However, families in the rural areas did not have sufficient savings, due to low income and lack of adequate infrastructure to promote savings. Thus, on 2nd October 1995, the president again proclaimed a new movement called *Gerakan Keluarga Sejahtera Sadar Menabung* (saving awareness for prosperous families). TAKESRA and KUKESRA are programmes among others in this scheme.

To emphasise the importance of the programmes, the Indonesian president launched a new instruction, *Inpres* No.3 on 11 March 1996, that is, *Pembangunan Keluarga Sejahtera dalam rangka Peningkatan Penanggulangan Kemiskinan* or PKS-PPK (Development of prosperous families for poverty alleviation). This simultaneously completed the previous presidential instruction, *Inpres* No.5 1993[33], and facilitated the previous initiatives.

Later, the term PROKESRA was widely used to describe the package of programmes for prosperous families, containing IDT and TA-KUKESRA. TA-KUKESRA itself has been established among eight other poverty alleviation programmes, all under the PKS-PPK programme package, in which KUKESRA and TAKESRA were the core elements

Even though it has been stated that IDT is assistance for the poor in backward villages and KUKESRA is designed for the poor in non-backward villages, in some cases it was necessary that KUKESRA also been distributed to the poor in backward villages (Kompas, 1997a; Suarapembaruan, 1997d; Kompas, 1998).

All poverty alleviation programmes are inter-related. PKS-PPK is the BKKBN's package of prosperity programmes consisting of 10 programmes as follows (see Figure 5-1): KUKESRA, TAKESRA, communicating information and education (KIE), learning and training, encouraging economic activities in rural areas by rural people having jobs in cities, pursuing local ethnic groups in cities to develop theh own villages, guiding the poor to economic productive activities, establishing business partnerships between small and larger business enterprises, flooring the houses of the poor, and

[33] *Inpres* No.5 1993 is then known as IDT (*Inpres Desa Tertinggal*), which is co-ordinated by BAPPENAS (BKKBN, 1996:11)

introducing insurance.

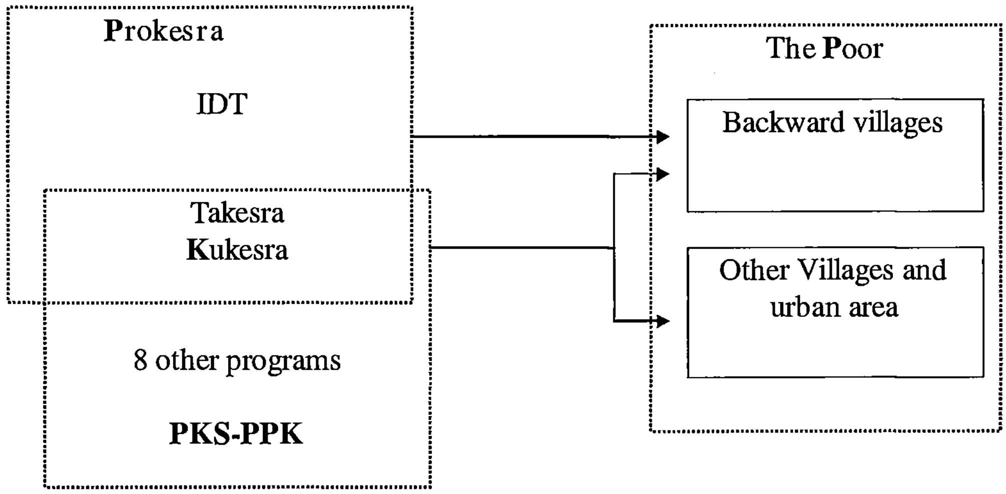

Figure 5-1 Prokesra and PKS-PPK Packages

The programme "communicating information and education (KIE)" is to make the poor understand the importance of the family's quality improvement. KIE also encourages the poor to commit to poverty alleviation. By understanding its importance, it is expected that the poor will actively take part in the government programme to alleviate poverty.

The "Learning and training" programme is aimed to give the poor, knowledge, skills, and technology to develop their families' economic activities. These are basics for doing any business to support the family's life. The next programme focuses on activities to "encourage people in cities to invest their money into their villages".

"To encourage city people to help develop their own villages" is another of the programmes. This programme will utilise the existing traditional groups in any city, which are established based on members' origins. These last two programmes are aimed to involve other parties, especially the rural people who are now living in cities to help their own villages. They become the government's partners in the rural developmental process. By investing their capital in their own villages, these villages will receive more financial input, which will enable them to develop. This will encourage many more economic activities at the village level, which would not have been possible otherwise.

KUKESRA is a credit scheme that gives loans to the poor based on their TAKESRA as collateral. Both these programmes make up the core of the poverty alleviation programme of the government. The government believes that the crucial obstacle the poor improving their lives is the lack of capital.

An important programme closely tied to TAKESRA and KUKESRA is "guiding the poor to become involved in economic productive activities". There are two sub-programmes *Pelaju* (*petik, olah, jual, untung* or picking, processing, selling, and getting profit), and *Pemaju* (*proses, kemas, jual, untung* or processing, packaging, selling, and getting profit), which aim to provide comprehensive guidance for agricultural and non-agricultural economic activities. *Pelaju* is directed to agricultural production and *Pemaju* to non-agricultural production. It is expected that these supporting activities will effectively give the poor knowledge and skills to handle small enterprises.

The programme of "creating a business partnership" is a programme to help the poor by establishing a link between larger and smaller enterprises at the village level. The relationship between the economic activities of the poor and large private businesses can take many forms, such as foster parents. This partnership is aimed at helping small businesses grow faster and be sustainable from assistance through larger enterprises. The economic linkage is important since, due to the linkages, both sides can obtain mutual benefits.

The next programme is "flooring". This is a programme related to improving the housing conditions of the poor. The housing condition is improved step by step from flooring (to make the floor out of cement), to gradually improving other parts such as the roof, walls, and toilet.

The last programme is "insurance". This is an extension programme that previously was used as part of the family planning programme. Originally, it was insurance for family planning participants (*akseptor*) to cover the side effects of the use of contraceptive instruments.

There are 3 kinds of insurance for prosperous family orientation; firstly, *Asuransi Keluarga Sejahtera Indonesia* (AKSI) (Indonesian Prosperous family's Insurance), which is given to families to protect them from any accidents in relation to their efforts to increase their prosperity status. Second is *Asuransi Keluarga Berencana Indonesia* (ASKBI) (Indonesian Insurance for family planning). The purpose of the ASKBI is to give protection to participants (*akseptor*) in family planning from any side effects of using contraceptives. The third is *Kartu Anyoman Kesehatan* (Health Protection Card). It is given to members of the lowest class in welfare family stratification who could not get health services through normal available procedures.

The ten programmes mentioned are interrelated and complement each other. As the main objectives are related to the eradication of poverty, the package structure can be seen as core programmes and supporting programmes. The core programme is KUKESRA, which is directly supported by TAKESRA. Since both exist simultaneously, both can be considered as cores[34]. Some of the other supporting programmes provide support in aspects of skill and managerial information (information and skills). Programmes for this purpose are 'communication of information and education', 'learning and training', 'guiding to economic productive activities through "*pelaju*" and "*pemaju*", and 'establishing partnerships in foster parent form'. Some others give support through creating employment opportunities (Jobs Creation) in rural areas such as 'encouraging economic activities in rural areas by rural people who have jobs in the cities', and 'pursuing local groups in cities to develop their own villages'. The programmes to support human capital are AKSI, ASKBI, and Health Card; all of which are types of insurance programme. All the above are aimed to fight the causes of poverty. Beside them, there is a special support programme called flooring. Flooring is not related to sustainable efforts to eliminate poverty; it only gives support by eliminating one of the poverty indicators based on BKKBN's criteria.

The position of TA-KUKESRA among the PKS-PPK programmes is as described in Figure 5-2 below.

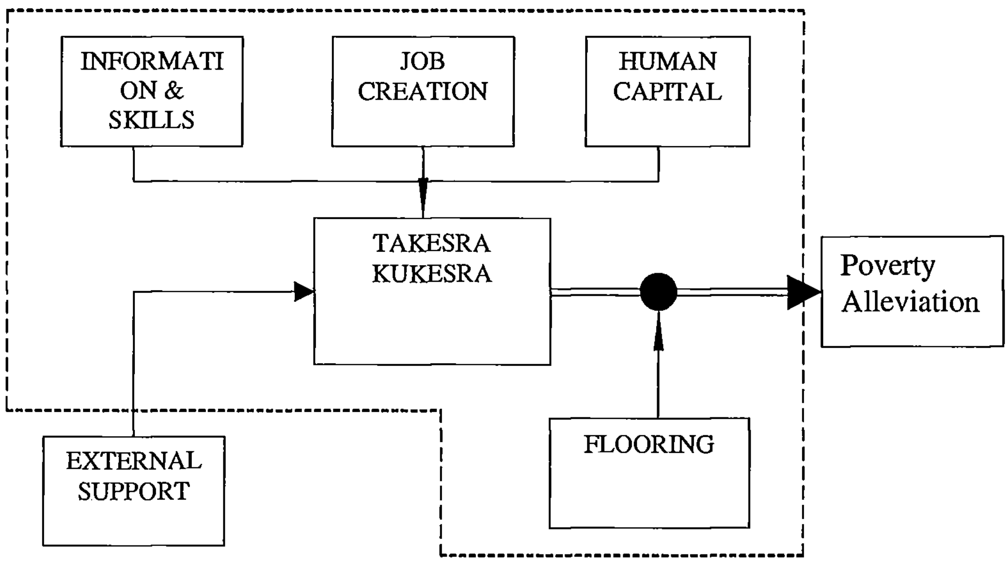

Figure 5-2 TA-KUKESRA in PKS-PPK

In addition to supporting all the programmes in PKS-PPK, BKKBN encourages other institutions to provide support (external support). Universities are expected to become involved through theh services such as the *Kuliah Kerja usaha* (KKU) or lectures on business practices, and the *Klinik Konsultasi Bisnis* (KKB) or Clinics for business consultation. BKKBN has also, in cooperation with the Jakarta Stock Exchange (BEJ), created the INKESRA (*Investasi Keluarga Sejahtera* or investment for welfare family) that makes it possible for the poor to buy shares from BEJ.

KUKESRA and TAKESRA, as the core of PKS-PPK programmes, have the general objective to improve the families' quality of life according to theh stage of prosperity, in particular for KPS and KSI, the bottom two classes in the prosperity category. The aim is to help them become productive using theh savings. This means that they can

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[34] This can clearly seen from the speeches of the minister of family planning and the head of the BKKBN to promote PKS-PPK in which KUKESRA and TAKESRA are the programmes emphasised.

use their savings to run a business activity generating income to improve their lives.

Specifically, there are eight objectives of PKS-PPK programmes (BKKBN, 1998:11-13):

1. To improve saving awareness of the target group members.
2. To assist the target group in order to accumulate their own funds for their family's need.
3. To accumulate public funds to support welfare family programmes
4. To help the poor obtain cheap working capital in a simple, easy, and quick way.
5. To encourage and support their initiatives to conduct small family businesses.
6. To support the poor people's businesses by linking them with other bigger businesses as partners.
7. To help the family members repay loans made to other members of the family, whether the borrower has deceased or become disabled due to an accident.
8. To introduce and improve the use of banking, post, and insurance services for the poor.

The first three objectives deal with saving aspects, ranging from the awareness of the need for saving to actual saving activities leading to fund accumulation. The performance of the first three objectives reflects the degree of success of saving by families. The government has designed some indicators to measure the success of these objectives. The indicators are the number of families which have TAKESRA accounts and the balance of TAKESRA compared to the initial balance provided by the government. Even though these indicators are important, they are unreliable and theh measurement tends to be biased. The change in voluntary savings is the appropriate indicator that should be use to approximate the awareness of the need to save.

The next three objectives, or objectives four to six, are related to productive economic activities carried out by the recipients. The last two objectives are related to sustainability and monetisation aspects.

The ultimate objective is to assist people in entrepreneurial aspects in order to help them move to the next higher level of prosperity class or to be more prosperous. In this case, the emphasis is on non-farm activities, and women's participation is given priority.

TA-KUKESRA MODEL

TA-KUKESRA is a group lending saving-credit scheme. The choice of this model and the administering of this scheme are based on the experiences of similar programmes in the past.

Firstly, it has been shown that many successful credit programmes use a group-lending approach. Grameen Bank in Bangladesh is the pioneer of this model, and has been replicated in many countries around the globe. In Indonesia, KURK (*Kredit Usaha Rakyat Kecil* or Productive Credit for Poor People), the local level programme which is using the group approach has been a successful programme (Mosley, 1996). Even though there are success stories of credit for individuals such as BKK and BRI *Unit Desa*, the advantages of the group approach to reach the poor can outweigh those of the individual credit approach. Both BKK and BRI Unit Desa show that theh credits are based on physical collateral and the recipients are those who live in cities, at least in the capitals of sub-districts (Hamid, 1986). The group approach overcomes the problems of collateral faced by the poor, and can serve recipients in remote areas. It is also able to shift the operating cost from the credit institution to the group.

Most group-lending approach programmes are situated in Java, while the outer islands still have fewer such institutions to assist the poor. Thus, the effort to assist the poor in the provision of credit in all parts of Indonesia has become a necessity at the current level of developmental process.

Secondly, BKKBN, historically, has plenty of experience all over Indonesia dealing with women from poor families through its family planning programme. BKKBN has agents to run the programmes covering the whole of Indonesia at every level. After BKKBN's success in family planning to control population growth, the board (BKKBN) extended the programme from reducing family size to improving theh income. The establishment of UPPKA, which was then transformed to UPPKS, marked this extension. UPPKS then became the embryo of KUKESRA, which covers the poor in all Indonesian villages by using BKKBN established networks.

KUKESRA as a credit scheme requires no conventional collateral. However, collateral is important in a credit programme, and the government has replaced the conventional collateral with new types of collateral namely, TAKESRA (saving scheme) and social collateral through group lending. TAKESRA is a government created collateral scheme because the government actually provides the initial balance that the poor can use to obtain KUKESRA. Effectively, the credit and the collateral both come from the government.

Group lending is the means by which social collateral is restored. All members have the responsibility to help and monitor each other. Social collateral is generated directly from the joint liability characteristics of group lending. Since the failure of a member has to be the responsibility of the whole group, the members will care for each other in order to prevent any default.

KUKESRA, a programme coordinated by the government at all levels to help the poor, has the following structure (see Figure 5-3).

TA-KUKESRA is an inter-departmental programme. The government departments involved in the programme are outlined and presented in *Inpres* No.3 of 11 March 1996. However, the two main departments playing crucial roles in the programme are BKKBN and BNI 1946 (*Bank Negara Indonesia 1946* or the 1946 National Bank of Indonesia) with the Post Office as its partner. BKKBN as the owner is responsible for the performance of the programme but does not deal with the funds. It just takes control over administrative duties and field screening, monitoring, and enforcing. BNI 1946 and the Post Office manage all financial matters.

BNI 1946 needs assistance from Post Offices because the bank has a limited number of branches. Thus, it cannot reach members dwelling in rural villages. Credit delivery is done by the Post Office, which has branches at least in the capital cities of the sub-districts.

The structure of the programme can be divided into two levels: the supervisory level from the top level of government to the district level, and the operational layer at the sub-district level where all the administrative issues involving the running of the programme are undertaken. At the operational level, staff have dhect contact with the recipients, while the inter-departmental coordination is done through the POKJANIS (*Kelompok Kerja Teknis* or teamwork) at each level.

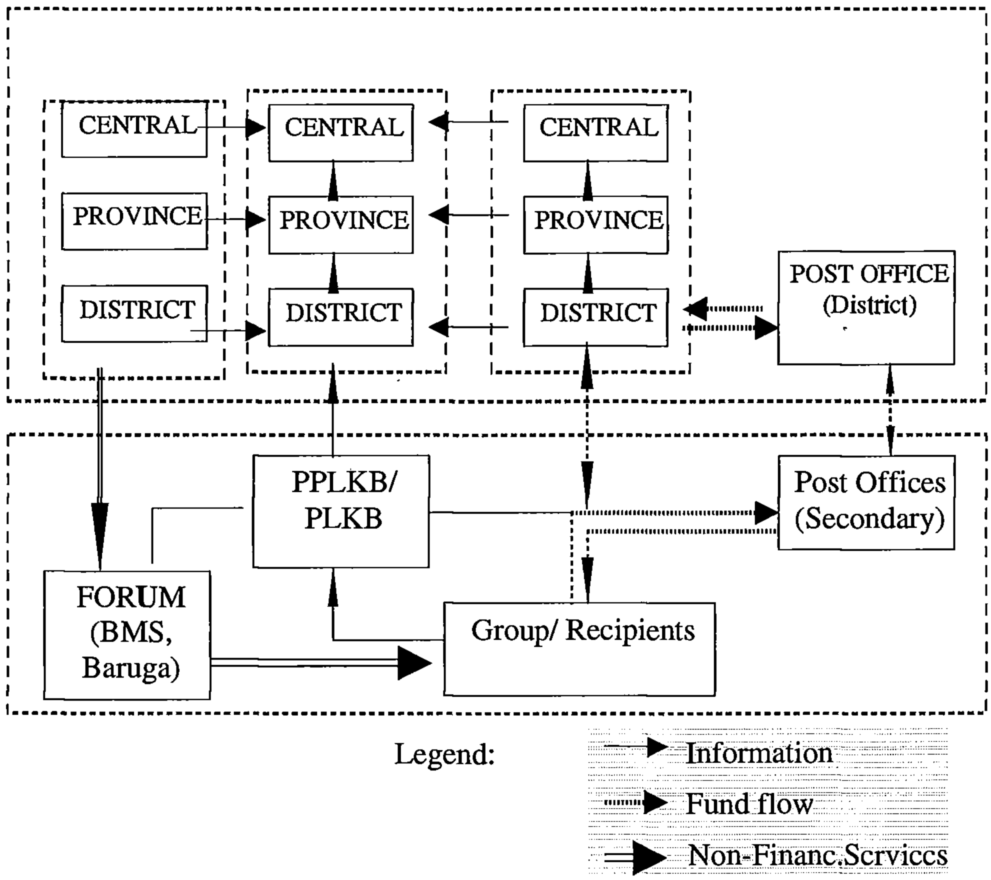

Figure 5-3 Model of TA-KUKESRA

At the top level, the agent of authority is the Minister of Population/ head of the

BKKBN[35] who gets administrative information from the deputy of the BKKBN, who handles KUKESRA. The deputy coordinates all aspects related to administrative procedures in order to improve the performance of KUKESRA. Still at this level, the minister gets information from BKKBN and works with directors of BNI 1946 and of the Post Office, as financial agents, in relation financial aspects of the programme.

At the middle levels, the procedures and the functions are similar. The middle levels include provincial and the district levels. In addition, all staff involved at these levels have to deliver relevant information and undertake inter departmental coordination or vertical coordination between higher and lower levels.

There is some variation at the lower levels. The coordinators of the administrative information are the secretaries of sub-districts at sub-district level and the thhd leader of the LKMD (*Lembaga Ketahanan Masyarakat Desa* or village social activities group) acts as coordinator at the lowest level. Similarly, agents of authority have two levels: heads of sub-districts and heads of villages. In contrast, on the financial side, there is only one level, post office at sub-district level. This is due to the fact that post offices are only located in the capital cities of the sub-district. For administrative coordinators and the authorised agents, there is coordination and reportage between sub-district level and village level. Financial agents in the sub-district, the secondary post offices, provide financial information to the higher level of the institution.

Thus, non-financial agents at the lowest level all get information from PPLKB (*Pengawas Petugas Lapangan Keluarga Berencana* or supervisors of the PLKB) and PLKB[36] (*Petugas lapangan Keluarga Berencana* or facilitators of the family planning programme) at the village level. They could be seen as critical actors in the model of KUKESRA. PPLKB and PLKB become the centres of information. They are the only

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[35] The ministry has been changed to the Ministry of Population and Women Empowerment since there was a merger between the Ministry of Women Empowerment and the Ministry of Population/ head of the BKKBN.

[36] BKKBN distinguishes this type of staff into 2 different types: PLKB and PKB (*Petugas Keluarga Berencana*) for the staff having no degree and for the staff holding a degree, respectively. Since PLKB and PKB do the same function, we ignore the distinction and use PLKB for both.

suppliers of information about UPPKS[37] or recipients. PPLKB, BKKBN staff at the sub-district level deliver information to BKKBN at the dishict level.

Moreover, PPLKB and PLKB are the key agents to decide if a group of UPPKS is eligible to obtain credit. These agents will do the checking and decide if a proposal from UPPKS/member group is feasible. If it is feasible, they will provide confirmation before sending the proposal to the BNI 1946 or Post Office that does the processing of credit provision. UPPKS and member groups are groups used by families to ask for KUKESRA. The member groups can get support from forums such as the BMS (*Balai Mitra Sejahtera* or Forum of prosperous partners) and the BARUGGA (*Balai Rujukan Keluarga* or Forum of Family's Reference) in terms of training that gives them skill and related information.

The governmental departments involved in the programme have three main functions: financial, administrative, and non-financial support. The financial function is run by BNI 1946 in cooperation with the Post Office. The funds flow between recipients and BNI 1946 or the Post Office without BKKBN's intervention. The financial progress is then reported periodically to BKKBN at the corresponding levels. Even though BKKBN does not interfere with the financial flow, as administrators they are responsible for the performance of the programme. BKKBN staff do monitoring by comparing information from BNI 1946 and from theh own staff in the field. BKKBN field staff also supervise the use and repayment of the loans.

In order to get information from the field staff, BKKBN has its internal monitoring and coordination between each level and the level below. The lower level reports to the higher level. Thus, information from PLKB/PKB goes to BKKBN at dishict level and then to higher levels.

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[37] BKKBN staff often call the group of members (peer group) as UPPKS. However, this can lead to confusion. UPPKS was the group of recipients of BKKBN's previous micro credit programme. BKKBN has forgotten this UPPKS related programme, it has been dissolved by *de facto*. When BKKBN had to run the TA-KUKESRA programme, they used UPPKS groups as well as newly created groups (non-UPPKS).

Other institutions involved are BKKBN's partners, which provide non-financial support. Universities provide KKU and KKB, while the Department of Industry and Trade provides training to improve members' production skills, for example. All these are coordinated by BKKBN as the administrator. All the support is provided through forums established such as BMS (*Balai Mitra Sejahtera* or Forum of prosperous partners) and the BARUGA (*Balai Rujukan Keluarga* or Forum of Family's Reference). Basically, they are the same forums but have different names for different regions. In these forums, many activities such as discussion, training, and other services will be carried out for the benefit of the members.

Source of funds:

TAKESRA-KUKESRA is financed by funds collected from 2% of the after tax income of those who had annual income as high as Rp 100 million and above, either personal or from enterprises. This is based on the Jimbaran agreement. In 1995, the Indonesian President gathered together the majority of wealthy Indonesian Chinese businessmen to ask them to contribute toward poverty alleviation. The group then became known as 'Group Jimbaran' after Jimbaran, the name of the village in the province of Bali where the meeting was held.

Members who had incomes equal to or greater than Rp 100 millions per year, contributed 2% of theh after tax income towards the fund. Starting from this group, subsequently all wealthy people in Indonesia who had incomes above the Rp 100 million income level were encouraged to sacrifice voluntarily 2% of theh after tax income. Even state owned companies were asked to do the same (Suarapembaruan, 1997b). Later the contribution was no longer voluntary, but became compulsory (Suarapembaruan, 1997a). All the funds were pooled in the *Yayasan Dana Sejahtera Mandiri* (YDSM), the foundation overseeing the welfare fund, and put in BNI 1946 as the central fund.

After the resignation of president Soeharto, many policies were evaluated and modified. Some were kept in operation while others were cancelled or postponed. The foundation managing the fund, YDSM, was dissolved. The compulsory contribution of 2% of after tax income was cancelled, but KUKESRA continues to use the funds left in its BNI

1946 account.

TRANSACTION PROCEDURE

KUKESRA is disbursed to the poor in order to add working capital to the small businesses of the group or household members. Thus, in order to get KUKESRA, the members have to have a business activity or at least a feasible proposal for doing a business. The procedure to get the fund is as follows.

The proposal from a group is sent to the Post Office or BNI 1946 through PLKB. The proposal is evaluated by PLKB to decide whether it is feasible or not. PLKB will decide and provide confirmation and send it to the nearest Post Office if the value stated in the proposal is equal to or less than Rp 5 million, or to the nearest BNI 1946 if the value is more than Rp 5 million. The successful proposal would then be funded and the money provided to the group.

Financial Management and credit progress:

BKKBN works jointly with BNI 1946 and Post Offices in all parts of Indonesia in the financial management of the loans. The BNI 1946 serves the groups which ask for more than Rp 5 millions credit (the value of total credit for a group of recipients), while the Post Offices serve the groups where the credit is less than this amount.

Families can only request TAKESRA/KUKESRA through groups such as UPPKS or even under new different groups. Thus, if a family wants to request KUKESRA, they have to become involved as members of a peer group. No credit is distributed directly to an individual family but through the group. Funds received from KUKESRA can be used either by the group in a collective business activity or allocated to each individual family's activities. However, the responsibility of the credit repayment still lies with the group. Banks and Post Offices only deal with groups and not with individual families. In this way, credit institution can minimise the administration cost of KUKESRA.

KUKESRA is a graduated credit facility. There are 5 stages of credit provision. The minimum KUKESRA is Rp 20,000 given at the fhst stage and the maximum is Rp 320,000 given at the last stage for a single household recipient.

The process starts with a government grant of Rp 2,000 which forms the initial balance for each member's TAKESRA. This account can be used as collateral for requesting KUKESRA. The maximum value of KUKESRA given to poor families is as much as 10 times their account balances in TAKESRA. However, at the time of a KUKESRA transaction, 10% of its value must be put back into theh TAKESRA account. Then, in the process of repayment, the debtors have to repay the principal with an interest payment based on a flat rate interest of 6% per annum.

Thus, using TAKESRA's initial balance of Rp 2,000 as collateral, a family at the fhst stage can obtain as much as Rp 20,000 KUKESRA, and has to put back as much as Rp 2,000 from this in its TAKESRA account. The debtor will take home the remaining Rp 18,000, and keep the new TAKESRA account balance at Rp 4,000. The debt has to be repaid in 4 monthly instalments. In the process of redemption, the recipient has to repay a total of Rp 20,000 for the principal plus a certain amount for interest payment. After redemption of all debt and fulfilling the TAKESRA duties, the account balance would be Rp 4,000. At the second stage, the family can borrow Rp 40,000. The same procedure is applied again. A sum of Rp 4,000 (10% of Rp 40,000) is taken and deposited as additional TAKESRA. The instalment starts in the second month after receiving the loan. The process continues until arriving at the fifth stage where the value of KUKESRA becomes Rp 320,000. The number of monthly instalments is 8, 10, and 12 for the repayment of credit in stage 3, 4, and 5, respectively. The families who have completed all these stages are assumed to have the capability to become small entrepreneurs. Thus, if they require more capital, they can go directly to a bank for assistance (see Figure 5-4). The same conditions apply to all families wherever they are, regardless of any differences in economic and social conditions.

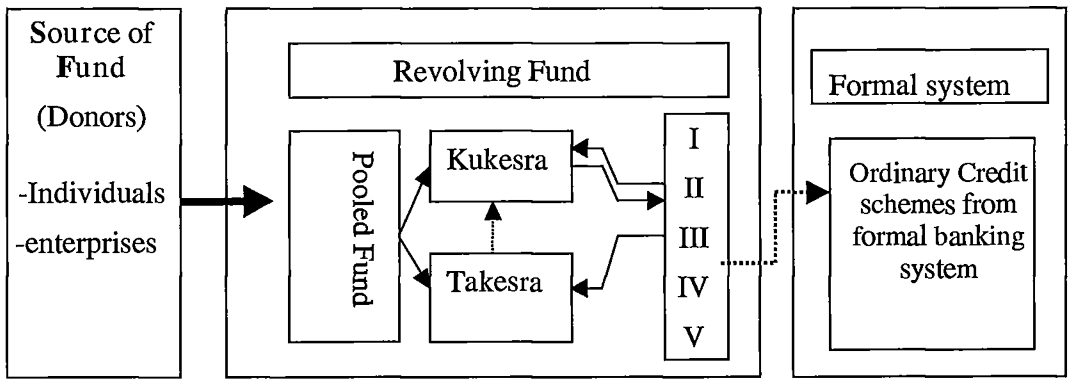

Figure 5-4 The KUKESRA-TAKESRA System

PROGRAMME IMPLEMENTATION

Even though on paper the design is well planned and the objectives clear, at times the implementation may not follow this plan. Moreover, if the design is not good and there exists some bias in implementation, the achievements would be far from those expected. In this section, some aspects of actual programme implementation will be highlighted.

The motivation behind TA-KUKESRA is based on the fact that the government believes that the major obstacle facing the poor to lift them out of poverty is the lack of capital. This is justified based on the fact that many informal moneylenders (IMLs) exist and operate among the poor. By intervening in the credit market and displacing the IMLs, the government's aim is to help the poor out of poverty. As a result of the government's intervention, the operation of IMLs reduced for a short period as many clients of the IMLs switched to KUKESRA. In this situation, KUKESRA provided a substitute for IML's funds. The government regarded the IMLs as exploitative and therefore advised that they should be avoided. However, it was not a complete substitution. Although all KUKESRA recipients proclaimed that they did not have contact with the IMLs, data obtained during the personal interviews suggested that most families continued to deal with IMLs.

They still relied on the services of IMLs because this was the source of funds which was available whenever they were needed. As availability of funds at the higher stages of KUKESRA became more uncertain, many more members of KUKESRA returned to the IMLs. It seemed that disappointment increasingly outweighed the cheaper cost of KUKESRA fund. Issues such as long waiting times, at times for more than a year, eroded members' enthusiasm to obtain a loan. In addition, carelessness on the part of the institutions dealing with members' documents, such as the loss of credit proposals, seem to have reduced the credibility of the institutions.

PROGRAMME DEFICIENCIES.

TA-KUKESRA is a central government programme, prepared by central government and implemented by local government. The weakness of such a programme is that since it is centralised it ignores regional specificities. It has been designed in a single model programme for all heterogenous regions. This approach has often been criticised as inappropriate for a country like Indonesia. Analyses of the failure of many credit programmes have shown that ignoring local or regional specificities is a major factor (Mubyarto, 1986:iii; Soetrisno, 1986:77; Sumodiningrat, 1986:120-122).

Some of the problems of the single model programme are discussed below;

Many of the poor rejected the loan. Even though the presence of IMLs is a proof that the need for cash among the poor in rural villages is high (Mubyarto, 1986), it does not imply that all poor households demanded loans. Also, it is not true to assume that the poor do not run businesses only because of lack of funds. There are many other factors. Giving money and enforcing the recipients to undertake business activities is also not the proper way. Many of the recipients were pressured to receive a loan, which created a new problem of its use. As a result, they used the funds for consumption and consequently paying the instalments became a problem. Some poor recipients in the village of Mangunrejo in the Kepanjen sub-district, for example, had to repay their loan instalment by providing their labour services because they did not have a steady income flow. Many other members of the programme rejected the loan since they had other saving-credit institutions such as community's Cooperation, *Pendidikan Kesejahteraan Keluarga* (PKK) (programme at village level to educate women on various aspects of family welfare). It cannot be assumed that since the real interest on the credit, in particular KUKESRA, is negative people will make use of the credit. Many people rejected it because the timing of repaying instalments was different from the income flow derived from theh produce.

Setting a high national target. The success of the programme was measured by the number of recipients and the total amount of funds extended. Thus, in order to show the success of the programme, within a short period of time it was forced to cover as many poor as possible, and as a consequence, the size of the funds distributed was increasingly large. Thus, the expansion of the programme was not purely determined by the market but was based on political motives.

The concepts used in the programme were contradictory. On the one hand, the programme is just addressed to the poor to help them out of poverty, but on the other hand, the administrators of the programme regarded the poor as lacking in ability to use the funds properly. Thus, they needed the assistance of non-poor members. The non-poor members can act as motivators but at the same time since they are more able to use the funds properly, they tend to reap more benefits than the poor themselves.

The above three weaknesses resulted in further problems in the implementation of the programme.

Target group and group formation

Programme

TA-KUKESRA is a major programme for poverty alleviation. It covers most of the poor throughout Indonesia. In many speeches, the minister of population/ the head of BKKBN has proclaimed that the programme has been successful (Kompas, 1997b), so have the local governments (Suarapembaruan, 1997c; 1998a). It seems that the programme has achieved certain goals for the elite but has perhaps not really helped the poor. The programme was prematurely applied and it was not well designed.

Many elements of the programme are yet to be implemented. At the time of this survey, that is, three years after its implementation, the *Balai Mitra Sejahtera* (BMS) for example, has yet to be implemented.

Coordination and gaps in information are some of the problems in KUKESRA programme. The problems of coordination appeared in several areas. Firstly is the time involved in approving the application for credit. At times the proposals had to wait months or even more than a year before a decision was made. Secondly, the results of the high level coordination among the top officials was not communicated well to staff at the lower levels. Thus, many problems of coordination emerged at the field levels.

The problem of coordination both internal and between related departments should be given more attention in governmental MFI, KUKESRA.

Gaps in information also exist between the bank, BNI 1946/Post Office, and PLKB. The gap is caused by the time delay in relation to the application procedure. The information from the bank is related to the flow of funds from BNI to Post Office which was carried out periodically while the information from PLKB is related to the flow of fund from Post office to the recipients and vice versa. However, not all differences are fully explained by the time lag. There are some other facts behind the phenomenon. Non-transparency is one of the factors. Some groups, for example, have never accepted a loan, but theh records at the post offices show that they have repaid regularly.

Group formation

The target of the TAKESRA/KUKESRA programme is families in the categories *Keluarga Pra Sejahtera (KPS), Keluarga Sejahtera I (KSI)*, the bottom two classes of the BKKBN welfare family classification. However, many people outside this specified target group have become members of KUKESRA and have received loans. This is due to the following reasons, some of which have been noted previously.

Contradiction in concepts: The poor are the target group of the programme but the administrators (BKKBN) claimed that the poor are not viable for the programme.

Because of their disadvantages such as low level of education and little skills, they were unable to use the funds properly. Thus, they needed the non-poor to assist the group and to utilise the funds in business activities.

Official target of achievement: Only two indicators are emphasised, fund absorption and repayment rate. Thus, other aspects such as who were the recipients and how the fund was used, were of less importance.

Pressure from higher levels of government: PPLKB and PLKB were pressured from theh superiors to cover many respondents in a relatively short period of time. Thus, the screening process was rarely undertaken.

Many groups were made up of staff members and not by ordinary members. Group members were taken from the lists of PKS and KS I. The accuracy of these databases would therefore affect the membership.

Intended inclusion of outsiders: most of BKKBN's cadres were outsiders. BKKBN relied much on its cadres in terms of administrative work. Thus, they needed to be included as members or group leaders in order that the administrative work could be well processed.

In order to receive funds from KUKESRA, the potential borrowers ought to be in groups of 10 to 30, where the characteristics of the groups are: self-selected with joint-liability. To become a member of a group, the potential member should be familiar to the others. They must trust each other since after becoming members, any default made by any member in the group becomes the responsibility of the group as a whole. However, in many groups this requirement was omitted because the standard procedures to establish a group were neglected.

From the survey it was found that in many cases, staff just grouped the names of people in the target group which were available from the lists of KPS and KS I, mainly into groups of thirty. The groups formed by staff were offered to cadres in the villages. The cadres were asked to collect the *Kartu Tanda Penduduk* (KTP) (residence Identification

Card) of the listed members for the credit process. Some members gave their KTP since they knew that the government would give them money in a TAKESRA account and cheap credit while other members were reluctant to be part of the group. Most members never knew about the joint liability.

Since the groups were created in a top-down fashion, there was not enough group cohesion, and members had less sense of belonging. The consequence of this kind of process is that joint liability did not work. Members did not care about the arrears of other members. As a consequence, if a member defaulted, other members were reluctant to take responsibility for the arrears. Any delays in repayment then became the responsibility of the leaders. The staff put pressure on the leader to make repayments first, and then collect them from members with arrears at a later date. This meant that the arrears of members become the responsibility of the leader and not of other members in the group. Consequently, leaders treated the funds as theh own and had the right to distribute them as best as they felt necessary. They lent the funds to fewer worthy people in order to avoid arrears. This leaders-redeeming-default mechanism comforted the PLKB but created problems and dissatisfaction among the leaders. Due to this inconvenience, several leaders dropped out of the programme. BKKBN's field staff always tried to prevent this from occurring as it was difficult for the staff to find other people who would be willing to be cadres and leaders.

Inconvenience was not only experienced by leaders/cadres but also by the PLKB as field staff. Theh task became increasingly more onerous but was not rewarded through higher salary. This discouraged PLKBs to do theh work. Any bias, for example the concentration of loans in the hands of fewer borrowers, was allowed as long as it made it easier for PLKBs. The loyality of the programme was an important aspect (Wahid, 1994:12) but this could not be maintained in KUKESRA.

From the above discussion, it is obvious that KUKESRA had many weaknesses hampering its success. Based on these weaknesses, it was expected that the repayment rate would be low. However, the data shows that a few provinces in Indonesia performed better than most others. East Java is one example of a good performing region where the arrears were generally below 10%. This leads us to question: why was

KUKESRA's performance in East Java, especially in the district of Malang, particularly good. Data obtained shows that the main determinants were due to factors outside the programme itself. Respect for the government, particularly government at the village level, was a major determining factor. Since the programme included the head of the sub-district and heads of villages, participants in the programme did their best. Other factors were the linkages with other essential programmes for the people in the rural areas. Often in the same forum, activities of several other programmes were carried out. People did not default on loan repayment because they felt that they would lose the chance to take part in other programmes as well.

Figure 5-5 shows that the programme itself contains many weaknesses leading to a high default rate. The top-down nature of the programme resulted in groups which were characterised by non elected leaders, passive members, members with no sense of belonging to the group, and lack of group activities. These characteristics led to different effects: no joint-liability, not being ready for business, and the concentration of loans in the hands of fewer members. The absence of joint-liability and not being prepared for business tended to increase arrears while concentration of loans among fewer borrowers tended to decrease them. From this flow of effects, many factors tended to push the arrears up. However, external factors such as the respect for local government and the inter-linkage with other governmental programmes for the poor contributed to a decrease in arrears.

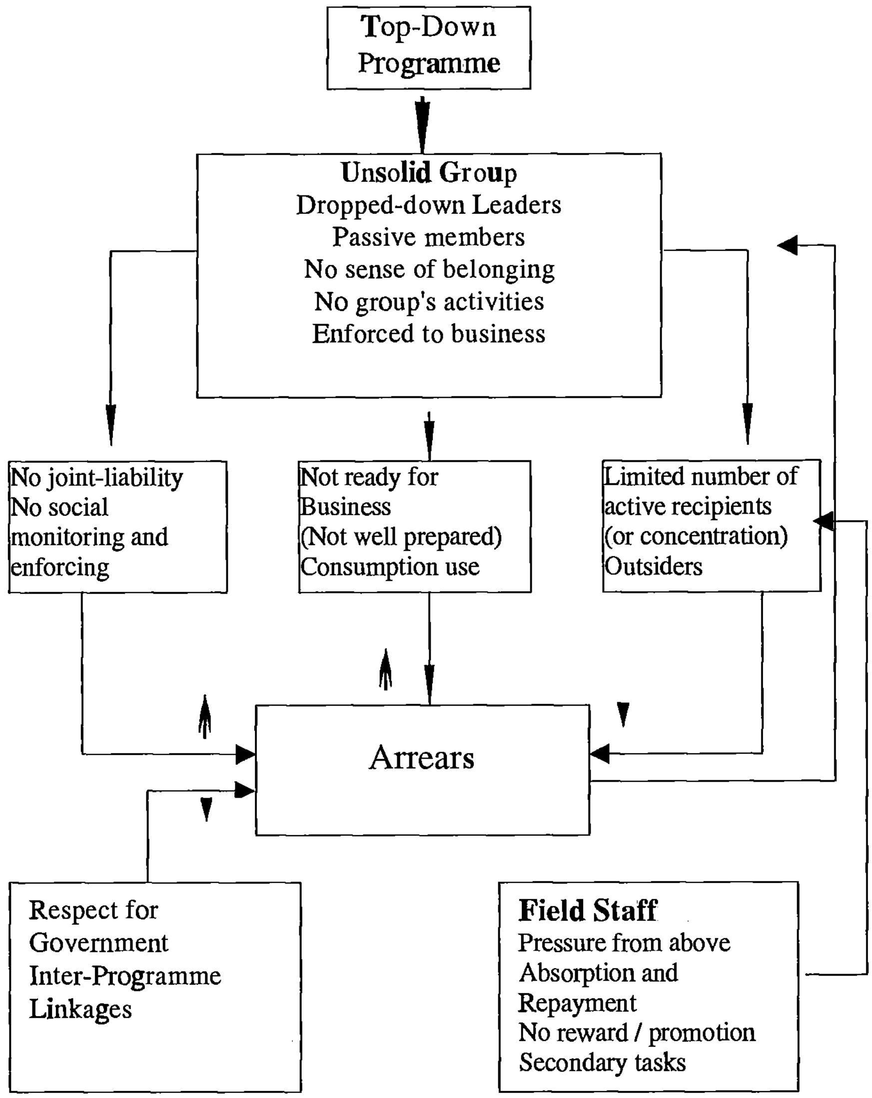

Figure 5-5 The Essential Effects in KUKESRA

MITRA KARYA EAST JAVA (MKEJ)

BACKGROUND

Mitra Karya East Java, hereafter called Mitra Karya or MKEJ began in 1992. In early 1992 the Indonesian Banker Institute (IBI) asked the University of Brawijaya whether they would like to undertake a rural banking programme following the model of Grameen Bank in Bangladesh. IBI promised that it would provide initial funding for the project.

Soon after receiving the offer from IBI, the university delegated it to Dr. Jumilah Zain, SU to establish the Mitra Karya. It is a programme for poverty alleviation by assisting the poor, particularly women, through economic activities. A suitable location to initiate the programme was sought. The criteria used initially to decide the appropriate region were the number of poor families in the region and the availability of off-farm self-employment opportunities.

The project received a setback as IBI failed to fulfil its promise to provide the initial funding. An appeal was made by Dr. Zein to the Grameen Trust, the institution providing assistance for the replication of the Grameen Bank model in the Asia-Pacific regions, through recommendation of Prof. Gibbon of *Cash-poor* in Kuala Lumpur. The Trust promised to provide an initial amount of US$15,000 in funding (Zein, 1999). However, due to the formal procedure involved, the fund had to be channelled through IBI. Thus, after Cash-poor was convinced that IBI was not committed to the scheme, it recommended that Mitra Karya continue its activities without the involvement of IBI. No fund was actually provided.

Eventually, the Research and Development Bureau of the University decided to finance the programme. Mitra Karya as a form of microfinance institution started its activities in October 1992. Unfortunately, the fund from the Bureau ran out before the programme was well established. The university gave up and suggested that the programme be terminated. Subsequently Dr. Zein used her own funds to finance the project. When the situation became increasingly critical, Mitra Karya got some financial assistance from Prof. Gibbon of *Cash-poor* in Kuala Lumpur. Subsequently more financial assistance came from a number of institutions such as BNI 1946, and BCA (*Bank Central Asia*), which is a private Indonesian bank. Thus, Mitra Karya is basically a NGO and no more under the umbrella of the University of Brawijaya. When it seemed that the programme could survive and effectively help the poor, many more institutions decided to offer assistance.

ORGANISATIONAL STRUCTURE

Mitra Karya is a replication of Grameen Bank in Bangladesh. Grameen Bank has branch offices as profit responsibility units, area offices monitoring 10-15 branch offices, zone offices monitoring area offices, and a Head office (Hossain, 1988:24).

In the early days of the Grameen Bank, it had only a Head Office and branch offices. When the programme expanded and the organisation became more developed the management functions of the Head Office were delegated to lower level offices.

Following the model of the Grameen Bank, Mitra Karya now has a structure similar to the Grameen Bank in its early days. Mitra Karya has a Head Office and 5 branches. Each branch has a branch manager who manages the branch. Each branch covers a number of sub-districts and villages, and in each village there is a *Rembuk*, a communicative forum for groups.

The general manager is located in the Head Office. The relationship between the general manager and the branch manager is concerned with monitoring, supervision, and making decisions about credit realisation. The branch manager has not been given the authority to make financial decisions at this stage. The general manager still has control over financial decisions and monitors field staff activities at the branch level. The branch manager has some tasks, including identifying the problems related with members or staff and possible alternative solutions. Field staff in branch offices have contact with the members. Members are consolidated in groups and *rembuk*, a forum for members activities. The structure can be described as follows.

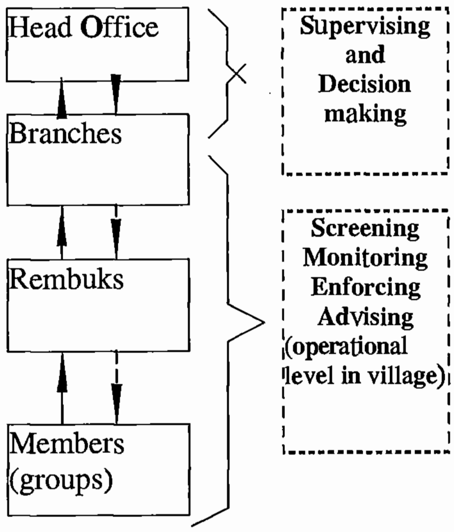

Figure 5-6 Organisation of Mitra Karya

The structure of the organisation is simple. It is independent from other institutions, and thus, it does not have the problem of coordination. The organisational simplicity results in a quick process of decision making and intensive supervision.

All staff hhed by Mitra Karya must fulfil the following criteria:

1. Good health condition. Each field staff member must provide a medical certificate showing that they are in good health. This is important because working in the field involves hard work. The staff are expected to cover a large area to collect repayments as well as to promote the programme to get new members. Thus, the programme stipulates healthy and physically fit field staff members.
2. Staff must also have a rural background. Living in rural areas is very different from living in the urban areas. Lack of a rural background may result in a high labour turnover and this involves additional costs.
3. Staff must have a good education, with at least a high school level of education. Some staff need to have an undergraduate degree, as these tasks requhe analytical and innovative capabilities to deal with real problems.

4. Staff must also have good communication skills, especially to deal with members who have little or no education.
5. Honesty is also an important requirement.
6. Staff must be committed to work hard. Good performance derives reward and promotion.

Besides these criteria, the size of the groups of members and weekly repayments are elements supporting the performance of Mitra Karya. Groups are of five which lead to intensive monitoring among the members and supervision from staff. Similarly, the more frequent the contact, the less will be the probability of default.

IMPLEMENTATION

The similarities and differences between Mitra Karya and Grameen Bank are as follows. As shown in Table 5-1, Mitra Karya maintains the main elements of the Grameen bank, however, some other elements are adjusted to fit the regional context.

The Grameen Bank model requires all new members to attend a seven-day meeting as an introduction to the programme. This meeting is to improve the discipline of the members. Mitra Karya initially tried the seven-day meeting model but it did not work well since most of the women in the area had to go to market everyday. The introduction programme meeting was later reduced to five days.

In the Grameen Bank there are 16 points which members must recite in the beginning of each meeting, also called "sixteen decisions", but for Mitra Karya some of these points were considered as not relevant. The details of the sixteen decisions are given in Appendix Chp.5.

The general manager of Mitra Karya found ttrat the stepwise model of credit realisation (2-2-1 after 2 instalments) had to be maintained, but the lag was more feasible with only one instalment. The stepwise formula is related to the credit realisation procedure.

Table 5-1 Comparison between Mitra Karya and Grameen Bank

Aspects	Grameen Bank	Mitra Karya Adjustment
Basic Principles:		
Target group	The poor	The poor
	Having business	Having business
Liability	Joint liability	Joint liability
Transparency	Transparency	Transparency
Staff Development	Promotions and reward	Promotions and reward
Size of group	5 members	5 members
Supporting Aspects:		
Introduction to programme	7 days	5 days
Members' swearing (Oath)	16 points	5 points
Stepwise realisation	2-2-1 model After 2 installments	2-2-1 model After 1 instalment
Default redemption	All members pay	Share with Mitra Karya (semi joint-liability)

Source: Survey data

Another important aspect is the redemption of default. Grameen Bank applies the principle of total joint-liability of group members where all members in the group have to take responsibility for any default of members in the group. Mitra Karya, however, does not apply total joint-liability but "semi-joint-liability". How members share the responsibility for default is described below in the section on redemption of default.

Group formation and Loan approval

Like any other new programme where the owners have no experience in the activities, each step is done very carefully. In the case of Mitra Karya, the first step is to find colleagues who can work together as a team. These are the primary staff. The team will fhst observe the various regions in East Java to find a potential region where the programme could be implemented. The chosen region has to fulfil the following requirements:

1. Most people living in the area must be poor.
2. Most families who are poor must have economic activities (small business).
3. The region must have a market and suitable transportation to the market.

These requirements imply that credit can reach the poor and they can use it in any form of economic activities which will generate income. This will make it possible to repay the loan.

After deciding on the region, the team will recruit the support staff who will do all the activities at the village level. The village staff and the primary staff will introduce the programme to the villagers in the selected region via a formal procedure. This means that they have to have permission of the village head. The villagers will then be invited for a meeting where the activities of microfinance will be introduced and explained. In the meeting, the purposes, characteristics, and other aspects of the programme are explained and all those interested in the programme are formed into groups of 5 members. This procedure is similar to that adopted by Grameen Bank.

Group members select theh own members, but all members must satisfy the standard requhements, that is, living in poverty and engaged in some form of business activity. The field staff will do the necessary inspection to ensure that the eligible candidates meet the requhements. The eligible candidates have to fulfil three requhements beside verbal recommendation from other members in the group. The three requhements are:

1. The candidate must be poor.
2. The candidate must be engaged in a business activity generating income and have the incentive to increase their business activities and hence income .
3. Since all members are female, they must have written agreement from their husbands.

The fhst two requhements ensure that they have incomes, which can be used as a basis for loan repayment. The probability of default is higher for those who do not have income generating activities. The thhd requhement is included to minimise the probability of default.

It is expected that members can be in-groups based on self-selection if and only if they know and trust each other. Based on these characteristics they can choose an appropriate leader of the group and bear joint liability for lhe group's arrears.

The group provides a form of social collateral on the loans the group members receive. Social collateral works if there are social control and pressure. Members monitor each other and help each other to fulfil theh duties. Intended default will be minimised since it can break the good relationship established among members in the group. Thus, the closer the relationship among members in the group the more they care for each other. This also ensures more cohesiveness of the group and this results in fewer intended defaults in repayment.

In addition, the permission granted by the village head also ensures that members fulfil theh obligations. In rural areas, the role of local government including the village head is still significant. The credibility of local government is also a factor hindering intended defaults.

Thus, from the above discussion, it is evident that there are a number of built in features of Mitra Karya which reduce defaults in repayment.

Credit realisation procedure

After the groups are established, the field staff and the manager will discuss the proposals for credit. The manager basically confirms that the members are eligible and have no problems with theh characters. The week after the decision, the credit will be granted to the fhst 2 members of the group. After the fhst 2 members repay the fhst regular instalment, the credit will then be given to the second 2 members of the group. The last member of the group will receive her credit after the fhst 2 members repay theh second instalment and the second 2 members repay theh fhst instalment. This method is known as the 2-2-1 formula. This formula is an important instrument to strengthen monitoring and motivation among the members in the group. Those who have received the loan have to fulfil theh duties to repay instalment as a type of consideration for those who have not yet received, otherwise they will not be able to get funds. At the same time, those who have not yet received funds have the motivation to monitor the use of the funds and ensure repayment. After finishing a stage of credit, they can advance to the next higher stage of credit in the same manner.

Since the organisation is simple, the decision-making is quick, which causes a short waiting time and certainty in credit realisation. If there are no problems with the members regarding the previous stage of credit, the proposal to the next stage will succeed. Performance in the previous instalment is the corner stone for the next higher stage of credit.

It was specified that the size of loan at a particular stage is twice the size of loan at the earlier stage. This gives incentives for members to get bigger loans.

The 2-2-1 formula and the graduated loan system act as a kind of push and pull factors for loan repayment. These result in minimum default.

Saving

The programme is intended not only for credit but also for saving. There are different types of savings, namely, compulsory saving, voluntary saving, and emergency saving. Members have to save a certain amount of money as compulsory saving each time a repayment is made. Voluntary saving depends on each member's willingness to do so. They decide how much and when they have to save while the amount and frequency of emergency saving is decided together as a group. The savings are put in the bank (BNI 1946) as a source of funding for the group. The compulsory savings are never refunded as long as the group exists. Even if a member exits from the group, her money in the fund remains with the group until another new member replaces her in the group.

Voluntary savings cater for the need for cash in the future. For example, if group members expect that on *Lebaran* (day of celebration at the end of fasting month) they will need additional cash, they can save from now till the time of *Lebaran*. The amount saved depends on the individual member's needs.

Funds from the emergency saving can be borrowed by members up to a certain limit for specific needs such as paying children's school fees. It will have to be repaid in ten instalments. It is not available for consumption needs. The amounts members are allowed to borrow are decided by all members in the group, and should not be more than 50% of the total emergency savings of the group. When a member borrows from the fund, all other members should give permission in writing. This means that all members become responsible for the fund. If a borrower fails to repay, all members in the group will lose.

Saving, at least compulsory saving, also plays a limited role as collateral. Savings is used by the programme to minimise losses from default. The more the savings the less the desire to default.

As a poverty alleviation programme, Mitra Karya also provides freedom for members to make their own decisions. The decision to enter or to exit the programme is undertaken under the member's own will. Cancellation of membership is allowed. Data obtained from the survey shows that cancellation was rare in the early days of the programme during the period before the economic crisis. However, since the crisis, cases of cancellation have increased. Before the crisis, most of the cases were due to members becoming independent through self-finance, but since the crisis, most of the cases of cancellation have been caused by the decline in business activities (Zein, 1999).

Repayment and Redemption of default

Repayment is done weekly. All loans have to be repaid within a period of fifty weeks. It is expected that all members are present when they repay each week, but in many cases the members send theh instalment through the leader. In this regard, Mitra Karya is flexible. If a member is unable to attend several consecutive meetings, the staff ensure that the member is still active in her business activities.

In dealing with default, Miha Karya does not put the whole burden of default on other members in the group. Miha Karya shares the burden between itself and the members in the group. This can be said to be "semi-joint-liability". For example, if a member has defaulted for ten instalments, then each other member has to take the responsibility for one defaulted instalment. The redemption is taken when a new stage of credit is realised. Thus, for a 5-member group, four out of ten defaulted instalments are redeemed by other members while the remahing six are borne by Miha Karya.

This adjustment is applied since not all the default is intended but arises due to losses in business income. Furthermore, this adjustment is more appropriate during the period of economic crisis when the majority of business activities have declined.

COMPARISON BETWEEN KUKESRA AND MITRA KARYA

Mitra Karya and KUKESRA are both MFIs but there are differences in many aspects of organisation (see Table 5-2). These differences lead to variation in how the programmes work and their achievements. Based on the characteristics of KUKESRA, its achievements tend to outrweigh the achievement of Mitra Karya in terms of outreach, in particular the breadth of outreach. The number of members in the KUKESRA programme tends to be large because of its size and the fact that it is supported by a large amount of funds while Mitra Karya is limited in funds and tends to have fewer members. However, there is no significant different in terms of depth, that is to what extent the programmes reach and assist the poorest. In terms of quality of outreach, KUKESRA is worse than MKEJ. The fact that many members of MFI such as KUKESRA, who are poor, returned to IMLs is evident that the MFI could not help them effectively (Kochar, 1997). In addition, there is evidence to show that the programme misses the target group. KUKESRA is more characterised by lack of control while Mitra Karya is closely supervised. The close supervision results in better performance (Reinke, 1998:44-45).

Furthermore, from the tables describing the factors determining repayment performance (see Table 5-3 and Table 5-4), it is clear that many aspects of the KUKESRA programme tend to have a negative impact on repayment. In contrast, Mitra Karya which bases its activities on profit and self-sufficiency among the poor, uses all its instruments to support repayment. Mitra Karya tends to be successful while KUKESRA is likely to fail, even though its coverage is large. The sustainability of KUKESRA could be achieved by inducing fresh funds and not relying on revolving funds. It depends a lot on subsidies. MFIs with characteristics such as those of KUKESRA tend to fail in theh operation (Woolcock, 1999).

The factors influencing the performance of MFIs are described in Table 5-3 and Table 5-4.

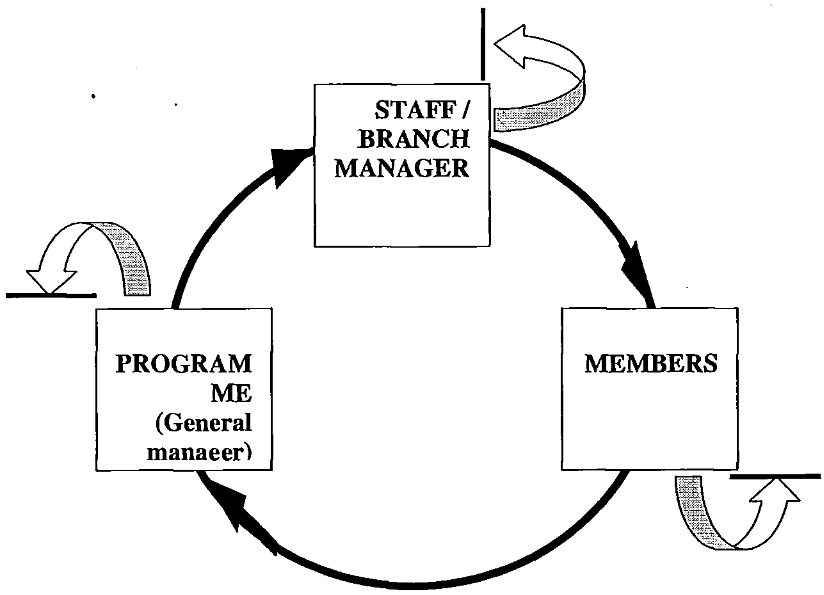

Figure 5-7 Wheel of MFI

In Figure 5-7, if the force for accelerating repayment is drawn as a clockwise arrow supported by push and pull factors, while accelerating arrears is drawn as an anti-clockwise arrow countered by counter arrears factors, then the combination of all the forces in the system causes the programme to survive and run steadily.

All the factors described support the thesis that Mitra Karya could run well but that the survival of KUKESRA is doubtful. Even though Miha Karya has to charge an annual interest rate as high as 30%, since its operating cost is also high like other MFIs (Wahid, 1994), it is profitable and members still receive the benefits. It supports the thesis that banking for the poor is still profitable (Benjamin, 1994). The factors influencing the repayment performance of MFIs are all described in Table 5-3 and Table 5-4.

Table 5-2 Character Comparison

Aspect	TA-Kukesra	Mitra Karya
Programme:		
Regional	All regions	Selected regions
Flexibility	Single type (unadjusted)	Adjusted to local context
Group lending	yes	yes
Graduated loan	Not on schedule	On schedule
Joint liability	Group leader responsible to 'yellow'[38] arrears	All members
Affectivity	Still rely much on IML	Fewer rely on IML
Repayment	monthly	weekly
Emphasis	Coverage (difficult to exit) Absorption Repayment	Repayment (easy to exit) Poor people Business use
Default	No legal sanction	No legal sanction
Motivation	To run government programme	To help the poor and profit
Staff		
Number	Fixed number of PLKB	Increase following the development of the programme
Incentives	No incentive	Incentives
Group and Members		
Process	Top-down	Self-selected
Size	10-30	5
Function	No intensive monitoring	Intensive monitoring
Members	Some from non-target group	All the poor target group
Usage	Some for productive and partly consumptive	All productive

Source: Survey data

[38] 'yellow' arrears is the attribute given by BKKBN for the arrears that is still expected to be repaid, while 'red' arrears is the arrears that is not expected to be repaid.

Table 5-3 Determinants for Repayment Performance

Actor	Accelerating Repayment factors				Counter arrears factors			
	Push Factor		Pull Factor		Restraint Factor		Preventive Factor	
	MKEJ	**KUKESRA**	**MKEJ**	**KUKESRA**	**MKEJ**	**KUKESRA**	**MKEJ**	**KUKESRA**
Members	(+)Joint liability (+)2-2-1 formula	(-)Only concept of Joint liability and no application (-) Altogether receive at the same time	(+)Graduated loan (+)Certainty	(-)Only concept of graduated loan, in many cases the size is different from the specified (-)Realisation is uncertain	(+)Inclusion (permission) local government (+)Community cohesion (+)Group cohesion (+)Lose benefits (non financial benefit)	(+)Inclusion (permission) local government (+)Communit y cohesion (-)No Group cohesion (-)no benefits to lose (+)Linkage with other governmental Programmes	(+)Inspection and confirmation of members situation (+)Introduction to Programme (+)Weekly meeting (frequent contact) (+)*Rembuk* (+)Small size group (intensive monitoring, counseling etc) (+)Saving (+)Good-relationship (member-member) (staff-members) (+)Share the risk also with Programme (owner)	(-)No (-)No (-)Monthly (-)rarely group meeting (-)No monitoring (-)Fewer do voluntary saving (-)Good-relationship (member-member) (staff-members) (-)Programme bears the risk

Source: Survey data

Table 5-4 Determinants for Repayment Performance

Actor	Accelerating Repayment factors				Counter arrears factors			
	Push Factor		Pull Factor		Restraint Factor		Preventive Factor	
	MKEJ	**KUKESRA**	**MKEJ**	**KUKESRA**	**MKEJ**	**KUKESRA**	**MKEJ**	**KUKESRA**
Staff /managers	(+)Transparence in staff group	(+)Transparence in staff group	(+)Salary, Reward, and promotion	(-)Nothing	(+)Unemployment (+)Lose position (+)Staff group control	(-)Nothing to lose (-)Nothing to lose (+)Staff group control	(+) Screened (requirements) (+)Good-training (+)Good-relationship (staff-members) (staff-staff) (staff-manager) (+)Rechecking (+)Sharing experience (+)Innovative	(-)Civil servants (-)No training (+)Good-relationship (staff-members) (staff-staff) (staff-manager) (+)Rechecking (+)Sharing experience (-)Less Innovative
General manager	(+)Development motive	(+) Showing reputation to superior	(+)Profit	(-)No care for profit	(+)Programme Reputation	(+) Showing reputation to superior	(+)MFI (Grameen) contact and share experience	(+)Instruction from above

Note: (+/-) is the expected sign of the effect on repayment

Source: survey data

APPENDIX CHP.5

"THE SIXTEEN DECISIONS" PROGRAMME

1.	The four principles of Grameen Bank - discipline, unity, courage, and hard work - we shall follow and advance in all walks of our lives.
2	We shall bring prosperity to our families.
3	We shall not live in dilapidated houses. We shall repair our houses and work towards constructing new houses as soon as possible.
4	We shall grow vegetables all the year round. We shall eat plenty of them and sell the surplus.
5	During the planting seasons, we shall plant as many seedlings as possible.
6	We shall plan to keep our families small. We shall minimise our expenditures. We shall look after our health.
7	We shall educate our children and ensure that they can earn enough to pay for their education.
8	We shall always keep our children and the environment clean.
9	We shall build and use pit latrines.
10	We shall drink tubewell water. If it is not available, we shall boil water or use alum.
11	We shall not take any dowry in our sons' weddings, neither shall we give any dowry in our daughters' weddings. We shall keep the centre free from the curse of dowry. We shall not practice child marriage.
12	We shall not inflict any injustice on anyone, neither shall we allow anyone to do so.
13	For higher income we shall collectively undertake bigger investments.
14	We shall always be ready to help each other. If anyone is in difficulty, we shall all help.
15	If we come to know of any breach of discipline in any centre, we shall all go there and help restore discipline.
16	We shall introduce physical exercise in all our centres. We shall take part in all social activities collectively.

Source: Kamal Siddiqui, *An Evaluation of Grameen Bank Operation* (Dhaka: National Institute of Local government, 1984). Cited from (Hossain, 1988:28).

CHAPTER-6: ASPECTS OF POVERTY NATIONWIDE AND REGIONAL SURVEYED

INTRODUCTION

Poverty in Indonesia is a subject attracting much attention from many people and organizations, including the government. More recently, when the Indonesian economy experienced the economic and political crisis, scholars paid much attention to see the change in the poverty situation. The crisis has also changed the trend of poverty alleviation, thus, scholars such as Asra (1998) and Manning (1998) in conducting theh analyses on poverty distinguished the period before the crisis in 1997 as a "permanent" pattern of poverty alleviation in Indonesia and the situation of poverty after 1997. Poverty alleviation as a whole in Indonesia had been impressive before 1997 as described by Asra (1998) and Manning (1998). However, reduction in poverty varies between areas and regions. The incidence of absolute and relative poverty both continuously declined in the 20-year period between 1976 and 1996. This means that the percentage of the poor declined and the number of people living in poverty was also fewer compared to the figures in the beginning of that period. This pattern was similar in all provinces, both in urban and rural areas.

Since the crisis of 1997, the issues of poverty and inequality have become headline news. Many estimates of poverty have been undertaken as a response to the effect of the crisis, but some of these are unreliable due to the limited availability of reliable data. In this chapter a short history of poverty alleviation will be undertaken and the analysis of poverty is broken into the period before and after the crisis of 1997.

POVERTY ALLEVIATION NATIONWIDE

Commitment to poverty alleviation has been the concern of all the governments which have ever ruled Indonesia (Dewanta, 1995:223). The Dutch colonial government, Indonesian Old Order, New Order, Reformation Order, and the current Order of Unity have all been involved to varying extents. Nasoetion (1996:46) argues that the motivation for poverty alleviation in Indonesia as in other countries is based on the principle of basic human rights to live as a human. These values are emphasised in the *five-principle* foundation (*Pancasila*) and the constitution (*UUD 1945*) in Indonesia.

Besides the philosophical argument, poverty alleviation is a necessity from an economic viewpoint. Poverty is a deprivation of many aspects of life, including economic resources, which results in a low level of aggregate demand and a low incentive to produce. Thus, poverty could hinder development; therefore, it has to be eliminated through a more progressive developmental process. Thus, poverty alleviation has to become the focus of any meaningful economic development.

The concern with poverty alleviation has existed since Indonesia was a Dutch colony. From the historical record in the colonial period, it was found that there were some *lumbung* created to help the poor such as *lumbung miskin* in east Java as described in chapter 4. Many other *lumbung* were created by government, however the government was more concerned to have some surplus from the people than to help the poor and raise them from poverty. Fortunately, besides *lumbung*, village banks were established to help the poor escape from the debt trap. These paved the way for the Indonesian People's Bank (BRI) that still maintains a service for the poor.

When Indonesia obtained her independence, the government (Old Order)[39] was not much concerned with the issues of poverty. Much attention was focussed on overcoming domestic rebellions and restoring political stability. Economic development and progress became a central concern under the New Order. Under the New Order, the Five-year Development Plan became the main strategy to rebuild the economy nationwide, and issues on poverty and inequality were incorporated.

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[39] *Old Order* is used as a label for the Indonesian government before Suharto became the President of Indonesia. This label is applied to the period under the Soekarno presidency between 1945 and 1967. *New Order* is the label for the period under the Suharto presidency from 1967 to 1998 and Habibi from 1998 to 1999. From 1999 to 2001 the government (President Abdurachman Wahid) was known as *Reform Order*, and since mid 2001 the government (president Megawati Soekarno Putri) has changed the regime to unity order.

POVERTY ALLEVIATION BEFORE THE CRISIS

The time reference for the period before the crisis is the period between 1976 and 1996. Even though some colonial government policy was dhected toward poverty eradication during the Dutch colonial period, serious attention for national economic development and poverty alleviation was only given by the government of the New Order Regime, especially after the launching of its fhst five-year Development Plan (REPELITA I) in 1971.

Many studies on poverty have been undertaken using this reference period. All studies on the evaluation of poverty alleviation show the same fact that the absolute poverty reduced constantly every year in the period, at least until 1996 (see Table 6-1).

Poverty oriented programs

Historically, efforts at poverty alleviation originated in the agricultural sector. During the Dutch colonial period, the poor often experienced food shortages and fell into the debt trap. The government introduced the *lumbung desa* programme to overcome the shortages as well as establishing village credit institutions to save the poor from the debt trap. In the Old Order Regime, the fhst regime after Indonesia obtained her independence, the development programme particularly related to poverty was only conducted after the 1960s. This is due to the fact that even though poverty was an important issue, poverty alleviation programs were not much articulated since most of the government's attention was given to maintaining political stability, such as suppressing some local rebellions and resolving the external conflict with Malaysia. Manning (1998:2) notes that during the period between 1940s and 1960s the Indonesian economy was characterized by instability except for a short period of economic stability in the 1950s.

Poverty alleviation programmes in that period and in the period of New-Order regime largely consisted of agricultural and non-agricultural credit, particularly small size credit which was more likely to assist the poor, beside many other pro-poor development programmes targeting the poor.

Suhendar (1994b: 15-17), in his study, found that at least since the beginning of the 1960s the government had undertaken agricultural development programmes. One well-known program was rice intensification, which provided inputs for rice production. This was fhst introduced by the Centre of Rice Foundation (*Badan Padi Sentra*) in the planting season of 1959/1960. Following the success of this program, many other similar programmes were implemented. In the planting season of 1963/1964, the government launched the program of 'Self-sufficiency of food' (*Swasembada Bahan Makanan, with acronym: SSBM*). Then, in the planting season of 1964/1965, the Bogor Agriculture Institute introduced a Mass Demonstration (*Demonstrasi Massal, with acronym: Demas*). In the following year this program was extended to become the Credit Package-deal offered by the government (*Bimbingan Massal, with acronym: BIMAS*). Thus, BIMAS started in the planting season of 1965/1966. Subsequently it was improved with new management and packages.

Since the New Order, the government has implemented many programmes which have had poverty alleviation effects, including maintaining and improving the existing programmes. BIMAS, for example, was improved to become the Rice Intensification (*Intensifikasi Massa, with acronym: INMAS*) programme in 1967. The government also implemented a modified Bimas, namely, 'Mutual Self-help' (*BIMAS Gotong-Royong*), in 1968/1969 and the 'Completed BIMAS' (*BIMAS yang disempurnakan*) in 1970. BIMAS credit was originally for rice production, but in 1972, it was extended to include other crops such as maize, groundnuts, sweet potato, cassava, and soybeans (BIMAS *palawija*) (Moll, 1989:36). Then, it was further improved to become the 'Special Rice intensification' (INSUS) programme and subsequently became the 'New Insus', or widely known as 'Supra-Insus' in 1982.

INMAS is a rice intensification program similar to the former BIMAS but excluding government credit. However, the rate of increase in production was still low. BIMAS was still in place but it had problems of loan repayment that resulted in fertiliser shortage. A related problem beside the shortage was that some farmers resold the fertiliser for cash since they needed cash. The cheaper fertilisers were sold and were not used in production. This and other problems resulted in the termination of BIMAS credit in the middle of 1985.

BIMAS and INMAS had effects on the speed of application of new technology because these programmes encouraged the use of new technology in rice production. However, Sayogyo reported from his field research that these projects were only suitable for larger farmers, who had land as large as 0.75 hectares or more. On the contrary, those who had agricultural land as small as 0.5 hectares or less were not interested in the programmes (White, 1996:26).

Consequently, fewer and fewer small farmers became involved in INMAS and BIMAS programmes. Moreover, since new technology would be followed by higher productivity, the large farmers obtained much more profit. The accumulation of land ownership in the hands of a limited number of persons resulted in larger and larger farms on the one hand, while the number of landless farmers increased on the other.

Shortage of capital and the deficiencies of the previous programmes have led to the introduction of new types of credit schemes to meet the need of the rural poor. The government has also provided other forms of non-agricultural credit. Different from BIMAS credit which was financed by the central government budget, other credit programmes like KIK (*Kredit Investasi Kecil*), KCK (*Kredit Candak Kulak*), KMKP (*Kredit Modal Kerja Permanen*) were financed by the Central Bank. All the credits mentioned were distributed by BRI. In 1973, KIK and KMKP were introduced for financing investment and working capital of small businesses. Since the financing of small businesses was not satisfactory and other business sectors were also experiencing lack of liquidity, the government launched a policy package in January 1990 (*Pakjan* 1990) as the policy of financial deregulation for small business to overcome the problem of liquidity. Based on the policy, all banks became free to provide any amount of credit to debtors. Unfortunately, the deregulation benefited the urban sectors such as real estate more while the sectors dealing with the poor did not gain significantly (Suhendar, Chotim *et al.*, 1994:17-19). In addition, like BIMAS, KIK and KMKP, bank lending also resulted in high default in loan repayment (Moll, 1989:37-39).

The performance of poverty reduction as presented in table 6.1 is the result of the combination of many pro-poor development programmes. Most of the programmes had dhect and indirect effects on poverty alleviation in Indonesia. Indirect poverty alleviation programmes have usually taken the form of various types of credit provided in the real sectors. Assisting real sectors such as agriculture where the poor are mostly located would benefit the poor most through the raising of theh income.

The effects on poverty alleviation changed particularly between urban and rural areas after the change in policy emphasis. Some policies brought many more changes to the rural areas than the urban areas while for others the effects were the other way round.

Between 1976-1980, there was an oil boom in Indonesia when the world oil prices increased. An effect of this booming oil price was a significant increase in government revenue. The revenue was allocated to modern urban and rural development projects and agricultural credit programmes to increase rice productivity (Manning, 1998). The increase in productivity would result in an increase in income from rice production. Productivity in real production rose by 18.6% in *Pelita* I and II and about 14.4% in *Pelita* II and III (Asra, 1998:7). Consequently, poverty declined by 7.3% in the urban areas and by 8.8% in rural areas (Manning, 1998).

However, Sayogyo found (as cited in White 1996:26) that the application of new technology in the agricultural sector only attracted large farmers, not farmers having small farm size. Furthermore, this process created an accumulation of land ownership and disadvantaged many smaller farmers.

Between 1980-1987, the modern sector grew more slowly because of the oil crisis in 1982, and there was a ceiling on credit. However, since the government had introduced a policy of deregulation for the banks, industry and other modern sector businesses could borrow whatever amount they needed. As a result, the modern sectors grew faster during the period 1987-1996. Thus, in the 1980s and 1990s per capita output in manufacturing grew by 65%, services by 42% and many workers moved away from the agricultural sector into the modern sectors (Asra, 1998:7).

Manning (1998) classified the period before the crisis into 3 sub periods i.e the periods between 1980-1987, 1987-1993 and that of 1993-1996. The urbanisation that occurred in these periods was the effect of, on the one hand, the application of new technology in the agricultural sector, which resulted in surplus labour. The off-farm sector could not absorb all the unemployed even though unemployment fell continuously from 1990 to

1993, when the unemployment rate fell to 2%. It is clear, however, that deregulation did not have much impact on the rural sector. On the other hand, the faster growth of the urban sector, including industries in urban areas, absorbed more unskilled labour such as in construction and real estate. The migration of people from rural to urban areas was driven by the net benefit they expected to gain from the shift.

This indicates that the poor benefited by moving to the urban areas. The share of population in the urban area increased from 21.9% in 1981 to 37.4% in 1996. Some studies on this matter such as those undertaken by Huppi & Ravallion (1991) found that urban migration negatively impacted on poverty alleviation. However, Huppi & Ravallion (1991) noted that this contradiction is due to inconsistency in the poverty lines used to identifying the poor. The difference in poverty lines between urban and rural areas is not consistent with urban-rural costs differences. Asra (1998) showed that the ratio of the urban to rural poverty lines is between 1.5 and 1.77. This assumes that the costs differential between the rural and urban is 70%, which is too high. Huppi & Ravallion (1991) argued that the reasonable costs difference is about 10%. By using a 10% difference, the decomposition of poverty alleviation showed that both intra-sectoral and inter-sectoral movements have a positive effect on the reduction in poverty. During the deregulation period, when the urban sector grew rapidly and many more rural people migrated to the urban areas, between 1990 and 1996, the rural to urban migration shared in poverty reduction by about 50.6%. The move from rural areas to the urban areas tended to depress the mean income of urban people. Thus, urbanisation in general reduced poverty; in particular it increased the rural migrants' income, but it could also increase the number of urban poor. Thus, by using the reasonable cost differential, the effect of moving to urban areas on poverty alleviation is positive (Asra, 1998:24).

Beside economic factors contributing to variances in poverty alleviation, population growth also affects the incidence of poverty as a whole. Thus, Family Planning is one among many supporting programmes aimed at poverty alleviation. The success of family planning means smaller families and reduced population growth. This results in a lower dependency ratio, or the productive age group tends to be bigger relative to the non-productive age groups. This implies that the success of family planning could be reflected by more people working relative to the total population, thus increasing per capita income. This is consistent with the objective of the family planning programme, which has been undertaken not only to achieve smaller family size but also to increase the welfare of families.

Poverty Alleviation by Region

Poverty alleviation has not been uniform across provinces, not only with respect to the incidence of poverty but also to the changes in the poverty level. BPS (1997: table 12.4, p.571) shows that the eastern part of Indonesia was poorer than the western part. In 1993, the eastern part experienced a poverty incidence as high as 18.39% while the incidence in the western part was just 12.34%. In 1996, the former experienced poverty as high as 16.15% while the latter was only 11.09%. However, it is clear that between 1993 and 1996, the eastern part of Indonesia experienced faster poverty reduction than that experienced by the western part.

Provinces in the eastern part of Indonesia which had low incidence of poverty are the provinces in the island of Sulawesi. In general, the incidence of poverty in Sulawesi was 9.57% in 1993, decreasing to 8.55% in 1996. In contrast, other provinces in the eastern part, such as East Timor[40], Maluku, Irian Jaya and West Kalimantan had higher levels of poverty incidence. Poverty in East Timor was the highest. It had a poverty incidence as high as 36.24% in 1993 which decreased to 31.15% in 1996. Maluku had a poverty incidence as high as 23.93% in 1993 which declined to 19.97% in 1996, Irian had 24.16% in 1993 and 21.17% in 1996, while West Kalimantan experienced a poverty level of 25.05% in 1993 which decreased to 21.98% in 1996 (BPS, 1997: table 12.5 p.572).

In the western part of Indonesia, there were some provinces with low incidence of poverty while others had higher incidence. The provinces with a low incidence of poverty were DKI Jakarta, and Bali. DKI Jakarta had 5.65% and 2.48% while Bali had 9.46% and 4.29%, in 1993 and 1996 respectively. Other provinces in the western part of Indonesia had almost the same degree of poverty incidence, lying in a range between

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40 At that time, East Timor was still a province of Indonesia. It remained so until it obtained its independence through a secret and universal ballot under United Nation supervision on 30 August 1999, in which the majority of the people of East Timor (78%) chose independence.

11.20% and 15.78% in 1993 and between 7.94% and 13.91% in 1996 (BPS, 1997: table 12.5 p.572). Thus, in the period 1976 to 1996, there was significant reduction in poverty in the whole country as well as in separate provinces.

POVERTY ALLEVIATION AFTER 1997

In the course of development, a person's status can change from poor to non-poor and vice-versa. This implies that poverty is a dynamic phenomenon. Even though poverty declined sharply in Indonesia up till 1997, the incidence of poverty has increased since then. In the second half of 1997, the Indonesian economy experienced a big monetary crisis, which not only affected the monetary sector but also the other sectors. Soon the financial crisis widened into the political domain. Unemployment and inflation increased significantly and, consequently, people's real incomes declined especially for those on a fixed income.

Riots in many parts of Indonesia, especially in Jakarta, the capital city, in the middle of May 1998 ruined many kinds of production equipment. Together with a long drought and bush fhes which occurred almost at the same period, these all become the reasons to expect that the real GDP in Indonesia would fall by 10 % per annum after July 1997. IMF also predicted that the Indonesian GDP would decline by about 15.3% for the year 1998/1999 (IMF, 1999: Table 1). The actual growth rate in 1998 was -13.2% and in 1999 it was 0.23% (BI, 2000). All this implies that incomes would fall and more people would fall below the poverty line.

The economic crisis showed that the issues of unemployment and poverty are inter-related. As the value of the Rupiah relative to other foreign currencies dropped, many businesses collapsed, particularly those industries using high import content. As a result, unemployment increased markedly. The increase in general prices meant that real per capita income fell and hence many more people fell below the poverty line. Cameron (1999) showed that the crisis affected the urban people more than people in the rural areas.

The effect of the crisis on unemployment can be seen by comparing the unemployment figures before and after the event. In 1996, that is prior to the crisis, unemployment was only 5%. At the time of crisis in mid-1997, the unemployment rate was about 4.7%. A year after the crisis, unemployment increased to 5.5%. The increase in overall unemployment was not really significant, about 0.8 percent. What is more important is that unemployment did not increase uniformly across regions. The change in unemployment was higher in urban areas than in rural regions. Unemployment in the urban areas increased from 8% to 9.3% in the same period, or increased by as many as 1.3 percentage points, while in the rural areas it increased from 2.8% to 3.3% or increased by 0.5 percent points (Manning, 1999)[41]. Using a "SUSENAS type" survey for December 1998, adjusted by SAKERNAS data for August 1997, BPS found that the unemployment rate in urban areas had changed from 6.7% in August 1997 to 7.2% in December 1998 while the rate in rural areas was relatively unchanged at 2.2% during the period (Booth, 1999: Table 7 p.21). These studies concluded that the effect of the crisis on unemployment was greater in the urban areas.

Another aspect of unemployment is unemployment by gender. BPS also found that the crisis resulted in higher unemployment among the males than females (Booth, 1999: Table 7 p.21). Female employment even slightly expanded. From August 1997 to December 1998, the unemployment rate for males increased from 3.5% to 4.3% (0.8 percent points) while the female unemployment rate fell from 4.3% to 3.7%. This is a phenomenon of *gender shift* in unemployment. The phenomenon could be explained as follows.

The crisis affected the formal sector more than the informal sector. This means that many of the males dropped out from the formal sector and, due to the falling family income, females were compelled to be engaged in some form of economic activities in the informal sector.

However, some unemployed from the non-agricultural sub-sectors in the formal sector tried to supplement theh falling income by engaging in various forms of self-employment activities. In the formal sector, only employment of professional and self-employment categories expanded. In contrast, in the informal sector, the self-employed

[41] Manning calculated the figures using the Labour Force Survey (SAKERNAS) for August 1998 and compared it to the result from the same survey for the year before.

reduced slightly, but many more females were involved in the informal agricultural sector and as unpaid family workers.

Thus, since unemployment increased at the same time as general prices rose, poverty must have increased due to a fall in real income. In particular, food prices increased much more than for non-food prices such as housing. This implies that the real income of the urban poor fell more than the fall in real income of the rural poor (Cameron, 1999).

Estimates published by BPS on the 10 July 1999 on the incidence of poverty indicated that the poverty situation in 1998, a year after the crisis, in terms of headcount index, was about the same as that which existed 17 years before. The incidence of poverty in 1998 was 24.2%. By comparison, it was 26.85% in 1981. Researchers have debated the reliability of the estimates, in particular the estimate of the poverty line used in the calculation. Then BPS adjusted the calculation and found that the revised poverty incidence for 1998 was 16.7% which was almost the same as the number 10 years before (see Table 6-1). On the basis of the results, adjusted and unadjusted, the number of poor increased by approximately 11.5 - 12 million between 1996 and 1998 (Booth, 1999:19).

Besides the poverty line, as shown in Table 6-1, the government also provides another index, namely KFM (*Kebutuhan Fisik Minimum* or Minimum Physical Needs)[42]. The purpose of KFM is to provide guidance for the government to decide on the level of minimum wage for workers. The government assumes that KFM estimates the minimum amount that should be provided in order to just satisfy workers' minimum physical needs, but not including all the basic needs for living. KFM covers 5 groups of expenditure items: food and drink, light/ kerosene for cooking, housing and cooking kits, clothing, and miscellaneous expenditures (transport, recreation, medicine, education etc). KFM is calculated for a single worker (PL), for a nuclear family with 2 children (K2), and for a nuclear family with 3 children (K3).

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[42] Unfortunately, the government has stop publishing the KFM indicator of poverty.

A comparison of the poverty line (PLn) and KFM is presented in Table 6-1. Unfortunately, information on KFM is not available for recent years. From 1978 to 1987, the figures show that the PLn was much lower than KFM, being approximately a quarter of the level of KFM. This means that the budget based on the PLn is sufficient to satisfy only a quarter of basic physical needs. This approach has been strongly criticised by White (1996:37-38) as the poverty line does not even fulfil the basic physical needs of the poor. White found that those who were categorised as non-poor based on the PLn criteria only fulfilled about 30% - 50% of theh basic physical needs.

The poverty line is also sensitive to the number of poor, as explained by Asra (1998) and White (1996). Moreover, Asra (1998) pointed out that the rural poverty line is more sensitive than the poverty line for urban areas, at least from 1981 to 1996.

Table **6-1** Poverty Alleviation Profile in Indonesia

Year	Head Count Index urban	Head Count Index rural	Head Count Index total	Inflation	PLn urban	PLn rural	PLn total	KFM in East Java PL	KFM in East Java K2	KFM in East Java K3
1978	30.8	33.4	33.31	6.7	4969	2981	3353	14115	32500	42622
1980	29.0	28.4	28.56	16	6831	4449	4975	21919	51160	59723
1981	28.1	26.5	26.85	7.1	9777	5877	6731	24977	55697	65937
1984	23.1	21.2	21.64	8.8	13731	7746	9326	35010	71629	86570
1987	20.1	16.1	17.42	8.9	17381	10294	13286	47434	115638	148572
1990	16.8	14.3	15.08	9.5	20614	13295	15564			
1993	13.5	13.8	13.67	9.8	27905	18244	21528			
1996	9.7	12.3	11.34	6.5	38246	27413	31464			
1998	-	-	39.9[a]							
	39.1[b]	53.2[b]	48.2[b]							
	21.9[c]	25.7[c]	24.2[c]							
	15.4[d]	17.6[d]	16.7[d]							
1999	56.6[e]	71.7[e]	66.3[e]		94507[f]	74405[f]	81089			

Notes:

[a] estimated by BPS for mid 1998
[b] estimated by ILO/UNDP for the end 1998
c estimated by BPS for 1998
[d] estimated by BPS for 1998 (adjusted)
[e] estimated by ILO/UNDP for the end 1999
[f] estimated by BPS for 1999 using SUSENAS data (Preliminary figure of SUSENAS 1999)
[a,b,c,d,e] are cited from Booth (1999:20) Table **6**.

POVERTY IN THE SURVEY REGION

INCOME POVERTY

The average level of income in the Malang District where the survey was undertaken is given in Table 6-2. Before the crisis, the real GDP of the district grew by more than 6% per annum. In 1995, it grew by 7.02% and in 1996 it was 6.88% of growth. In mid-1997 when the crisis began the growth of the regional economy declined to 4.91% per annum. However, as it was noted before, the effects of the crisis came about a year later in mid 1998 as shown by the rate of growth and inflation. In 1998, the inflation jumped significantly from 13.89% to 130.51% per annum and the real GDP fell from 4.91% to (- 6.87%) or fell by 11.78%. Real per capita income also fell. In 1995, the per capita income grew by 6.26%; in 1996, it grew by 5.05%; in 1997, per capita income grew by only 3.17%. In these years, the growth was still positive but by 1998, the growth of per capita income dropped to a negative number (- 7.29%). This means that the economic situation worsened, implying that poverty must have increased following the negative economic growth in the district. Even though, due to the high inflation rate, the nominal per capita income in 1998 was about three times as much as that in 1995, the real per capita income in the district in 1998 was just a little more than the level in 1995.

Table 6-2 Per capita Income, Inflation and Growth in Malang District

Year	Per Capita Income (Rp)		Inflation rate (%)	Growth in GDP Constant 1993 Price (%)	
	Current Price	Constant 1993 Price		Regional GDP	Per capita Income
1995	1255133.62	1122939.85	5.90	7.02	6.26
1996	1388578.64	1179698.21	5.31	6.88	5.05
1997	1631523.95	1217060.35	13.89	4.91	3.17
1998	3486720.79	1128334.43	130.51	-6.87	-7.29

Source: BPS Malang District, 1997; 1998: *Kabupaten Malang dalam Angka.*[Statistics of Malang District]

POOR VILLAGE LEVEL

In 1993, the government undertook a scheme of village mapping to categorize villages into backward or poor and non-backward or non-poor villages. The aim was to help the poor by offering special assistance to those who were really in need. The method included 25 variables for evaluating villages in the urban areas and 27 variables for villages in the rural areas. In the 1993 method, the criteria used to identify the poor villages were standard deviation and Range criteria[43]. A third criteria used was called DM-2, which was based on the opinion of the census field officers undertaking observations in the field. For a village to be classified as poor it had to satisfy two out of these three criteria.

However, the method used in the 1993 mapping had some drawbacks. Accordingly, in 1994 it was revised in order to accommodate the feedback from the evaluation of the poor villages that had received government assistance in 1993. The fact that government assistance did not reach the villages which were poor or to those who really needed it was caused partly by the extortion of the staff dealing with the scheme and partly due to the criteria used. Not all variables used were strongly correlated with the level of economic welfare. Thus, in 1994, the government refined the method by reselecting the existing variables and adding additional variables.

Under the refined method, only ten and eleven variables from the existing variable list were kept for urban and rural areas respectively. In addition, seven other new variables were added to each area. Thus, under the revised method, seventeen and eighteen variables were used for urban and rural villages respectively. The reselection was done by testing the correlation between these variables and the level of economic welfare, which was measured by per capita expenditure on food and non-food items. Those

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[43] Standard Deviation criterion:

Village is regarded as poor if: $TS < (\overline{X} - \sigma)$ where TS is total score of the village, X-bar is mean total score of the province in where the village exists and σ is the standard deviation of the province.

Range Criterion:

Village is regarded as poor if : $TS < (T - 3I)$ where T is the highest total score of the province, i is the range of score in the province (highest-lowest) divided by 5 (see BPS, 1995a).

variables showing strong correlation were maintained while others were removed[44].

The impact of the revision in 1994 was a change in the status of some villages from non-poor to poor and the other way around. Table 6-3 and Table 6-4 show the size of the change. As indicated in Table 6-3, about 6.7% of villages classified as poor according to the 1993 classification were grouped as non-poor based on the 1994 criteria. The change was more in the urban areas than in the rural areas. In the urban areas, the change was about 19.76%, but for the rural areas it was about 6.04%. The misclassification was larger in outer islands than in Java. In Java, the misclassification of backward villages that should have been non-backward villages was 5.84% and 8.18% for rural and urban areas respectively. Moreover, in East Java the figures were 6.15% for rural and 8.7% for urban areas.

Table 6-3 Backward Villages in 1993 which were unchanged under the 1994 Method.

Region	Backward Village (%)		
	Rural	Urban	Rural+Urban
Indonesia	93.96	80.24	93.30
Java	94.16	91.82	93.91
East-Java	93.85	91.30	93.55

Source: BPS (1995a) Table 3.2-3.4

Table 6-4 Misclassification of Backward villages in 1994 Under the 1993 Method

Region	Backward village (%)		
	Rural	Urban	Rural+Urban
Indonesia	51.27	23.66	47.60
Java	53.34	32.46	49.39
East-Java	52.79	35.01	49.94

Source: BPS (1995a) Table 3.5-3.7

Table 6-4 shows the change in the status of the "new" poor villages using the 1994 method from the non-poor based on the previous method. Almost half the backward villages based on year 1994 criteria were non-poor under criteria of year 1993. Thus, the bias was quite large, moreover it occurred more in rural than in urban areas.

[44] The variables used in 1993 and those used in 1994 can be classified into potency of village, housing and environment, and potency of residents. More detail can be seen in BPS (1995a).

The classification of 'backward and non-backward villages' in the province of East Java and in the sample area based on the 1994 methodology is as presented in Table 6-5. Out of 1261 villages in urban areas of the province of East Java, about 81.36% were grouped as non-backward and the remaining 18.64% as backward villages. So only 235 out of 1261 urban villages were still classified as poor. Similarly, out of 7132 rural villages in the province, 5315 villages were not poor, and the remaining 1813 villages were poor. Poor villages in rural East Java thus constituted only about 25.42%, while non-poor villages accounted for 74.58%. Thus, rural poor villages both in relative and absolute terms were more numerous than those in the urban areas.

The proportion was smaller for the district of Malang. The proportion of poor villages in the urban area was only 14.55%, while in the rural areas it was 17.56%. The proportion of poor villages for both urban and rural areas was much lower compared to the whole province of East Java. As a consequence, the proportion of non-poor villages in the district of Malang was bigger than for the province as a whole.

Even though, based on the overall figures from the levels of province and district, the proportion of poor villages in the urban areas was smaller than the proportion in rural areas, this did not hold for every sub-district. The sample area in this survey is an example where the proportions were different. In the sample area of 48 villages, 12 being urban and 36 rural, the proportion of poor villages in the rural areas was only 5.56% while it was 16.67% in the urban areas.

Table 6-5 Backward Villages in 1994

	Backward		Non-Backward	
Urban	Villages	Percent	Villages	Percent
East Java	235	18.64	1026	81.36
Distr.Malang	8	14.55	47	85.45
Sample Area	2	16.67	10	83.33
Kepanjen	2	25.00	6	75.00
Ngajum	-	-	-	-
Kromengan	0	0.00	1	100.00
Sumberpucung	0	0.00	3	100.00
Wonosari	-	-	-	-
Rural				
East JaVa	1813	25.42	5319	74.58
Distr.Malang	62	17.56	291	82.44
Sample Area	2	5.56	34	94.44
Kepanjen	1	10.00	9	90.00
Ngajum	1	11.11	8	88.89
Kromengan	0	0.00	5	100.00
Sumberpucung	0	0.00	4	100.00
Wonosari	0	0.00	8	100.00

Source: BPS (1995b)

In general however, non-backward villages that become the target of government TA-KUKESRA programmes were more in rural areas in terms of absolute number.

FAMILY WELFARE

The census classifies families into five welfare classes, and each family is classified into one of the classes. The 5 classes from highest welfare to lowest welfare are: KSIII+, KSIII, KSII, KSI, KPS. The variables and the criteria used in the classification are presented by BKKBN (1996). The lowest 2 classes (KSI and KPS) are defined as the poor. Hence, they form the target group of poverty alleviation program conducted by government.

The incidence of family poverty measured by this approach is presented in Table 6-6 below.

These data show that the majority of the families in the sample area are poor irrespective of where they live, backward or in non-backward villages. Furthermore, the proportion of the poor in the area increased even before the economic crisis came into effect.

Table 6-6 Poverty in Family Level

Region	Poor (KPS + KSI) (%)		
	1995	1996	1997
Malang District	51.7	54.4	55.3
Sample area	52.0	54.5	53.2
Kepanjen	52.1	54.6	50.6
Ngajum	49.8	57.4	55.8
Sumberpucung	53.4	52.6	52.5
Kromengan	50.0	56.2	53.4
Wonosari	53.8	50.0	57.6

Source: BKKBN Malang District.

As an extended measurement of poverty, it will be of interest to note how well this measurement relates to the poverty line. This can be seen in Table 6-7, which shows that there are large variations between the two measurements of poverty. KPS and KSI, classified as poor by BKKBN, comprise only 20.0% poor people according to SSD percentile 20 or about 49% the poor if it is measure from percentile 40.

Table 6-7 Poverty based on BKKBN Classification and the Poverty Line

	KPS		KSI		Target Group (BKKBN Poor Families)	
	Poor	Not Poor	Poor	Not Poor	Poor	Not Poor
SSD[a]	25.2	74.8	15	85	20	80
SSD[b]	57.1	42.9	41.4	58.6	49	51
Sample[c1]	20	80	19.7	80.3	19.8	80.2
Sample[c2]	20.9	79.1	19.3	80.7	20	80

[a] using 20th consumption percentile as poverty line
[b] using 49th consumption percentile as poverty line
[c] using BPS poverty line for sample area Rp 69248,- for Malang District, 1999.
[a, b] Table 1a and 1b in the Appendix of Sumarto, Wetterberg *et al*(1999), Update on the Impact of the Indonesian Crisis on Consumption Expenditures and Poverty Incidence: Result from the December 1998 Round of 100 Villages Survey
[c(1,2)] is survey data.1 is for whole respondents, 2 is for respondents having businesses.

Data from the survey show that, based on the poverty line criteria, the poor constituted about 20-21% of the KPS and 19.7 - 19.3% of the KSI, or in average about 20%.

As a consequence, if the poverty alleviation programmes were imposed on these groups (KPS and KSI) of poor people, about 80% of the clients would be those who were not supposed to get the assistance because their per capita income is higher than the poverty line.

POVERTY PERFORMANCE OF THE SAMPLE

INCOME POVERTY

When the survey was carried out from the beginning of 1999 until mid-1999, it covered a number of aspects of poverty. However, it should be borne in mind that it did not cover all the poor the region. Since the focus of this study is on MFI, in particular, KUKESRA and MKEJ, the implications of the findings for poverty is limited to the clients of these programmes.

The BPS's estimate of the poverty line (PLn) for Malang District for 1999 was Rp 69248 per capita. Since BPS' SUSENAS did not have enough respondents at the district level, there was only an overall poverty line for each district without breakdown for rural and urban areas.

Poverty can be estimated based on either a family or a household as shown in Table 6-8. If the per capita income is calculated on the basis of family, the incidence of poverty is quite low. The poverty incidence for MKEJ member families was as high as it was for KUKESRA member families at about 18.3%. In contrast, if per capita income is measured on the basis of household unit then the poverty incidence among the household surveyed was about 41.7%. The poverty incidence of the members of KUKESRA and of MKEJ was not significantly different, at about 41.8% for KUKESRA members and about 41.5% for the members of MKEJ.

The poverty incidence with respect to family or household is different because the number of members in a household tended to be larger than that for a family. This is due to the fact that those who had business activities, in many cases brought other non-family members to join and live with them either to assist in the business, or had poorer relatives. It is common in Java and in other parts of Indonesia that richer families assist theh poorer relatives by allowing children of the poorer to live with them. This phenomenon can be termed as sharing poverty because by doing this some non-poor families' incomes fall below the poverty line. Even though poverty by household base is much higher, this does not imply that all household members suffer the same degree of deprivation. It depends on the internal distribution of household resources. The data suggest that those who have just come into a wealthier family tend to have less access to resources than the original family members.

The purpose of the discussion here is to examine the condition of the "poor" involved in the MFIs. It is clear from Table 6-8 that there was a significant difference between poverty incidences based on the family and household.

Table 6-8 Head Count Index of Poverty[§]

	Family	Household
Kukesra:		
Poor	18.3 %	41.8 %
Not-poor	81.7 %	58.2 %
N	251	251
MKEJ:		
Poor	18.3 %	41.5 %
Not-poor	81.7 %	58.5 %
N	142	142
Total:		
Poor	18.3 %	41.7 %
Not-poor	81.7 %	58.3 %
N	393	393

Source: Survey data

Table 6-9 The Distribution of Per capita Income

Income Distribution	Household base		Family base	
	Kukesra	MKEJ	Kukesra	MKEJ
Below Pin	41.8%	41.5%	18.3%	18.3%
Below Mean	70.9%	61.2%	68.9%	68.3%
Mean (Rp 000)	106.70	90.26	212.15	173.00
Median (Rp 000)	80.00	81.875	150.00	133.33
Range (highest-Lowest) (Rp 000)	965.00	306.67	1708.33	1284.00
Ratio Mean to Median	1.33	1.1	1.41	1.3

Source: Survey data

From the ratio Mean to Median in the above table, it is clear that the per capita income among KUKESRA members were more dispersed than among MKEJ members.

[§] Usually the unit of measurement in economic survey is household. However, BKKBN has used its own measurement that is family. Family is based on marriage while household is based on house where people live together. If every family lives in their own house, the size of family must be the same as the size of household. However, if there are some families living together in a house, the size of household is much bigger than the size of each family which lives in the house.

BASIC NEEDS SATISFACTION (BNS)

Another approach to evaluating poverty is by using Basic Needs Satisfaction (BNS). This is calculated from several groups of basic needs including education, nutrition, housing, health, and sanitation.

The survey found that out of 393 respondents, 53.2% did not satisfy theh basic needs. These were not only from the poor group but also from the non-poor households based on the poverty line criteria. Even though it was expected that all respondents would be from the poor class, as the target group for MFI is the poor, 58.3% of them were not poor so only 41.7% were from the poor category. Two observations can be made from this. Firstly, the BKKBN welfare classification of the poor is not consistent with the income classification of poverty. Secondly, the recipients of credit through MFI who have business activities are mostly from the non-poor group. Most recipients who are really poor did not have business activities and used the funds for other purposes, including consumption.

Table 6-10, Table 6-11, and Table 6-12 present the measurement of poverty in terms of the satisfaction of basic needs. Table 6-10 presents the performance of the lack of consumption in basic needs using two indicators: the headcount ratio and consumption gap or shortfall. In terms of access to education, 16.8% of respondents had a level of education below the norm level, which is the level an individual should be according to theh age. For those who are non-poor based on PLn criteria, 13.5% lacked this level of education and for the poor group the proportion was 25%. The sample consisted of those who were 15 years old or less, who are still in the compulsory education age group. It can be seen that the higher the per capita income the better the level of education achieved. The above figures imply that 86.5% of households of the non-poor group had sufficient education while for poor group only 75.0% did. This indicates that the poor lacked education because of low income.

The tables also provide information on the educational gap or shortfall of respondents. The educational gap index for the non-poor group was just 0.34 while that for the poor was 0.37. However, the t-test for mean difference, as presented in Table 6-12, is only 0.66, indicating that there was no significant difference in the mean level of education between the poor and non-poor groups.

In terms of nutritional adequacy, Table 6-10 shows that 52.8% of non-poor households or about 121 respondents had adequate nutritional levels, while the others, 108 respondents or about 47.2%, had nutritional intake below the recommended level. As expected, the poor were more under-nourished than the non-poor. The proportion of poor respondents who had adequate nutritional intake was only 38.4% of households while the remaining 61.6% did not have sufficient nutritional intake. From the table it is clear that there is a strong correlation between nutritional intake and the level of per capita household income. The higher the level of income, the better the nutritional intake tends to be.

It is also important to examine the shortfall in nutritional intake of households. This is measured by the gap between the actual and recommended level. As presented in Table 6-10, both the poor and non-poor households had the same degree of under nutrition. On the average, both poor and non-poor groups consumed only about 65% of the recommended 2100 calories per capita per day.

The level of satisfactory health services can be seen from the same tables. In Table 6-10, it is seen that there was no significant difference in the lack of health services consumption between the poor and non-poor groups. The proportion of households experiencing a shortfall in health services was almost the same for the poor and non-poor households. However, in terms of intensity in the lack of health services, the poor once again suffer more than the non-poor group. In Table 6-10, it is shown that on the average, the non-poor group lacks health services by about 18% compared to the minimum requirement while it was 26% for the poor. A t-test for the differences at the mean indicated that the coefficient was significant (see Table 6-12). Furthermore, Table 6-12 also shows that the variance of the gap among the poor group is larger than the variance for the non-poor group.

The lack of access to basic levels of housing services is also shown in the tables mentioned above. From the tables it can be seen that availability of housing services is correlated to income. The poor in general have access to less housing services. About 38.7% of non-poor respondents still lacked adequate housing services while it was

59.2% for poor. However, the availability of housing services to those who experienced inadequate housing was nearly identical for both poor and non-poor based on poverty line criteria. This suggests that the housing conditions are similar for all respondents who experience a lack of housing services. It is shown by the insignificance of t statistics of the lack of housing services in table 6-12.

The next item of basic needs is sanitation. Sanitation includes the condition of bath facilities and toilets, and the quality of drinking water. Table 6-11 and Table 6-12 show that there was no difference in terms of the proportion of households having adequate sanitation for the poor and non-poor households. This can be explained by the fact that sanitation depends on the community where they live. For example if the community is near a river, the majority of the people use the river as the place for bathing and a toilet. This is correlated with theh habits and is unrelated to the level of income.

Table 6-11 and Table 6-12 provide information on the average value of the indexes of the items in the basic needs basket. Table 6-11 presents the information of the whole sample while Table 6-12 just provides information of households that lacked these basic needs.

Table 6-10 **Poverty** in Terms of the Lack of Basic Needs

Lack of Satisfaction	Not Poor		Poor	
	Headcount	**Gap**	**Headcount**	**Gap**
Education	31	31	35	35
	13.5%	34.0%	25.0%	37.0%
		(0.12)		(0.15)
Nutrition	108	108	101	101
	47.2%	35%	61.6%	35%
		(0.16)		(0.15)
Health	171	171	118	118
	74.6%	18.0%	72.0%	26%
		(0.20)		(0.27)
Housing	67	67	77	77
	38.7%	47%	59.2%	42%
		(0.23)		(0.21)
Sanitation	160	160	107	107
	91%	38%	82.3%	43%
		(0.24)		(0.23)

Note: figures in brackets are standard deviation.
Source: Survey data

For the sample as a whole, it is clear that all items except sanitation are available relatively less to the poor than the non-poor. With respect to the test for variance differences, two items of basic needs: education and health services are the items having significant difference in the variance (see table 6-11 and 6-12). For these two items, the variances for the poor group were much bigger than that of the non-poor group. This means that the availability of these two items of basic needs is more dispersed among the poor than the non-poor. This table also emphasises that availability of adequate sanitation is the lowest for both groups. This means that sanitation does not depend on the level of per capita income but other variables like, for example, the envhonmental factors in the community.

Table 6-11 Poverty Gap in Basic Needs of the Total Sample

Lack of Satisfaction	PLn Classification		T[b] Means difference between Non-Poor and poor group	F Levene for test variances' difference
	Not Poor[a]	Poor[a]		
Education	0.05	0.08	-2.09**	14.8 ***
	(0.13)	(0.17)	-2.01**	
Nutrition	0.17	0.21	-2.33**	0.05
	(0.21)	(0.21)	-2.33**	
Health	0.13	0.18	-2.25**	22.4 ***
	(0.19)	(0.25)	-2.14**	
Housing	0.18	0.25	-2.18**	1.076
	(0.27)	(0.26)	-2.19**	
Sanitation	0.35	0.35	-0.16	2.039
	(0.25)	(0.26)	-0.16	

Notes:
[a] mean value and figures in bracket is standard deviation
[b] there are 2 figures: "above" is the t statistics with the assumption of equal variance and the "below" is the t statistic without this assumption.
*** significance at below 1% level
** significance at below 5% level
* significance at below 10% level

Table 6-12 also shows the index of the lack of availability of all the items of basic needs for those lacking basic needs. All items except health show no significant differences in the mean between the poor and non-poor groups. In the case of health, the poor receive less health care than the rich.

Table 6-12 Poverty Gap in Lack of Basic Needs in Those Lacking Basic Needs

Lack of Satisfaction	PLn Classification		T[b] Means difference between Non-Poor and poor group	F Levene for test variances' difference
	Not Poor[a]	Poor[a]		
Education	0.34	0.37	-0.66	1.57
	(0.14)	(0.15)	-0.67	
Nutrition	0.35	0.35	0.07	0.174
	(0.16)	(0.15)	0.07	
Health	0.18	0.26	-2.78***	23.22***
	(0.20)	(0.27)	-2.64***	
Housing	0.47	0.42	1.29	0.065
	(0.23)	(0.21)	1.28	
Sanitation	0.38	0.43	-1.56	0.008
	(0.24)	(0.23)	-1.58	

Notes:
[a] mean value and figures in bracket is standard deviation
[b] there are 2 figures: "above" is the t statistics with the assumption of equal variance and the "below" is the t statistic without this assumption.
*** significance at below 1% level
** significance at below 5% level
* significance at below 10% level

SUMMARY

Government statistics show a significant reduction in absolute poverty in Indonesia since 1976. White (1996:36) calculated the poverty incidence using the head-count ratio based on data from the BPS (Central Bureau of Statistics) and found that the poverty incidence in Indonesia had decreased sharply since 1976. In 1976, approximately 40.08% of households were living in poverty but by 1996, the percentage had declined to 11.34%. Regardless of the criticisms against the poverty lines used by the Indonesian government, Dewanta (1995) and Manning (1998) have argued that the poverty alleviation programmes in Indonesia have been successful. Other supporting statistics show that the absolute numbers of people living below the poverty line reduced, but relative distribution of income has remained unchanged.

This remarkable success in poverty reduction has raised many important questions about the causes. Data show that there is a strong positive correlation between economic growth in Indonesia and the level of poverty alleviation. Thus, factors behind the rapid economic growth and how they affected the reduction in poverty are important aspects to investigate. The government has implemented many policies and programs that have dhectly or indhectly assisted the poor. Many kinds of assistance have been provided in the various sectors including the production sector, and trade and services which dhectly assisted the poor in theh economic activities, ranging from assistance in agriculture to non-farm small credit. The government also constructed numerous public facilities in the rural areas, which helped to generate off-farm income for people in the areas.

All the programs implemented were dependent on the government budget capacity. When there was an oil boom in the 1970s and 1980s the revenue from oil export increased and many types of credit facilities were provided, not only in the urban areas but also to assist the poor in the rural areas. However, when oil prices dropped revenue also fell and these programs were somewhat reduced.

The banking system could not provide as much credit as the business sector requhed because of the ceiling imposed on credit. However after the central bank cancelled the regulation on credit ceilings on 1st June 1983, generally known as the deregulation period, the business sector had more access to financial resources and as much credit as they requhed. For small businesses, the deregulation came with the policy package in January 1990 (*Pakjan* 1990). Deregulation benefited the urban sectors resulting in the further development of the sector, which in turn generated more rural to urban migration. Studies show that intra sectoral development and population mobilisation had a positive impact on poverty alleviation. According to Suryahadi, Sumarto et al. (2000), the index of poverty P0, PI, P2 showed that since crisis (between 1998 to1999) the increase in poverty for urban areas were 152.3%, 183%, and 201.6% respectively, while for rural areas the figures were 56.9%, 70.5%, and 83.6% respectively. Obviously, the effect of the crisis on poverty was larger in urban than in rural areas.

Since mid-1997, the Indonesian economy has experienced a crisis. The effect of this crisis has been apparent since 1998. The economy grew negatively in 1998. The effect of this on poverty is that it increased absolute and relative poverty significantly. Unemployment also increased markedly. Real income fell and some studies have found that the effects of the crisis were larger in the urban areas than in the rural areas. Unemployment among males was higher than for the females.

In the sample survey undertaken for this study, various aspects of poverty were examined: income poverty, village level poverty, family level poverty and poverty using the basic needs satisfaction approach.

It was found that the proportion of respondents having per capita income below the poverty line was quite large. However, the income poverty classification carried out by BPS and the poverty classification based on BKKBN's welfare family approach was not consistent. In addition, it was found that income disparity among the families receiving credit from MFIs was large. Furthermore, the disparity of income of the KUKESRA member families was larger than that of MKEJ member families.

CHAPTER-7: EVALUATION OF KUKESRA AND MKEJ: INSTITUTIONALIST APPROACH

INTRODUCTION

Microfinance institutions measure the success of a financial programme to eradicate poverty based on two main criteria: outreach and sustainability. Outreach refers to the benefit received by the community through members of the programme while sustainability relates to the permanency of the programme. Based on outreach, a financial programme for poverty alleviation can be regarded as successful if it can provide benefits for its members. This can be indicated by a number of indicators such as the willingness of the members to be more involved in the programme from one stage to another, the willingness to fulfil theh duties on time. All indicators are based on lower cost and better quality of services provided.

It is assumed that even though members, namely the poor, have a low level of education or even have no education, they behave rationally. Schultz (1964) found that small farmers in less developed countries behave rationally in the production process. This behaviour reflects the basic principle of efficiency, that is, to minimise the cost for a level of output or to have the highest return for the available resources. Based on the same principle, the choice of becoming a member or not to become a member of an MFI will depend much on the return that people expect to receive. If they expect that the return from being a member is higher than not being one, they will participate in the programme as members; otherwise they will not. Thus, the changes in the number of new members in the programme can reflect the success of such programmes.

This phenomenon can be analysed further. If the members find that what they receive is different from what they had expected, they will reconsider theh decision as to whether they should continue with the programme or not. If, on the other hand, as members they discover that they are not benefiting much from the programme, they will exit out of the programme. Dissatisfaction can be manifested in termination of the membership of the programme. Thus, the dropout rate, among other things, can be used as an indicator of the members' dissatisfaction rate.

The advantage for the community, especially the poor, is that the more the poor are involved in the programme, the greater the benefit of poverty alleviation. Also the poorer the recipients, the deeper will be the impact on poverty reduction. The benefit received is also related to the services received on the one hand, and to the costs spent by the recipients on the other.

However, the benefit for the poor and for the community is not the only requhement for the success of a microfinance programme. Besides that, success also requhes the sustainability of the institution. If all the benefits accrue to members alone, and none to the institution, members will be very enthusiastic to be involved in the programme, but the institution may not succeed. This means that in the short term, the members may benefit but in the longer term, failure of the programme means that the institution will have to close down, and the benefits to members will no longer be available.

In order for the system of MFIs to survive, both sides - the members as well as the institution - must benefit. The institution cannot experience losses all the time. At least all the costs must be fully recovered by the operating revenue. The discussion in this chapter will deal with the benefits received by members and the institutions. Outreach deals with the benefits received by members while sustainability benefits the institution.

ASPECTS OF OUTREACH

There are several indicators used to measure aspects of outreach of a microfinance programme. Here aspects such as breadth of outreach, depth of outreach, length of outreach, cost of outreach, and quality of outreach will be discussed.

BREADTH OF OUTREACH

Navajas, Meyer, *et al* (2000) define breadth as the achievement of an MFI to reach the poor in terms of number. It is a quantitative aspect of coverage that MFIs achieve. The larger the number of, for example, recipients or centres served by the MFI, means the better the breadth. In the case of KUKESRA and MKEJ as MFIs, the breadth can be measured by a number of indicators such as the area covered by the programme and then the number of recipients served. Moreover, the number of recipients served can be analysed further by dividing the overall number into those who are just administratively included as members and those who are functionally acting as participants or who actually receive the benefit of the programme; the latter we call recipients.

Regional Aspects

Studies dealing with microfinance often use the number of branches or cenlres as an indicator to show the extent to which the programme covers the region (Getuhig-Jr. and Shams, 1991:15-16). The larger the numbe, the further the spread of the programme in the region. Under KUKESRA, there are no centres. The programme is spread through the government family planning programme network. Accordingly, its spread can be measured by the number of subdistricts receiving TAKESRA and KUKESRA programmes. Since the services are distributed through branch post offices and it is not necessary that each sub-district has its own branch post office, the indicator of regional coverage is measured by the number of branch post offices running the programmes. To discuss more deeply the regional coverage, it is necessary to see how the government divided all provinces into five regional groups according to theh absorption capacity of KUKESRA. We can then see and discuss how fast the programme covered these areas.

Regional Absorption Scenarios

Before determining how fast the programme reached the areas in a province, it is necessary to see how the provinces in Indonesia were classified in terms of KUKESRA's absorption.

Regarding the differences among provinces, the government made five regional groups of provinces (BKKBN, 1997:1-5). These regional groups differ in theh response to TA-KUKESRA's expected rates of absorption. The regional groups and theh regions are presented in Table 7-1.

Table 7-1 National Groups of Regions Based on Absorption Capacity

Groups	Regions	Expected Expansion
I	DIY (Yogyakarta), Bengkulu, Central Kalimantan, North Sulawesi and Southeast Sulawesi	10% monthly, slowly decreases to 5% and constant to 2.5% monthly
II	Aceh, North Sumatra, East Kalimantan, Central Java and Bali	From 7.5% slowly decreases to 2.5% monthly
IIi	DKI (Jakarta), West Java, East Java, South Sumatra, Riau, West Kalimantan, South Kalimantan, West Nusa Tenggara, West Sumatra, Lamping, South Sulawesi, and Central Sulawesi	From 5% slowly decreases to 2.5% monthly
IV	Jambi	2.5% monthly
V	East Nusa Tenggara, Maluku, Irian Jaya, and East Timor[1)]	2.5% monthly for the first district receiving KUKESRA.

[1)]East Timor was still a part of Indonesia before the 1998 ballot.
Source: (BKKBN, 1997:1-5)

BKKBN's regional grouping shows that the highest expected levels of absorption rate were about 10%, 7.5%, 5%, 2.5% for group I, II, III and IV respectively. Regional group V was a new region that had just recently received KUKESRA and as such the anticipated level of absorption was low. The rates of absorption in all regional groups were expected to continuously decrease to 2.5%. East Java, as a province belonging to the thhd regional group, was assumed to have an initial 5% monthly absorption rate which would continuously decrease to 2.5%. These was a moderate rate of absorption in the above scenarios. Malang district of the province of East Java is also in regional group III. The scenario also predicted that the recipients in East Java would reach stage V, the last stage in the cycle of KUKESRA, by October 1998.

Unfortunately, the expected rate of absorption was far different from the actual rate of absorption. The growth rate of absorption and of membership did not follow the expected pattern. The difference is mainly caused by the fact that all branches of BKKBN worked to achieve as a high rate of absorption and membership as possible to obtain a good reputation for the respective branches. These characteristics were pointed out by Moll (1989) in regard to the government supported credit programmes in Indonesia, in particular programmes such as KIK, KMKP, and BIMAS. Kane (1984:166-168), pointed out that this characteristic is a general one applying to many agricultural development credit programmes in developing countries. These institutions were generally delivery agencies, rather than financial institutions.

The absorption rate in this type of programme did not depend on the demand from the poor but more on the capacity of the programme to serve its members. Even though the response of the poor regarding small credit varied, it was found that the absorption rate was much related to the capacity of the programme to deliver credit.

The Regional Development of TA-KUKESRA in Malang District

KUKESRA and TAKESRA began in April 1996. Soon after the programme was introduced, it spread rapidly to sub-districts and villages all over Indonesia. In the district of Malang in the province of East Java out of 27 Sub-districts, there were 24 sub-districts which accepted TAKESRA by July 1996, but only 3 of them received KUKESRA. Three months later, by October 1996, all the sub-districts in the district had received TAKESRA and 20 of them had received KUKESRA. By November 1996, all the 27 sub-districts in Malang District had received TAKESRA, but only 21 sub-districts had received KUKESRA. By December 1996, all sub-districts had received TAKESRA as well as KUKESRA. This shows how rapidly TA-KUKESRA spread across all the sub-districts. Within 5 months, all the sub-districts, whether near the capital city or in the remote areas, had TA-KUKESRA (see Table 7-2).

Table 7-2 Spread of TA-KUKESRA in Malang District (According to the number of Branch Post Office)

Schemes	July 1996	October 1996	November 1996	December 1996
KUKESRA	3 (11.11%)	20 (74.07%)	21 (77.77%)	27 (100%)
TAKESRA	24 (88.89%)	27 (100%)	27 (100%)	27 (100%)

Source: BKKBN Malang District

The performance of MKEJ was very different from that of KUKESRA. In the case of MKEJ, the manager and senior staff had to undertake careful observation in a region to see whether or not it had enough potential recipients to extend the MFI. They had to come down and estimate roughly how many people were involved in small businesses or were in the informal business sector. They also had to identify how these people currently fulfilled their need for funds to support theh businesses. All these kinds of information were crucial to avoid any wastage of MFI's resources. If the number of potential recipients was considered insufficient or they dwelt sparsely in a wide area which could increase the operating costs of the programme; that region was avoided, unless the procedure to reach the poor in the new area, as discussed in chapter 5, was undertaken.

Thus, it is clear that KUKESRA is a large and extensive programme enabling the poor, especially those living in non-backward villages, to have access to cheap credit to initiate and support businesses, especially in off-farm activities. As a result, in a very short period of time many villages were assisted by the scheme through the branch post offices . Obviously, market demand did not determine the expansion of the programme, but simply the government's deshe to expand the coverage of TA-KUKESRA.

In contrast, MKEJ is not an extensive programme but was gradually introduced in the various regions. Consequently, the development of MKEJ in terms of the regions covered was not as rapid as that of TA-KUKESRA. Even though MKEJ began in 1993, long before TA-KUKESRA, the areas covered are still limited. Not all the sub-districts in the district of Malang have been served. Only five sub-districts had accepted the MKEJ programme at the time of this study. The relative slowness of the spread of MKEJ compared to the speed of spread of TA-KUKESRA is a fundamental characteristic of MKEJ. A careful selection procedure of the potential areas and potential members is an important feature of MKEJ.

The experience of MKEJ has shown that moving into new areas and enlisting members quickly without careful selection would lead to a high default rate. In the early period of MKEJ, it was found that a faster rate of expansion had come with low quality of selection leading to a high default rate. As affirmed by DR. Jumilah Zain, the owner and founder of MKEJ, the staff felt the need to have more members because it showed theh reputation and derived theh income. Thus, the MFI always warned its field staff to do an appropriate selection of new members. Bad selection would appear in the form of an increase in the rate of default. Growing slower with low default rate was preferred to growing faster with a high default rate. This is an important point in the management of MKEJ , according to DR. Zain.

Progress in the Organization and Operation

Besides regional coverage, the progress of an MFI that ought to be focused on is the progress of the programme in relation to its: groups, members, and transactions. Each of these will be discussed below. These aspects show dhectly the performance of an MFI's progress in relation to its organization and its operation.

Progress in the number of Groups

The government used the same approach as that used for its Family Planning Programme when it was fhst introduced to expand the coverage of KUKESRA. In fact, some BKKBN staff who had been dealing with both programmes, Family Planning and TA-KUKESRA, were included. This seems to imply that BKKBN staff just repeated theh experience when they fhst introduced the Family Planning Programme. This is because BKKBN is the administrator of both the programmes. Many poor became members without having any knowledge about KUKESRA. They were informed that they had become members of TA-KUKESRA and their names were listed on the members list. They were then gathered together and informed about TAKESRA and KUKESRA. Obviously, the process of group formation in TA-KUKESRA is more top-down than based on the need from the bottom.

Some cadres who are leaders of groups explained the story of the group establishment as follows. The fhst time the BKKBN's field staff, PLKB or PKB, would like to build groups they just obtained data about families in the villages via the wife of the village head or from cadres. Then PKB/PLKB, without any consultation, divided the names into groups of 30 and appointed cadres to be leaders of the groups. Not much information about the programme had been delivered. A few of the cadres only knew that the government would give a small credit which would be repaid in a certain term based on a joint-liability principle. After the groups had been established, the members were informed about the credit. Many were compelled to become members (see Box 7-1) but they could not do anything because theh names had been written on member lists.

This situation is very different from what happened in the MKEJ programme. Members themselves established the groups in MKEJ. They just established the group based on mutual trust. Since they knew each other and trusted each other, they grouped themselves under the principle of joint liabilities. Often they were close neighbours or, in some cases, relatives.

Because of the above situation, the information provided in credit proposals, particularly in KUKESRA, was fabricated. This information was to show that all candidates were poor from specified target group. However, in fact, many members were from outside the target group as shown in Table 7-4. This confirms Getuhig-Jr.'s (1991) finding that many poverty alleviation programmes (PAPs) sponsored by government fail to reach theh target group, the poor. The information usually fabricated was related to the requhements of the MFI programme. Even though there were a few members that were not poor, all the data in the credit proposal showed that all the members were poor, with family incomes below Rp 100,000 per month[45]. Furthermore, many of theh signatures were written by the staff. In contrast, in MKEJ, staff are not allowed to fabricate information. Even for uneducated members who could not sign theh names, staff were not allowed to sign on theh behalf. The staff just showed them how to put a sign as theh own signature, even if it was just as a line or a circle. That was what the MKEJ staff did. They therefore involved the poor in the process. Self confidence is an important aspect for empowering women. However, KUKESRA failed to establish the confidence. In contrast, MKEJ from the very basic stages, tries to encourage the poor to be self confident.

Box 7-1 TA-KUKESRA Group Formation

The experience of group Teratai, in Maduarjo- Ngajum, shows that PKB came to the cadres of *Posyandu* (an integrated health services post) and asked them to list all families, with the poor as priority. The list was then given to PKB through the wife of the head of the village. A few days later, PKB returned the list, advising that all the members had already become the members of a TAKESRA group, which consisted of 10 to 30 (mostly 30) members. The cadres were chosen as the group leaders. Then

[45] Many groups stated that all their members had family incomes of only Rp 75,000 per month for each family.

PKB explained that there would be a cheap credit programme, KUKESRA, and that all members would have money from the government in a TAKESRA account. For that purpose, all members had to give their data stated in KTP (residence identification card). Then the leader, together with PKB, went to the Branch Post Office to open the account for the group and for all its members. They said that soon after, credit would be realised. The leader of Teratai 15, for instance, said that she once asked the members to give signatures, but for those who could not sign, she made signatures for them. Leaders confirmed that for the consecutive stages of KUKESRA, PKB never asked for data from members. This means that they still used the old data, although sometimes they were not valid since some members had moved to other places or even abroad. Even though KUKESRA is a "*tanggung renteng*" (joint liability) credit programme, what all the leaders and members knew is that if there were any arrears, the leaders would have to take responsibility. This is the reason why all leaders tend to distribute credit to credit worthy persons who can use the credit for on-going businesses. In order to make a rational explanation about others who did not get the credit, the leaders linked it to fear of accumulating unpaid arrears, because of the low and unstable income of such individuals and groups.

Groups of TAKESRA and KUKESRA

The number of members with TAKESRA accounts was much bigger than the number of members having KUKESRA accounts. This is obvious in the TA-KUKESRA programme because TAKESRA is the requirement for KUKESRA, thus all who have KUKESRA must have a TAKESRA account but not the other way round. Thus, if the development of members was just indicated by the number of those who had TAKESRA, then the programme had a better outreach than if the indicator used is the number of those having KUKESRA. A comparison of members, in terms of groups, having TAKESRA and having KUKESRA is presented in Table 7-3.

Table 7-3 Development of Groups for TAKESRA and KUKESRA

TAKESRA Date	Kepanjen	Ngajum	Sumberpucung	Total
31-Jul-96	54	186	74	414
31-Jan-97	141	272	253	666
31-May-97	141	272	253	666
31-Jul-98	141	272	253	666
06-Feb-99	192	285	270	747
21-May-99	192	285	270	747
KUKESRA				
31-Jul-96	0	0	0	0
31-Jan-97	134	211	126	471
31-May-97	134	211	126	471
31-Jul-98	134	211	126	471
06-Feb-99	134	211	126	471
21-May-99	134	211	126	471
	KUKESRA to TAKESRA member groups Ratio (Percentage)			
31-Jul-96	0.00	0.00	0.00	0.00
31-Jan-97	95.04	77.57	49.80	70.72
31-May-97	95.04	77.57	49.80	70.72
31-Jul-98	95.04	77.57	49.80	70.72
06-Feb-99	69.79	74.04	46.67	63.05
21-May-99	69.79	74.04	46.67	63.05

Computation from BKKBN Data

The table shows that the increase in those involved in TAKESRA programme grew much faster than that in KUKESRA programme. The difference in growth is reflected by the smaller ratio of members between KUKESRA and TAKESRA. In general, the ratio continuously decreased from 70.72% to 63.05% from January 1997 to May 1999. This shows that in January 1997 about 70.72% of the members of TAKESRA received KUKESRA, but by May 1999 it had declined to only 63.05%. The table shows that the change in the ratio was driven entirely by the increased number of groups in the TAKESRA programme. The data indicate that the number of poor members increased continuously in TAKESRA, while KUKESRA focussed its services on those who were regarded as poor based on the BKKBN's family Survey in 1994.

In MKEJ, those who have credit accounts also have saving accounts. Thus, the number of groups as well as members with savings and getting loans are the same because saving is just a consequence of taking the loan.

The growth of TA-KUKESRA members as presented in Table 7-14 shows that it was significantly high in the early period but continuously declined in the subsequent periods. This is generally applicable to the district and the five sub-districts in the survey areas. The same character appears in TAKESRA as well as KUKESRA. This character indicates that both are clearly 'big-push' programmes. The high growth in the early period shows the tendency to cover all members of target group as much as possible.

As noted previously, KUKESRA progress could not follow the speed of TAKESRA. Many members of TAKESRA did not receive KUKESRA soon after. Thus, the number of members in KUKESRA was less than the number of members in TAKESRA. Due to this, the growth of TAKESRA was very high in the early period and then reduced. Those who got TAKESRA waited for the KUKESRA. Since the number of the members of KUKESRA was much less than that of TAKESRA, the increase in the number of new recipients of KUKESRA resulted in a high rate of growth. Thus, the delay caused the growth of members of KUKESRA to remain relatively high, as shown in Table 7-14, even though that of TAKESRA had become lower. In contrast, the growth of the members of MKEJ as shown in Table 7-15 shows that it is lower than the growth of KUKESRA. In 1995, MKEJ grew by 28.63%. It then expanded its coverage to include many more poor people, thus in 1996 and 1997 it grew by about 75%. It was thus showing steady growth until the situation in the wake of the economic turmoil evident in 1998 when the growth was low at 6.83%.

Even though MKEJ is a relatively small programme, the rate of growth of about 70% shows that the poor really have high demand for credit. The demand is particularly strong from the poor who have small business activities.

Member Groups and Recipients

In this section we will look at outreach in terms of different types of members, including target group, outsiders, and recipients. Since the TA-KUKESRA programme has been designed to serve the poor who are situated in the two bottom classes of BKKBN welfare classification, that is KPS and KSI, all other people situated outside the mentioned classes are regarded as outsiders. Furthermore, those who have TAKESRA accounts are called members of TA-KUKESRA, while only those having a KUKESRA account are recipients.

The poor Target group and the outsiders

Table 7-4 shows that, based on BKKBN Classification of the poor, about 19% of members are outsiders. They are not poor. Their class of welfare is above KSI. They are, according to this classification, the non-poor, and consequently they have no right to receive a loan. However, as explained above, BKKBN allowed or even encouraged them to be involved in the programme. The inclusion of the non-poor into the KUKESRA programme was based on the argument that only the non-poor had the ability to stimulate and assist the group to work. BKKBN staff did not care who got the loan, how the recipients used the funds and how they repaid the loan. This phenomenon is not new in governmental poverty alleviation programmes. Bhatt (1991) and David (1984) revealed this phenomenon in most subsidized credit programmes and other governmental poverty alleviation programmes (PAPs). What makes the difference between TA-KUKESRA and other governmental PAPs is that the other PAPs' situation was caused by bad design related to the unclearness of the definition of the poor target group, making the inclusion of the non-poor possible. In TA-KUKESRA, the government made the definition of target group clear. Unfortunately the government itself doubted whether the programme could run by serving only the defined target group. The intended inclusion of the non-poor is therefore a bias resulting from the ultimate objectives of the programme itself. It shows an internal contradiction in programme design (see Box 7-2).

In some groups, the outsiders were even treated as more important than the recipients from the target group. In many cases, the poor from the target group were ignored by services provided for supporting KUKESRA. It was assumed by staff that the poor lacked the ability to absorb the information due to low levels of education. The training for improving the skills necessary to produce some simple homemade products was an example. In this training, for instance, the participants included were the leaders, most of whom were cadres or educated people, and outsiders. It was then expected that they would transfer the skills they got from the training to the ordinary members, the uneducated and the poor, but in fact, this never happened.

Another example, noted previously, was that poor members were not involved in the process of applying for credit. Leaders or staff sometimes even fabricated theh signatures[46].

MKEJ also theoretically has a target group: those who are poor and have business activities. Here the concept of poverty and its measurement is subjective being based on staff judgment. MKEJ does not select candidates based on the national poverty line. The author suspects that the MFI avoids using the poverty line because if it did, many candidates would be excluded and the remainder would be insufficient to maintain a profitable operation. The less the number of legitimate candidates the higher will be the relative operating cost. MFIs do this because the poverty line in Indonesia is claimed to be too low, for example by White (1996) and too sensitive by Asra, (1998), Thorbecke and Puijm (1993), White (1996:36-38). This confirms Hatch's (1998:30) observation that most MFIs use poverty indicators that do not correlate with a country's national poverty line.

Box 7-2 The inclusion of Outsiders

The scheme of KUKESRA, that should just serve the poor target group members, ie those who are included in the 2 bottom classes of welfare family classification, in practice includes many outsiders from higher classes of welfare status. This is because BKKBN, the owner of the programme, faces a dilemma in relation to the poor target group. The poor are assumed to have no organisational ability to manage funds. They are seen to be apathetic and passive. All these assumptions were derived from the fact that they had only low levels of education and skills. Likewise, it has been assumed that letting the poor manage the groups by themselves would be unworkable. They were assumed to need the support of non-poor neighbours. Accordingly, BKKBN adjusted its policy to allow the non-poor to be included in the scheme. However, since it was an internal policy of BKKBN, dhected from the top to village level staff, other

[46] A few leaders say that they created signatures for members particularly the poor because the ordinary members' signatures are never approved by the relevant post office, only the signatures of the leaders and of PKB/PLKB are approved. Accordingly, only 2 signatures need to be authentic because in evaluating the proposal the officers in the post office only pay attention to the validity of the signatures of PKB/PLKB and the leader.

institutions such as banks and post offices did not recognize it. In order to operationalise the policy, BKKBN manipulated information it offered to other departments. The field staff and the groups represented by theh leaders provided fabricated information of the non-poor people, especially in respect to theh levels of income, in order to be regarded as poor. From the credit proposals, it can be seen that all members, poor or non-poor, have levels of family income below Rp 100,000, the level of very poor people in the area.

In summary, KUKESRA in reality is not just for the poorest of the poor but also non-poor people. This is because the latter are assumed to stimulate and develop the credit group and theh business activities and thus help the poor.

Recipients of KUKESRA

Table 7-14 and Table 7-15 show the performance and growth of KUKESRA and of MKEJ. Unfortunately, there are slightly different measures for membership in both programmes. In MKEJ, all of the members are recipients who are involved in both the credit and saving activities in the scheme. In KUKESRA, on the contrary, not all stated members are recipients.

Even though it is clearly stated in the regulation that all the poor will get cheap credit and the government provides TAKESRA accounts to the poor as a prerequisite for having KUKESRA, in fact, the membership showed that not all who had TAKESRA accounts wanted to receive KUKESRA. A few TAKESRA members rejected loans or did not accept KUKESRA, thus they did not have KUKESRA accounts, even though theh group's proposal for KUKESRA had been realized. They are just members, but not recipients of KUKESRA, since they had no credit transactions.

Thus, the study distinguishes between members and recipients in the KUKESRA programme since not all members actively participate as participants that get involved in credit-saving activities. Unfortunately, however, there is no historical data on the effective members or recipients for KUKESRA. Data only records the number of members that were assumed to be using the funds through disbursements. Primary data from the survey, as presented in Table 7-4, shows that the proportion of recipients to members of KUKESRA was about 65%. This means that on average only 65% of KUKESRA members were recipients of KUKESRA while the other 35% were just members in name, but did not receive any loan.

Even among the 65% of members who were recipients, the intensity of the involvement in the credit programme also varied. If the clientele is measured by the involvement in taking or not taking the loan, then the intensity should be measured by the value of loan received.

Those recipients who are situated in the same stage of KUKESRA should receive the same amount of loan as the amount specified. Unfortunately, several recipients received less while others received more than the amount specified. Most of the cases of those who received less comprised the really poor, while those who received more were the less poor or the non-poor recipients.

Here once again the operator, BKKBN staff and cadres/leaders, faced a dilemma. On the one hand, they needed to distribute credit to the really poor. However, distributing credit to this type of group has a high-expected default rate. This could raise the problem of arrears that could increase the burden for the staff and leaders. On the other hand, distributing to the non-poor is biased from the objective of the programme. The biased distribution in KUKESRA confirms the result of studies on other governmental credit programme carried out by scholars such as Conning (1999), Gurgand, Pederson *et al.* (1994), Hulme and Mosley (1996), and Yaron (1994b).

In addition to those who do not get any credit and were therefore not recipients, there was another category of members who should be regarded as non-active recipients. These were members who had received credit from KUKESRA or had been recipients but at the time the survey was carried out, they did not have a relationship with KUKESRA because theh credit, even after waiting for months and in some cases years, had not been renewed. They just had TAKESRA accounts but, for the KUKESRA, they were passive recipients. Functionally they were not different from those who had not taken a KUKESRA loan. They need to be categorised as non-active recipients because even though they had had the benefit of a loan, they had long been passive.

As noted above, Table 7-4 shows that on average about 65% of the group members were recipients. This is similar to the observation of one official (Marjono) who says that only about 18 - 20 members in a group use KUKESRA while the others just get TAKESRA, seeing it as a type of governmental grant for the poor. In addition, Table 7-7 shows that about 50% of such recipients had become passive or non-active recipients because no credits were renewed after waiting 3 months or more. Thus, from these tables, it follows that only 32% of the group members could be considered to be active recipients.

Table 7-4 Performance of Members in Group

Parameters in member Group	KUKESRA (%)			MKEJ (%)
	Far From Market	Near to Market	Total	
Outsiders in Stage I	21.09	17.10	19.04	-
Recipients in Stage I	58.53	68.09	63.58	100.00
Outsiders in Stage II	24.72	19.61	21.95	-
Recipients in Stage II	63.00	68.67	66.08	100.00
Outsiders in Stage III	24.27	14.84	18.78	-
Recipients in Stage III	67.70	67.73	67.72	100.00

Source: Survey data

Great variation is also found within groups. A group in Maduarjo of Ngajum, for instance, distributed the credit, which was designed for 30 members, to just three members in KUKESRA stage I and to four members when KUKESRA stage II was realised. A few recipients received up to 90% of the group's fund. A few other groups had the same situation where most of the group's fund went to a limited number of persons. These persons usually had a close relationship with leader or the head of village. Another group in Sumberpucung just put the enthe fund into the leader's saving account in a formal bank because of the leader's fear that arrears might accumulate if funds were distributed to others. In this last case, all members were then passive members of KUKESRA because the enthe fund was not distributed.

Another explanation of why few members became recipients can also be seen to come from the members' side. A few poor members felt afraid of borrowing because they could not guarantee that they could repay the loan since they did not have permanent jobs. They were fearful of their incapacity to pay, because of low and unstable income flows. Bouman (1984:234-235) in his study on Sri Lanka poverty found that the poor have been enthusiastic to change their economic life, but low level and irregular income make them very sensitive to risk. Many of them are hired and paid on a daily basis in the farming sector, where demand can be seasonal and intermittent. If the owners offer them work, they have jobs and have income, otherwise they stay at home without jobs and income. In such circumstances, they need money but they cannot borrow since their situation is unworthy. In summary, for these poor people, the need of money is high but the demand for credit is very low.

In Mangunrejo of sub-district Kepanjen, many of the poor, landless farmers and/or unskilled farm workers who received credit from KUKESRA were not able to repay their loans. They eventually borrowed the money from their landlord to redeem the KUKESRA loan and then they repaid the landlord with their labour.

A similar explanation preventing a number of members from becoming recipients came from some of group leaders. Mrs. Serah, a group leader, explained that the poor in her group tended to reject the credit due to their fear of inability to repay. Consequently, only 13 members who were economically sufficient used most of the fund on behalf of 30 members. They repaid it well. In addition, if there was any default, the leader repaid it by using her own money before getting it back from the members in arrears.

In addition, some leaders considered that if each member used their loan separately, the size of the loan would be too small to run a small sized of business effectively; creating the conditions for the loan to be used for consumption, leading in turn to accumulation of arrears. Such reasoning caused a number of leaders to concentrate funds into the hands of a limited number of persons. These persons either had businesses or to they were wealthy enough to repay the loans. To such persons credit was distributed.

From interviews with some BKKBN staff (Mr. Slamet from BKKBN sub district Sumberpucung, and Mr. Marjono from BKKBN in district level), it was found that since the distribution of the loan was determined by the cadres, they often put capacity to repay before the objectives of the programme, which were to provide credit to the poor.

It has become clear that there are many reasons why those above the poverty line became involved in the MFI, in particular this governmental sponsored programme. These range from the operator/staff assuming that the poor were a greater credit risk and therefore directing credit to those who had more secure income flows or assets, to the lack of demand from the poorest members.

Many poor recipients of KUKESRA received loans in a smaller amount than the specified size at any stage of credit. Thus, recipients from the same programme and situated at the same stage received different sizes of loan. This is different from Hatch's (1998) finding that the different size of loan is only reliable for inter programme comparisons, especially between rural MFIs and urban MFIs, because the urban poor tend to be richer than the rural poor. Therefore, the size of loan demanded in urban areas tends to be larger than that in rural areas. Moreover, Hatch (1998:12) found that this relation is not reliable for comparing the different sizes demanded within a programme or MFI in a particular group-lending programme. KUKESRA does not support the findings in Bolivia by Hatch because even though KUKESRA is a group lending programme with the same amount available for all recipients in the same stage, in fact, the amount received is not the same as specified but follows the demand of recipients or a compromise. In contrast, the MKEJ case supports Hatch's (1998:12) finding because all the recipients in the group received the same amount as had been specified beforehand. In MKEJ, there is no correlation between the size of loan and the level of poverty. The size of loan just relates to the stage of credit.

Moreover, a Grameen replication programme such as MKEJ applies some other restrictions. MKEJ has slightly different definition of its target group. Not all the poor can easily become its target group, only the poor that have income generating activities or small business activities. This characteristic becomes predominant since income from the business is expected to be the main source for loan repayment. This approach reduces the conflict between distributing the loan appropriately and avoiding arrears. All the Grameen replication programmes emphasize income generating activities. This emphasis has been discussed among scholars in *Development Finance* online forum (devfinance@lists.acs.ohio-state.edu) by some scholars.

Rahman and Khandker (1994:50) note that most MFIs, including Grameen bank, did not reach the poorest of the poor, where the characteristics of the poorest, according to Dhonte, are: no skills, no assets, no income generating activities, and no idea for undertaking any economic activity. However, most the discussants in the forum agree that MFIs have to reach the type of poor who have income generating activities because MFIs, for example AFRACA, a non-governmental MFI in Zimbabwe, has no provision for charity (Afraca, 1998; Dhonte, 1998; Dijk, 1998). The above mentioned point was the conclusion of the workshop on the institutionalisation of linkage banking in Uganda organised by the Bank of Uganda in collaboration with AFRACA (1998). Richard (1998) emphasizes that an MFI's recipients must have, at least, real economic opportunities or activities where the loans can be invested in, that is income generating activities.

Funds disbursed

The government, in this case BKKBN as the owner of the TA-KUKESRA programme, emphasised the rate of absorption and of repayment as the main indicators of success. Thus from the top to village levels, the governments pushed its staff to increase the absorption to reach the target and simultaneously maintain a high rate of repayment. In order to achieve a good performance in the mentioned indicators, the study found that BKKBN's staff, particularly field staff, worked with the emphasis just on absorption and repayment while other aspects of MFI had less attention. The progress of funds disbursed is presented in Table 7-5.

Table 7-5 Development of Members and Funds Disbursed

Date	Member (district)	Member (sample)	Disbursed Fund (district) (Rp 0000)	Disbursed Fund (Sample) (Rp 0000)
8/31/97	100583	20228	63904	49874
9/30/97	100583	20228	63904	49874
10/31/97	118841	20843	102544	51950
11/30/97	118841	20843	102544	51950
12/31/97	123271	21886	120264	56122
1/31/98	131872	23004	137416	60194
2/28/98	135991	23928	149424	63726
3/31/98	141056	25508	164652	68546
4/30/98	160012	29227	225524	83614
5/31/98	160012	29227	225524	83614
6/30/98	160012	29227	225524	83614
7/31/98	177894	33333	297052	100038
9/30/98	204856	36831	404900	114090
10/31/98	204856	36831	404900	114090
11/30/98	219189	40739	462232	129914
12/31/98	227977	41643	513336	133414

Source: BKKBN Malang District

Unfortunately, the absorption progress was hindered by the lack of coordination, both horizontally and vertically. Horizontal coordination refers to coordination among different related departments while vertical coordination refers to the coordination between different levels in a department. The lack of coordination caused some delay, and members had to wait for months or even years to get higher stages they had proposed. The waiting time can be seen in Table 7-6 and Table 7-7.

Table 7-6 Waiting time in KUKESRA

Stages	Waiting time (days)	
	Mean	Maximum
Stage I	116.75 N=75	365.00 N=75
Stage II	135.67 N=52	395.00 N=52
Stage III	104.59 N=37	300.00 N=37

Note: N is valid frequency
Source: Survey data

Table 7-7 The Structure of Waiting time (Percentage)

Length	Stage I	Stage II	Stage III
Less than 2 weeks	25.29	25.52	12.29
2 weeks - 1 month	7.06	7.34	13.41
1 month - 3 months	21.18	16.43	26.82
3 month - 6 months	25.29	32.17	35.75
6 month - 9 months	19.12	13.99	8.38
9 months and above	2.06	4.55	3.35
Total	100.00	100.00	100.00

Primary data

This waiting time, which was long and uncertain, showed the inefficiency in the management. As found in many studies on government sponsored programmes, it had large resources but inefficient management (Kane, 1984; Getuhig-Jr. and Shams, 1991). Delays in obtaining credit was a common characteristic, such as found in IDEMA (*he lnstituto te Mercadeo Agropecuario*) in Colombia (Getuhig-Jr. and Shams, 1991).

The amount of funds disbursed did not only grow due to the increase in the size of the credit but also the number of members. The size of credit will increase following the change in the stage of credit because, according to the rules, the higher the stage, the bigger the size of credit. Accordingly, as long as the members continue to take higher stages of credit, the size of fund disbursed will increase. The next stage of credit is twice as much as the amount of the current stage, or looking at in another way, the size of the current stage is twice as big as that of the previous size.

The other aspect boosting KUKESRA was the number of members. If the number of members increase the amount of funds borrowed in total tend to be larger and this means KUKESRA grows faster. In order to boost absorption of the funds, the staff established as many groups as possible and included as many poor people as possible, even if some of them were not actually poor. The number of members will become the basis for the absorption. Since the size of loan is fixed in each stage of credit, the change in absorption in the stage was entirely caused by the change in the number of members in that stage. Thus, the change in funds disbursed as a whole depended on the number of members and the stage-member composition in the programme.

The value disbursed can be calculated easily by multiplying of the number of members in each stage by the size of loan at that stage.

DEPTH OF OUTREACH

This measure will investigate to what extent the programmes reach those who are in need of the cheap funds especially the poorest of the poor. Since there are two different definitions of the poor, based on BKKBN classification and based on poverty line, both approaches can be investigated.

Depth of outreach tries to investigate to what extent the programme can reach the poorest of the poor as the hard core of the poor. Alternatively, one can consider to what extent the poorest benefit from the programme. There are two approaches used. The fhst is to see the portion of the poor involved in the programme and the second is to further investigate the poor recipients, whether the poor are from those situated near poverty line or situated at the bottom of poor group.

In respect to KUKESRA programme, Table 7-4 shows that about 80% the respondents were from the target group, while only 20% of all KUKESRA respondents came from non-target groups. However, these 20% respondents of KUKESRA took up 33.3% of loanable funds while the target group members, as many as 80%, only got 66.7% of the fund. On average, each non-target group member got twice as much as each target group member. Therefore, even though the number of outsiders was smaller than that of the target group, the funds they received was relatively much bigger.

The more important issue here is not the size of the average loan received, but the distribution of the funds. The distribution to non-target group members was more scattered than the distribution among the members of target group. That means that a limited number of outsiders received a large amount of funds. A leader of a group in Sumberpucung lent the enthe fund to a local furniture entrepreneur. He was rich and not a member of the group. Another put it into her own formal bank account. These two are examples where the leader attempted to save the fund, but offered no benefit to members.

The concentration of loanable funds in the hands of a small number of recipients with large size loans increased when the programme entered stages II and III where the scheduled size of credit for each individual is also bigger. This also indicated that the higher the stage of KUKESRA, the more biased the distribution of the credit to some limited members. In addition, the members coming from high welfare classes, the non-target group, obtained more funds than members from the target group did.

In general then, many poor people who became members of KUKESRA regularly took smaller size loans and used them for consumption or allocated them to the informal business sector such as petty trade which deals with daily basic necessities. In contrast, the non-poor members, even though they are not so many, took bigger size loans and used them in either the formal or informal business sector.

The above situation is different from that in MKEJ. MKEJ did not have such a bias. The absence of bias was also caused by the application of self selection as well as the small size group approach. Since they self selected, the economic situation among members was not much different. In addition, since the size of the group was small, usually five, the monitoring was more effective and transparent. Thus, each member only received the amount specified.

Even though the judgment about the poor is subjective, all the MKEJ staff had a well defined criteria to separate the poor from the non-poor. Physical economic condition, such as housing, clothing, and jobs of members of a family were used as a proxy for this purpose. In addition, MKEJ members were drawn essentially from the informal sector. Thus, MKEJ members were only the poor with business enterprises which operate mainly in the informal sector.

In the case of KUKESRA, however, even though the number of members listed as participants was large, this could not show to what extent the services of the programme reached the poor. How many of the services, TAKESRA and KUKESRA, were consumed by the poor depended on who really became the recipients.

Now, if the concept of poverty is just based on income or poverty line, where those who have per capita income below the poverty line are regarded as poor, otherwise not, the depth of outreach can be approached by investigating the poverty gap index of the poor members in each programme. The larger the index, the deeper the penetration of the programme to the poor.

From primary data as shown in Table 7-8, it is found that half the members in both programmes were poor. The Head count index (HC) for KUKESRA is 0.545, meaning that 54.5% of the members of KUKESRA were poor people. Similarly for MKEJ 51.3% of its members were economically poor. Navajas, Meyer, *et al.* (2000), in their study on MFIs for the poorest in Bolivia found that some MFIs such as FIE, Caja Los Andes, and BancoSol had medians above the poverty line. This means that more than half of these programmes' members were not poor. Two other MFIs, PRODEM and Sartawi, investigated by the same researchers, had a median a bit below the poverty line. This means that for these two MFIs, more than half the members were poor. PRODEM and Sartawi, which were situated in rural areas, are like KUKESRA and MKEJ in this study. They confirm that rural recipients are poorer than the recipients in urban areas.

Regarding the intensity of poverty, the poverty gap index (PG) is used. This index shows that the PG for KUKESRA is 0.300 with a standard deviation of 0.213 while for MKEJ it gives the figures 0.329 and 0.174 respectively.

Comparing the indexes of HC and PG indicates that KUKESRA and MKEJ covered almost the same proportion of poor people. More than half the members of both KUKESRA and MKEJ are poor. Similarly, statistically, the depth of outreach measured by poverty gap index of both schemes is not different. This is shown by insignificant t statistics (0.913) for means difference.

Table 7-8 Poverty Index of Recipients of the Schemes

Poverty Index for the Recipients			
Parameters	**KUKESRA**	**MKEJ**	**T value**
HC	0.545	0.513	
PG	0.299 (0.213)	0.329 (0.174)	0.913
N	145	117	
N1	79	60	

Note:

$$HC = \frac{N1}{N} \quad \text{and} \quad PG = \frac{1}{N}\sum_{N1} (P^* - P)\Big|_{P^*>P}$$

N=total number of respondent
N1= respondents who are poor
P*=poverty line
P=family per capita income
Source: survey data

LENGTH OF OUTREACH

Length of outreach can be seen from how long members are involved in the programme. This is based on the assumption that members have free choice to keep going with the programme or to quit. Thus, the proper indicator to consider is the dropout rate.

Unfortunately, the governmental MFI, KUKESRA, does not have record for this rate, because it does not apply to this programme. TA-KUKESRA is a programme which forces the poor to be members but hinders them from exiting. This is because, in government's view, exit means failure of the programme while more members means success.

Even though there was no data on drop-out rate, interviews with poor members revealed that many passive recipients and members would have preferred to exit than to remain in the programme. From interviews, it was also discovered that when the government provided cheap credit through KUKESRA, the poor have expected much from KUKESRA and initially quit from credit transactions with informal moneylenders (IMLs). They did this because they had faith in the government. However, in many cases, where no new loans were being realized for a long time after members had redeemed all the instalments of earlier stages, they returned to IMLs. They applied for new credit to run theh businesses, but the new credit was never realised when they needed much cash. Thus, they returned to informal moneylenders, that is, back to the same situation as before they got KUKESRA. Since KUKESRA is no better than IML, recipients felt indifferent towards KUKESRA. IMLs that give certainty even become the preferred financial institution. This is no different from the case of agricultural credit in Columbia (Hussain and Damaine, 1992). In KUKESRA, many recipients no longer felt they were members of KUKESRA, and even asked PLKB/PKB or the cadres to delete theh names from the member list. Unfortunately, the PLKB/PKB did not allow them to quit, and still maintained them as members.

The situation is different from the case of MKEJ. In a discussion with the owner of MKEJ, DR. Jumilah Zein, it was emphasized that MKEJ allowed its members to keep going or to quit. Groups even had the right to decide whether to maintain a certain member or expel her, for some reason. If any member feels that she does not need MKEJ anymore, she can decide to quit. This can happen, where she finds some other financial sources better or more appropriately suited to her need. For instance, some members, after joining the MKEJ, expanded their businesses and needed more funds, so they went to other sources that could provide a larger loan. This type of member is a good outcome of MKEJ as an MFI, which has proved successful to grow the recipient's business. Some others shifted to alternative financial sources because they lacked information from MKEJ. Some of them thought that they had repaid too much without knowing how much they had paid for instalments and how much to accumulate theh own saving.

However the majority of members who left were terminated by the owner of MKEJ. The owner, after investigation, could decide whether to maintain certain members or to terminate them. Usually the owner referred to the members' historical record of repayment, especially for those who had some delay in repayment. Many recipients had delays due to problems with their businesses but some delayed to avoid repayment. The former were maintained as members, while the latter were terminated.

MKEJ has no detailed data of drop outs according to the above mentioned reasons but it has data on total dropout rates. The rates are 1.6%, 1.3%, and 1.18% for the years of

1996, 1997, and 1998 respectively. These figures show that the dropout rate has tended to decrease over this period.

In the period before the economic crisis started, the dropout rate was 1.6% and in the crisis period it fell to 1.2%, reflecting increased consideration being shown for difficulties arising from deteriorating economic conditions.

COST OUTREACH

Cost outreach means that the MFI has good performance if its recipients can receive the same services with lower costs spent compared to the same service offered by informal moneylenders (IMLs). The costs include the cost of funds and the cost of operation borne by recipients. The cost of funds is the interest the recipients have to pay for the loan. The costs of operation include all other costs borne by recipients such as transport costs, administrative costs and other elements of costs.

In order for the recipients to benefit from the programme, given the very small size of KUKESRA loans, it is stated that the government imposes no charges on the recipients. However, what is stated in the programme regulations is different from the facts on the ground.

The normal procedure to receive and repay the loan is as follows. Members belonging to a given neighbourhood just gather in a house usually the house of group leader or cadre. Since the distance among them is reasonably close they can go to the meeting on foot. The meeting is usually a multipurpose meeting. At the same meeting some unrelated activities are carried out. As the majority of the people in the sample area are Moslem, they usually utilise a prayer meeting to conduct TA-KUKESRA and other activities. After holding joint prayer, for instance, they continue with RoSCA (Rotated Saving-Credit Association, the local name of which is *Arisan*) and then TA-KUKESRA while non-members can go home earlier or wait if they want. Most of the time the TA-KUKESRA activities are just to collect repayments and savings if there are any.

The repayment collected is taken by the leader and then the PLKB or PKB comes and takes it, with or without the leader, to the relevant branch post office where they have to pay the loan instalment. This mechanism shows how the transaction costs are shifted from members to staff or from recipients to the institution. The members just bear the cost of income forgone due to working hours sacrificed.

Unfortunately, BKKBN has no extra funds to finance the TA-KUKESRA operation described above. It just provides all administrative supplies, such as TAKESRA books for individuals as well as for groups but not transport costs for the staff to leaders' houses or to post offices. BKKBN assumes that this is part of their normal duties as public servants of BKKBN.

Thus, theoretically, KUKESRA has no cost, but in order to serve the recipients, members put some extra funds above the rate of repayment into a pool to fund the staff's transport. The idea of this extra fund came from staff, but they let the members decide on the details of the arrangement. But it is important to notice that in dealing with poor people in rural areas it is obvious that what the staff utter or suggest tends to be enthely accepted by members as a whole. Due to this phenomena, it could be concluded that the idea of the extra cost and its size enthely depended on the staff.

The extra cost can be significant. In stage I the recipients are supposed to make monthly repayments of Rp5,062.50 for 4 months but actually they paid as much as Rp 5,250 in each payment. In stage II, they paid as much as Rp 7,000 each time in 6 months but only Rp 6,783.33 was for loan repayment. In stage III they paid a monthly payment of as much as Rp 10,500 for 8 months while the requhement for loan repayment was Rp10,225.33. Accordingly, as presented in Table 7-9 the extra cost increased from Rp 187.5 to Rp 216.67 and Rp 274.67 from stage I to stage II and III respectively. The amount that the recipient paid to the staff is much higher than the interest payment on the loan that they had to pay to bank (see Table 7-9). On the average, each staff member received extra income from the activity of between Rp 41,850.19 and Rp 67,502.05 in 1997 and between Rp 155,585.22 and Rp 298,829.30 in 1998. This means that the staff have been receiving risk-free benefit or income without risk while the clients of the programmes were still struggling with their businesses particularly in the crisis period. It is also apparent that the more clients the staff serve the bigger the income they can get (see table 7-9 for details). Hatch (1998) found that many governmental MFIs provide more benefit to government staff or deliverers than to recipients.

Table 7-9 Extra Cost for Recipients of KUKESRA

Stages	Members			Staff	Extra expense (Rp)	
	Stage 1	Stage 2	Stage 3		Total	Average per Staff
End of 1997						
Kepanjen	4992	1869	0	6	405,012.30	67,502.05
Ngajum[1]	5841	2761	0	14	598,308.70	42,736.34
SumberPucung[2]	4878	1545	0	8	334,801.50	41,850.19
Sample	15711	6175	0	28	1,338,122.50	47,790.09
End of 1998						
Kepanjen	5802	8274	0	6	1,792,975.80	298,829.30
Ngajum[1]	7067	8353	1340	14	2,178,193.10	155,585.22
SumberPucung[2]	5202	6199	406	8	1,454,851.50	181,856.44
Sample	18071	22826	1746	28	5,426,020.40	193,786.44
Extra cost monthly Per recipient						

[1] including Ngajum and Wonosari
[2] including Sumberpucung and Kromengan
Source: Survey data

Besides the extra cost, attending the meeting means members have to sacrifice some hours of work. This implies income forgone. In fact, it is a shared cost because the approximately 2-hour meeting is often a multipurpose meeting. If there is a single purpose meeting just for KUKESRA, then the average income forgone (loss of working hours) is shown in Table 7-10.

Several KUKESRA groups had no meetings while some others had separate meetings, not joint meetings as explained above. In this case they used to meet in the leader's house or take it in turn in members' houses. The meetings usually involved consumption costs such as for snacks. Thus, the house owners had to spend about Rp 15000 for serving 30 members in one full circle. In summary, there was a variation in the organization of the group meetings of the KUKESRA programme and in the cost implications. Homeowners usually had to bear some consumption costs because of the habit of serving snacks for the attendees. The total of all extra costs was sometimes much higher than the cost the recipients had to pay for the funds they borrowed. Some researchers found the same facts for MFIs and little extra cost for informal moneylenders (IMLs) (Hussain and Damaine, 1992:4-5).

Table 7-10 Recipients' Transaction Costs (TA-KUKESRA)

		Stage I (Rp)	Stage II (Rp)	Stage III (Rp)
	Loan size	20000	40000	80000
(1)	Each monthly Repayment	5250	7000	10500
(1a)	Principal	5000	6666.67	10000
(1b)	Instalment (Principal+interest)	5062.50	6783.33	10225.33

*The effective length of a TA-KUKESRA meeting is about 0.5-1 hour
Source: Survey data

Due to these costs, the net benefit the recipients receive is reduced. In areas where the meeting was just for repayment collection, most of the time the recipients sent the repayment to the leader and were absent from the meeting.

The story is different for MKEJ. In MKEJ there is very little extra cost. A group (*rembukan*) is made of 5 members dwelling next door to one another. It is, therefore, easy to coordinate and hold a meeting. On average the meeting consumes just 15-20 minutes of time. It is filled with credit transactions and a short discussion of members problems. For those who have activities surrounding the house, the meeting does not disrupt theh business activities. For those who have business activities at a distance from the meeting place, they postpone the business or just send the repayment through the leader of the group. Accordingly, the cost of transactions is relatively low as shown in Table 7-11 below.

Table 7-11 Recipients' Transaction Costs (MKEJ)

	Loan size	Stage I (Rp)		Stage II (Rp)	Stage III (Rp)
		50000	75000	10000	125000
(1)	Each monthly Repayment	1300	1950	2600	3250
(1a)	Principal	1000	1500	2000	2500
(1b)	Instalment (Principal+interest)	1300	1950	2600	3250

*Many of them are close neighbours where theh businesses are usually at the house so they can monitor the business while the meeting is going on .

Source: Survey data

The extra costs for MKEJ are therefore relatively less than the extra costs in KUKESRA. The ratio of non-interest costs to interest cost for KUKESRA is (1937.5/62.5) or 31, compared to (250/300) or 0.83 for MKEJ. However, this comparison is not fah since the interest rate in KUKESRA is very low (negative real interest rate). Thus, it is faher to compare the extra cost per value of loan. The ratio of extra cost per value of loan for KUKESRA is (1937.5/5000) or 0.39 while for MKEJ it is (250/1000) or 0.25. This explains why more members felt disappointed with KUKESRA than with MKEJ.

Less Costs

MFIs help the poor financially with relatively low costs compared to other common available financial sources for the poor. However, more important is not just low cost but lower per unit cost when members are involved in a higher stage of credit. To do this, MFIs share the costs, in particular some elements of operating costs, and save the cost in term of interest differentials.

In sharing the cost, MFIs help with some components of cost such as transport costs. Using the member group, this item of cost is partly charged to the MFI programme and partly to participants or recipients. Recipients, on the one hand, do not necessarily pay transport costs from theh place to the office (post office for KUKESRA and head office for MKEJ) in order to repay instalments and do saving. On the other hand, the staff do not need to come to each recipients' house. They, recipients and staff, just come to the group meeting.

If members have to do everything themselves, there will be a high cost. For example each member in village Maduarjo of sub-district Ngajum spent Rp 5,000 for a return trip to the post office in the sub-district. Also, since the public transport was infrequent, they had to spend a lot of time waiting for it. Consequently, the cost of transport will be higher than the value of loan that they have to repay. By using a lending group, members do not need to spend such costs. However, in an IML system, recipients do not spend these costs either because the lender will come to the recipients' doorstep to offer loan and to take repayment.

Even though there is a shift of cost, particularly transport costs, from recipients to MFI, it is not a saving of cost because all financial sources for the poor do the same. MFIs and IMLs all come to the recipients place to conduct transactions. However transactions with MFIs can save costs. At least there is an interest differential between the interest rates of MFIs and of IMLs.

Table 7-12 shows the comparison of several rural financial institutions dealing with the poor. KUKESRA and MKEJ offered lower interest rates compared to IMLs (*bank harian*). However KUKESRA and MKEJ are not the institutions providing the lowest interest rate for the poor. Community financial institutions such as PKK and cooperatives charged much lower rates. Even though officially it is stated that KUKESRA offers the lowest rate, being below 4.17% per annum, its effective rate, where all costs are included, is about 18% per annum. Some recipients even had to bear a higher rate because they received less than the scheduled size of the loan while they had to pay the same costs as recipients who had received more. Thus the computed effective rates can reach 33% to 35% per year. MKEJ, also as a business MFI, charged rates as high as 36.33%- 37.43%. The details of the effective interest rates can be seen in formula, tables, and explanation all in the Appendix Chp.7.2.A.

However many poor or the poorest of the poor still felt uncomfortable dealing with formal banking such as BRI unit desa. For them, PKK and Cooperatives were the best institutions. Many members rejected KUKESRA because they had accounts in PKK and in Cooperatives. The case of members in village Peniwen Sub-district Kromengan is an example. These villagers rejected a KUKESRA loan and allowed it to be transfered to other groups which were in need. They felt that they had local financial institutions such as PKK and cooperative that could satisfy theh financial needs. The local institutions are even more flexible and often better fit the needs of the rural people than KUKESRA.

The one important point that can be drawn from Table 7-12 is that KUKESRA and MKEJ charged lower and lower effective rates for the recipients when they entered into higher stages of credit. Moreover, not only the cost of funds, but also all borrowing costs tended to decrease with the increase in stage. This is clear from Table 7-10 and Table 7-11.

The borrowing cost rate (borrowing cost per value of loan) for KUKESRA decreased from 40% in stage 1, to 31.24% for stage 2 and then to 22.5% for stage 3. Likewise, MKEJ also had decreasing borrowing costs. The borrowing cost rate for recipients of MKEJ for stage 1 was 55%, reduced to 46.67% in stage 2 and then to 40% in stage 3. This performance shows that cost outreach for both programmes is good. They can provide services to theh recipients with lower and lower borrowing costs.

Table 7-12 Interest Rate of Several Financial Institutions

Institutions	Terms	Frequencies	Annual effective Interest Rate (compound)
IML (bank Harian)	daily	30 days	791.61%
	daily	24 days	1500.35%
	3daily	28 times	284.00%
	weekly	6 weeks	329.98%
Community Credit-Saving (PKK)	monthly	10 months	12.00%
Cooperatives	monthly	10 months	12.00%
	monthly	12 months	14.00%
BPR	monthly	12 months	39.20%
Governmental (BRI)	monthly	12 months	20.00%
Governmental (BRI) KPKU	monthly	12 months	65.00%
KUKESRA[1]	monthly	4 months (Stage I)	18.00% - 35.89%
	monthly	6 months (Stage II)	11.42% - 33.21%
	monthly	8 months (Stage III)	8.45% - 31.74%
MKEJ[1]	weekly	1 Year (Stage I)	37.43%
	weekly	1 Year (Stage II)	36.73%
	weekly	1 Year (Stage III)	36.33%

[1] Effective rate
Source: Primary Data

QUALITY OUTREACH

Quality outreach refers to the services provided to recipients. This emphasizes the services and not the costs. For this purpose, we can see both the type and how MFIs provide services in a regular basis.

To measure quality of outreach, we can fhst see how the programme, in particular KUKESRA delivered its services. As noted previously, Malang District as a region situated in a province of the regional group III, had planned for the fhst stage of KUKESRA to start in April 1996, stage II to start in August 1996, stage III in February

1997, stage IV in October 1997 and the last stage would start in August 1998[47]. However the facts showed that the progress of KUKESRA was far behind schedule. In Malang District, for instance, KUKESRA started the first stage three months late in July 1996. This has affected the start and completion of later stages as well (see Table 7-13).

Table 7-13 Development in Stages of KUKESRA

Date	Malang District			Sample Area		
	Stage I	Stage II	Stage III	Stage I	Stage II	Stage III
8/31/97	84607	15976	0	15519	4709	0
9/30/97	84607	15976	0	15519	4709	0
10/31/97	93205	25636	0	15711	5132	0
11/30/97	93205	25636	0	15711	5132	0
12/31/97	93205	30066	0	15711	6175	0
1/31/98	97578	34234	60	15911	7093	0
2/28/98	98754	37118	119	16111	7758	59
3/31/98	100118	40713	225	16861	8588	59
4/30/98	106677	50289	3046	18005	10543	679
5/31/98	106677	50289	3046	18005	10543	679
6/30/98	106677	50289	3046	18005	10543	679
7/31/98	106677	68171	3046	18005	14649	679
9/30/98	106677	95133	3046	18005	18132	694
10/31/98	106677	95133	3046	18005	18132	694
11/30/98	106677	109466	3046	18005	21992	742
12/31/98	107163	113294	7520	18071	22826	746

Source: BKKBN Malang District

As mentioned above, according to the schedule, the third stage should start in February 1997, in fact, it started in January 1998. Therefore, it had an 11-month delay. The sluggish development of KUKESRA was not only due to the slowness of members responding to credit, but also due to the coordination among government related departments. Problems of coordination or institutional problems have caused many members to wait for months or even for years (see Table 7-6 and Table 7-7) for the realisation of the new credit they had proposed after enthely redeeming the loan of a previous stage.

Thus, even though KUKESRA could quickly cover all sub-districts in Malang District, progress was still slow. The delay caused many members to try to quit the programme. The intensity of group activity was low: infrequent meetings, or rarely attending the

[47] The schedule derived in BKKBN has some inconsistencies. In BKKBN (1997:1-5), it is scheduled that the last stage will start on October 1998, while in Mongid (1996), BKKBN publication, with complete description and assumptions, shows that the last stage should start in August 1998.

meetings. This was another indicator to show members' unwillingness to participate, since to quit was not allowed by the staff.

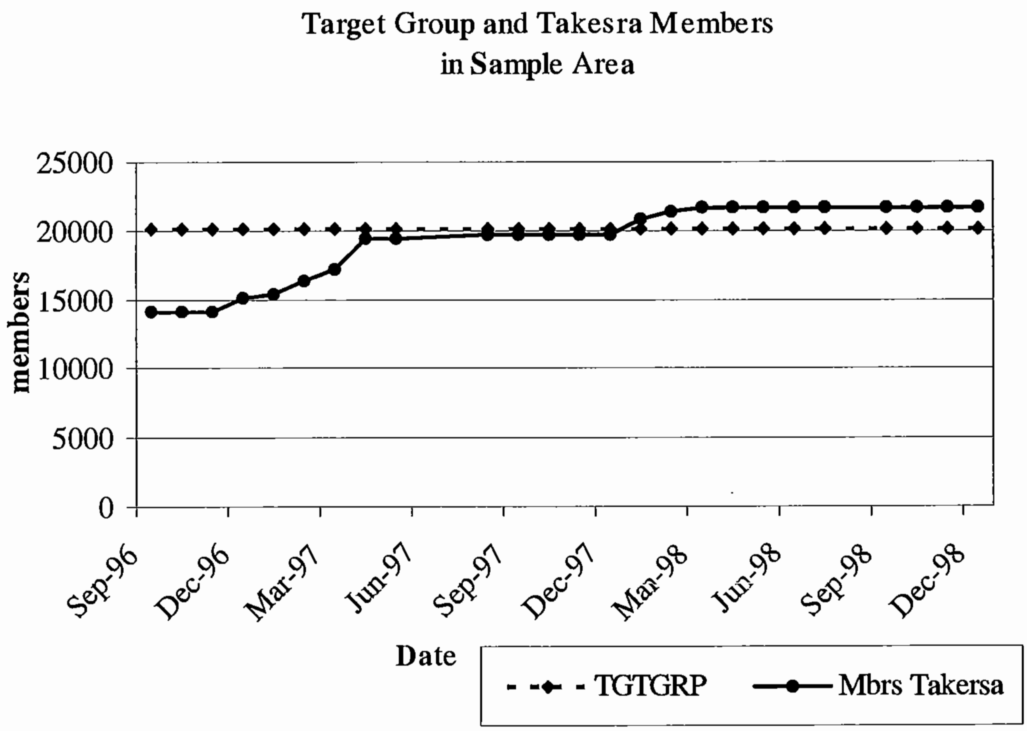
MKEJ has no such problem of coordination because it is relatively small and the management is simpler. It does not need coordination among departments because it is just an entity under the dhect control of a top manager. All the decisions related to credit realization rest with one person. The decisions can be made easily and fast because there are weekly meeting where the staff discuss all the issues dhectly with the manager. At the meeting, they can dhectly decide the entry of new members. Therefore, the MKEJ members do not have to wait more than 2 weeks for the realisation of loans.

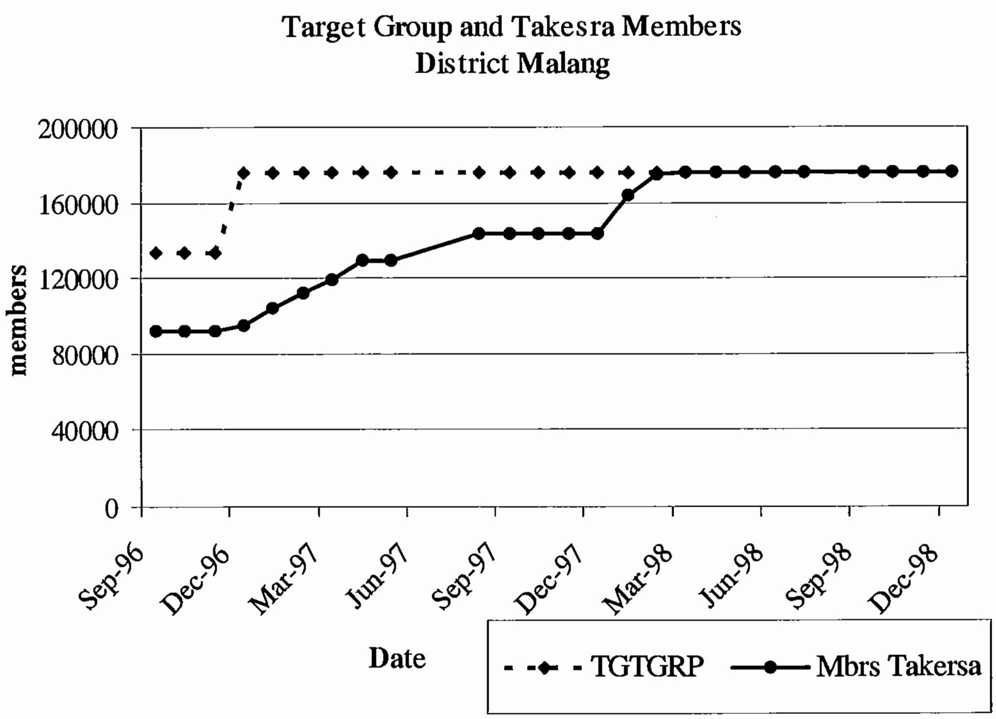
The difference indicates that the coverage of a programme relies much on the aspect emphasised. The aspect emphasized determines the strategy chosen, which in turn affects staff's behaviour. If the programme emphasises outreach, its coverage tends to be larger than if it emphasises sustainability.

But the progress of a programme does not only depend on the staff's efforts and the strategy applied but also on management of the organization, particularly that related to decision making. KUKESRA has a complicated coordination leading to much more time consumed and higher uncertainty than MKEJ. MKEJ has a simple coordination providing high certainty and quick decision.

In the Malang District, everyone in the target group of the TA-KUKESRA has been fully served since February 1998, in other words it just took 2 years to serve all target group members. This target group is the poor, the 2 bottom classes in family welfare ranking, based on the BKKBN family census in 1995. The poor target group consists of 175512 families in Malang District; all have been served since February 1998 as shown in Figure 7-1.

In the sample area, the number of the members of TAKESRA served was bigger than the number of the target group in the area. This phenomenon was influenced by the following developments. There was a shift among sub-districts or lower levels in a district. This means that TAKESRA and KUKESRA that should have been allocated in one area could be shifted to other area because demand in the former area was smaller while it was greater in other areas. The difference in the actual capacity of absorption from the normal capacity based on the number of target group is due to the fact that many non-poor people were included in the programme.





Note: TGTGRP is the number of members in target group or the poor.
MbrsTakesra is the numbers of members having TAKESRA accounts.

Figure 7-1 Progress of Members and Target Group

Besides the delivery of services, the type of services offered also indicates benefit for recipients and hence quality of outreach. All MFIs, including TA-KUKESRA and MKEJ at least offer the basic services: loan and saving facilities. In order that the recipients can use the service properly, in particular using the loans, some other supporting services such as training and business counselling are provided.

Regarding the quantity of financial services provided, TA-KUKESRA only provided 2 types of saving (TAKESRA Blokir and voluntary saving) and one type of KUKESRA loan. Members, in the realization of each stage of credit, have to put 10% of the total credit they are supposed to receive into theh compulsory saving, which is called as "TAKESRA Blokir" or some times called "Blokir". In the progress of the programme, KUKESRA has been prioritised while the voluntary saving aspect of TAKESRA has had little or no priority. Table 7-14 shows that TAKESRA as a whole increased significantly. But this indicates the increase in TAKESRA blokir as compulsory saving. This 'blokir' increased rapidly following the increase in the number of TAKESRA members and the change in stage of KUKESRA. The survey found that there was no systematic change in TAKESRA in terms of voluntary saving. Most recipients did not have voluntary saving, they just put a sum of funds in TAKESRA once and there was no effort to update this.

Table 7-14 TA-KUKESRA parameters of Outreach and Sustainability

		Growth Rate (%)							
		TAKESRA					KUKESRA		
		1996	1997	1998			1996	1997	1998
Members	Sample	104.50	30.68	7.81	Members	Sample	-	420.85	94.84
	Ngajum	43.96	13.96	17.16		Ngajum	-	337.98	94.84
	Kepanjen	70.89	19.00	5.42		Kepanjen	-	316.58	105.16
	Sumberpucung	288.32	60.62	1.23		Sumberpucung	-	986.80	83.82
	District	189.28	51.32	20.61		District	-	335.56	84.94
Saving	Sample	201.71	241.04	73.96	Credit	Sample	-	343.60	77.42
	Ngajum	137.26	230.54	62.99		Ngajum	-	295.68	32.93
	Kepanjen	195.62	199.81	106.69		Kepanjen	-	235.24	151.30
	Sumberpucung	356.82	298.98	61.45		Sumberpucung	-	830.71	67.03
	District	341.80	207.66	73.41		District	-	303.59	48.89
Av.size of saving	Sample	67.72	160.97	61.37	Av.size of loan	Sample	-	-14.83	-8.94
	Ngajum	78.86	190.05	39.11		Ngajum	-	-9.66	-31.77
	Kepanjen	96.29	151.94	96.05		Kepanjen	-	-19.53	22.49
	Sumberpucung	31.12	148.39	59.48		Sumberpucung	-	-14.36	-9.14
	District	85.27	103.32	43.78		District	-	-7.34	-19.49

Source: Further computation of Data from BKKBN Malang District

Table 7-15 MKEJ Parameters of Outreach and Sustainability

YEAR	1995	1996	1997	1998
Growth				
Member	28.63%	75.20%	74.78%	6.83%
Drop-out rate	4.13%	1.60%	1.37%	1.18%
Group	15.00%	82.61%	67.95%	5.45%
Centre	26.44%	50.00%	57.58%	-0.77%
Saving	96.23%	76.23%	55.28%	64.30%
Ratios				
Saving to Loan outstanding	13.52%	31.98%	37.94%	38.91%
Staff to member	0.52%	0.53%	0.42%	0.37%
Member per staff	193.83	187.00	238.27	269.47
Group per staff	43.33	37.38	49.64	53.94
Arrears to portfolio	1.22%	5.00%	0.60%	0.55%
Arrears to amount due	1.47%	3.35%	0.60%	0.59%
Repayment Rate (to instalment)	98.00%	98.00%	98.30%	96.00%
Cumulative	98.00%	98.00%	98.13%	97.34%
Borrowers meeting duties	97.76%	98.93%	99.54%	99.67%

Source: Survey data

As shown in Table 7-15, the ratio of staff to members continuously decreased from 1996 to 1998. This does mean that the quality of service decreased but just for increasing efficiency. The arrears to portfolio also decreased showing a good performance. MKEJ, in contrast, has some development in the type of services provided. It extended the range of loans from general loan when the programme started to general and home loans in 1996. MKEJ also offers different types of saving: compulsory saving, emergency saving, and voluntary saving as discussed in chapter 5.

SUMMARY

TA-KUKESRA is the most progressive MFI ever implemented in Indonesia. In a relatively short period it has reached all provinces, districts, sub-districts and even villages. Starting from non-backward villages, it then expanded to backward villages. A huge number of people have been listed as members of the programme. However, even though the number of people claimed to be members of TA-KUKESRA is big and has increased rapidly, it cannot represent the demand for the programme from the poor.

Many members became members involuntarily. Theh names may be in the listed groups, but they are inactive. In addition, even though as members they have the right to borrow, many of them are reluctant to receive loans and some of them even rejected the loans offered. Besides those rejecting loans, about 44% of members who have received a loan have become passive recipients for more than 3 months. They have redeemed theh enthe debts and asked for a new loan but nothing has been realised yet. In contrast, MKEJ provides credit based on real demand from the recipients. Even though the breadth is not as good as in KUKESRA, all the recipients actively participate in credit. They do not need to wait long for a new loan after redeeming the previous one. In 2 weeks waiting time, they could receive the new loan in a higher stage.

Thus, even though the programme of KUKESRA has better breadth compared to MKEJ, the breadth is low intensity. All MKEJ recipients fully participate in the programme while for KUKESRA members, many of the recipients are passive.

KUKESRA includes many outsiders, members from outside the target group KUKESRA is designed for. Even though the number of outsiders is smaller than the number of members from the target group, the outsiders absorb relatively more funds than the members from the target group. Beside the inequality between these two groups of members, there is inequality in the distribution of the credit within each group. The distribution of credit among recipients from the target group is more homogenous compared to that in the group of outsiders. This means that a limited number of people belonging to the non-target group receive much bigger size loans. MKEJ has no such types of bias because MKEJ does not define its target group in the same way and all recipients get loans as per the scheduled size.

Accordingly, even though the number of members as well as the amount of loans outstanding in the KUKESRA programme has made good progress, it cannot guarantee that all services provided by the programme really reach the poor members of the target group. Only half of the members are poor in this group.

The extent to which recipients are involved in the programme can be seen from the length of period of involvement. For successful recipients who follow the programme regularly, the length is associated with the highest level of credit stage they receive. Those who are not successful will drop out of the programme. Accordingly, the involvement of the recipients in general in the programme can be seen from the dropout rate. MKEJ shows that its dropout rate has decreased over the three years of data availability. KUKESRA has different characters from MKEJ. It has no explicit dropout rate. Also KUKESRA hampers or does not allow the recipients to quit the programme. Thus, using a time frame is no longer valid to measure the involvement of recipients as a whole in the programme. However from the interviews conducted, it was found that many, in particular the passive recipients, would have preferred to quit rather than stay in the programme.

Outreach can also be seen in the costs expended for the benefit received. It is expected that for the same benefit received the costs will decrease, or the MFI should provide the service with lower costs. KUKESRA has no formal costs charged to recipients except the cost of funds; that is interest payments. However, in actual fact it is a high cost MFI. Besides income forgone due to the meetings and other costs such as the cost of transport and consumption, recipients also contribute, with theh agreement, the transport costs for staff. This extra cost is higher than the interest they have to pay to the institution. All the components of costs for KUKESRA are more expensive than for MKEJ.

The worth of the credit is the other aspect to consider beside the costs. It is expected that MFI will bring a great worth for the recipients through supporting business enterprises. Unfortunately unlike MKEJ where all the recipients have businesses, KUKESRA spends the loanable fund not only on those who have businesses but also on other recipients who do not. For the latter, the programme suggests that they try to do some kind of business. But the facts show that there are still many that have no business yet.

For those who have businesses, it is not clear if the loan is really for businesses or just for consumption because the recipients cannot distinguish how much the fund is used for business and how much for consumption. However an obvious benefit appears to be that.the funds from KUKESRA can replace those from other more expensive sources such as from IMLs. Unfortunately, this benefit is often short lived because the continuity of KUKESRA is uncertain, so most of the recipients return to theh old habits of borrowing from an IML, which is an expensive source of funds.

The benefit of saving is also not apparent yet. It seems that saving in TAKESRA is not very interesting for recipients. In contrast, the saving accounts of the recipients in MKEJ show frequent transactions. This means that saving in MKEJ is much more promising than in TAKESRA.

Finally it can be said that most of the aspects of outreach are not indicative of good performance for the TA-KUKESRA programme even though it can reach so many poor people. In contrast, even though MKEJ has relatively small coverage, many aspects show that this MFI has better outreach than TA-KUKESRA. The members and regions covered are not so wide as KUKESRA, but other aspects of outreach show a better performance.

ASPECT OF SUSTAINABILITY

Sustainability means the programme can continue its operation in the long term. An MFI programme can be sustained if it can at least cover its operational costs or economically survive on its own strength and without a sustained subsidy (Gurgand, Pederson *et al.*, 1994; Yaron, 1994b; Hulme and Mosley, 1996; Conning, 1999). If an MFI can only run with the support of subsidies, such as from government or from foreign donors, it cannot be said to be sustainable because the subsidy wherever it comes from, will eventually stop. When it stops, the MFI cannot continue to operate, thus it is not sustained. Clearly, the term sustainability refers to self-sustainability. Sustainability requires high repayment rates, under a rational interest rate, and efficient operation.

MFIS AND MEMBERS' BUSINESSES

The usage of funds

The benefit of the programme depends not only on the outreach that MFIs can afford, but also on the how the recipients use the funds in such a way that it has the largest impact on theh economic conditions. The amount of funds a recipient can obtain depends on the usage for which it is assigned. Since the objectives of MFI are to assist the poor to improve theh economic conditions, it stipulates that the loan can help them to enhance employment, particularly self-employment, which increases or generates theh income. This, in turn, will result in an increase in the consumption of basic needs. This means that the funds must be allocated to productive economic activities such as small business enterprises either in the formal or informal sectors.

An issue of importance is whether the funds are used in theh business as financial support, which will have income and employment expansion effects. Before investigating how the funds are used, it is important to determine how the funds are distributed in the group. Firstly, one can consider those members involved in business enterprises. Even though on average each group is composed of 30 members, not all members have business activities. For those who are involved in business, some had business activities before the launch of KUKESRA, while others initiated businesses after obtaining the loan. For those who were not involved in business activities, it is difficult to judge whether they could use the funds in their business activities.

In fact, many of the members without businesses initially rejected the loan, but subsequently took their loan reluctantly after persuasion from the staff administering the programme.

Secondly, not all members received the loan. In fact, credit was approved for anyone irrespective of whether they had businesses or not. When asked for what purpose they had used the fund, all the recipients tended to say simply that they had used the fund for business purposes. However, upon investigation about the type of business undertaken, it was revealed that this was not the case. They just gave answers that they assumed were preferred by the policy makers (Adams, Vogel *et al.*, 1984:56-57). By examining members with respect to theh involvement in business activities, it was easy to identify who could use the funds for business and who could not. It was observed that those who were not involved in business tended to use the funds for other purposes. They used the funds for theh daily consumption needs or to pay children's school fees, or for buying clothes, and for other purposes. When the time for repayment came, they set aside some of theh daily wages to repay the loan as the amount of instalment was relatively small. For the fhst stage of KUKESRA, for instance, the repayment instalment was Rp 5,250 per month, while theh daily wages in farming were at least as much as Rp 3,500. Thus, a couple of days' daily wage payments were set aside for monthly repayment of loans. Unfortunately, even though they worked on a daily basis, there was no certainty in theh employment. It was dependent on the farm owner and the timing of the planting season. In some seasons, the farm owners needed more workers, hence the workers could work on a daily basis, while in other seasons, at times the workers had no jobs. Whenever they had jobs, a monthly repayment of Rp 5250 per month was not a heavy burden but during seasons when there were no jobs, payment of instalment became a heavy burden for the household. Accordingly, they had to find other sources to repay the monthly instalment if they were not to default.

Other members are those who had businesses. In this category, not all those listed as members who had businesses received a loan from KUKESRA. For those in this category who did not take the loan, the question as to how they made use of their credit was therefore irrelevant. But others in this category who took the credit were all asked if the loan was genuinely used in their business activities. Their responses indicate that those who received credit and had businesses were engaged in the activities described in Table 7-16 below.

Table 7-16 Jobs Related to the Usage of Loan

Jobs	Number	Percentage
Petty Trade	247	62.85
Agriculture	28	7.12
Home Industry	15	3.82
Others	48	12.21
No Jobs	55	13.99

Source: Survey data

Even though those who had businesses borrowed funds, it cannot be assumed that the funds borrowed were allocated to theh businesses. Many recipients who obtained the standard credit for a particular stage, took the credit just to show theh participation in the government programme. Consequently, there was no improvement in the working capital of theh businesses. As a result, one cannot claim that those who received credit improved the working capital in theh businesses as they did not use the funds for business activities. Thus, careful observation is required, case by case, to see how the recipients used the funds and not simply take the size of working capital as a fixed indicator.

It was observed that it was difficult to separate the usage of funds for business and for consumption purposes. Most of the recipients treated the fund as a general-purpose loan, and consequently used it for their businesses as well as for consumption whenever they needed it. The usage of the fund was flexible. For example, funds obtained for business activities were used to pay children's school fees when necessary, and subsequently obtained funds from other sources of finance were used for business activities. Accordingly, the question of the allocation of the fund becomes irrelevant. It is more relevant to investigate whether the cheaper fund could replace the more expensive sources, particularly from the IML whom they used to deal with. If they replaced the expensive with the cheaper source for financing theh business and daily lives, this meant that even though working capital was still unchanged, the loan was effective.

Unfortunately, the majority of members who tried to avoid IML felt that they were unlikely to obtain further assistance (second and thhd stages) from KUKESRA and therefore returned to the services of the IML.

There were cases where the leaders did not give the loan to members who had the right to receive one. It was found that some leaders did not give credit to members because the leaders feared that such members would default in repayment and the leaders themselves would become responsible for any repayment. In other cases, the leaders had theh own ideas as to how to make good use of the funds for the benefit of all the members in the group, and yet in some other cases, the leaders made use of the funds for theh own benefit.

It was revealed in one particular case that the leader used the funds of the group for her own son's wedding. Even though she eventually repaid the loan enthely, the members lost the opportunity to make use of the funds more effectively. In some other cases leaders, fearing the poor would not be able to repay the loan if the funds were passed on to them, just kept the fund, so they could use it when they needed cash. Thus, the funds were deposited in a bank and withdrawn when repayment was due. Other leaders facing a similar situation gathered all the members together and discussed what to do with the funds. Some agreed to build public facilities such as a public toilet and all the members involved helped jointly to repay the loan. This may be a good idea since the families in the community did not have proper toilet facilities, but unfortunately, this was not the purpose for which the credit was approved.

Saving Benefits

Saying is expected to give benefit for savers in terms of interest. However, in the case of MFIs, most of the savers have small savings which are not sufficient to establish a savings account. This is because the cost of maintaining a savings account is much higher than the interest payment they obtain. However, the main objective of savings from the point of view of MFIs is not the interest income earned but the establishment of the habit of saving, especially among the poor.

Thus in TA-KUKESRA, the savings interest is calculated for the group, and the interest earned is then distributed to the members in the group based on their savings contribution to the group saving. In the case of MKEJ, the savings of members are put in the bank in an MKEJ account and not for each individual member. As the amount of interest is still too low to be distributed among members, MKEJ transforms the interest in terms of a bonus for a special occasion such as *Lebaran.*

Progress and development of saving and withdrawals

TAKESRA did not have a high response even though the recipients were encouraged to undertake saving. TAKESRA was created to promote the habit of saving among the poor as it was assumed that the poor had savings in a non-financial form. But in fact, many of them also had also savings in local saving and credit institutions. In order to encourage saving habits, the TAKESRA offered 2 types of saving plans: compulsory saving (TAKESRA Blokh) and voluntary saving. It was expected that by joining TA-

KUKESRA habits could be established which would be reflected in the increase in voluntary saving. However, this was difficult for the poor, as observed by Mrs Siti, a BKKBN field staff member in Ngajum. In the areas under her service (*Sumberkunci*, *Kapurono*, and *Banaran*), of the 16 groups or about 180 members, only 3 members had voluntary savings. The number of members having voluntary saving was as follows (see Table 7-17).

Table 7-17 Percentage of Members Having Voluntary Saving

Length	TA-KUKESRA (%)	MKEJ (%)
Percentage Having Voluntary Saving	90	100
Passive less than 1 month	10	100
Passive less than 2 months	15	0
Passive less than 3 months	20	0
Passive greater than 3 months	55	0

Source: Survey Data

Table 7-17 shows that 90% of KUKESRA recipients had voluntary saving (i.e some additional saving above the TAKESRA *Blokir*). Only 10% of the recipients of KUKESRA had no voluntary saving at all. However, further analysis of the remaining 90% indicated that only 10% of them had an active saving account, as indicated by the update of the balance of voluntary saving once in a month. Another 55% indicated that once they put a sum of money in theh TAKESRA account as voluntary saving, they never touched it and never made any changes. They left it there to show that they had voluntary saving. A difference in performance can be found in the behaviour of members of the MKEJ programme. All of them had voluntary saving with weekly renewed balance.

The savings of TAKESRA members showed that they still fell far short of what was expected. Many members had no savings or just had inactive saving accounts for more than 3 months.

Table 7-18 Voluntary Saving Performance (Before and After Crisis Period)

Transactions		Average Days between transaction		Average value of each transaction (Rp)		Average value of transactions per month (Rp)	
		In Crisis	Before Crisis	In Crisis	Before Crisis	In Crisis	Before Crisis
SAVING							
Ta-KUKESRA							
	Leaders	108.78	110.08	5146.73	2592.50	3166.39	1095.18
	Members	93.90	113.86	4861.70	1930.24	3477.69	760.37
	Total	97.16	113.07	4924.27	2068.85	3494.99	830.44
MKEJ							
	Leaders	26.82	18.47	401.01	3118.06	1597.49	26180.67
	Members	15.53	7.37	349.17	427.96	1007.94	922.03
	Total	16.89	7.87	355.39	550.24	1078.69	2370.86
WITHDRAWALS							
Ta-KUKESRA							
	Leaders	59.04	23.83	7509.26	833.33	5809.49	58.28
	Members	137.43	31.19	24228.81	1029.41	6448.97	73.09
	Total	120.22	29.65	20558.67	988.37	6345.83	69.99
MKEJ							
	Leaders	96.63	0.00	3228.70	0.00	1670.13	0.00
	Members	93.44	33.11	2563.63	656.16	1120.86	184.56
	Total	93.88	31.58	2685.37	631.66	1189.62	174.61

Source: Survey data

In order to show that their group had some savings, the non-poor members or leaders often deposited some money in theh account. The performance of voluntary saving is presented in Table 7-18.

The growth of TAKESRA depends on 2 aspects of saving: compulsory and voluntary savings. As noted previously, the compulsory saving will be as much as 10% of total credit provided. Thus, compulsory saving depends on the number of recipients and the stage of credit they are involved in. In contrast, voluntary saving can increase or decrease at any time. It depends on the members' willingness to save. They can save as much as possible ranging from as little as Rp 100. This amount was considered very small, but it was set in order to stimulate and establish saving habits among members. Obviously, the amount of voluntary saving undertaken is a better measure to evaluate members saving behaviour.

The use of TAKESRA as a measurement for members' saving behaviour should be interpreted with caution. The question is whether the total TAKESRA can represent the behaviour of all members or at least the majority of the groups' members. There are 2 aspects of TAKESRA that should be taken into account in assessing its effectiveness: the behaviour of TAKESRA as group saving and the individual member's behaviour in TAKESRA.

Balances in TAKESRA increased for many groups. This indicates that the members in the groups actively participated in saving. However, often this did not reveal the behaviour of the majority of the members in the groups. In many case, the leaders of the groups would try to boost theh reputation by increasing the amount of TAKESRA as one of the main indicators. Consequently, they and a few members often put additional money in TAKESRA in order to prove to government officials that people were saving. This was more a ploy to show a large TAKESRA balance of the group. In reality this did not derive the expected benefit of saving that savers were suppose to obtain.

It has been argued that TAKESRA balance was just a "make-up" to show a "good" saving performance. The behaviour of TAKESRA is, however, difficult to trace.

Table 7-18 shows some aspects of saving. There were significant differences in the behaviour of individual savers in TAKESRA compared to that in MKEJ. For TAKESRA, in the period before the economic crisis of July 1997, an average member saved once in 113.07 days but during the period of economic crisis this increased to once every 97.16 days. In contrast, on average MKEJ savers made a deposit once in 7.78 days in the period before the economic crisis and reduced the frequency to once every 16.89 days in the period after the economic crisis. This reflects the difficulty of earning an income in the period of crisis and tends to indicate that MKEJ savers were affected by the crisis. On the contrary, members of TAKESRA saved more often during the period of the economic and political crisis. This behaviour is difficult to explain from an economic view but may be political.

The behaviour of savers with respect to withdrawals is as follows. For TAKESRA savers, in the period before the economic crisis they, on average, withdrew once in 29.65 days while in the period of the crisis withdrawals were made on the average once in 120.22 days. For MKEJ savers, in the period before the crisis they withdrew once in 31.58 days and once in 93.88 days after the crisis.

From Table 7-18, it is clear that the TA-KUKESRA programme did not result in the establishment of saving habits, while in the case of MKEJ changes in the savings habit were significant.

Encouragement of Entrepreneurship

There are 2 problems that need to be taken into account in analysing the business activities of the poor. Fhstly, some had business deals in the informal sector where it was difficult to separate rigorously the use of funds for investment and for consumption. The second is that many enter into business activities without any prior skills. Eventually, efficiency becomes a serious problem. In view of this, MFI serving the poor have to pay attention to all these problems. MFIs not only provide small loans but also have to help the poor in some aspect of production, such as productive skills, marketing promotion, efficiency productivity and quality improvement. All these aim to enable the poor to effectively use the funds for business production, and to derive their income. The income derived is the main source for loan repayment.

In the case of KUKESRA, the majority of the poor had no business of any kind. However, since the credit was provided for generating business activities, the owner, BKKBN, in cooperation with other departments such as trade and industry department at the district level, provided supportive programmes for the members. This programme involved the transfer of knowledge and skills which are related to the production process of a few products which were appropriate for the poor.

Unfortunately, BKKBN had never monitored or evaluated whether the skills and knowledge transferred were applied in practice, and whether there was a need for any adjustments in the programme to make it more effective. From the study carried out, it was found that none of the skills transferred by BKKBN's counterpart could be applied. The skills and knowledge they received were new, and neither the cadres nor the members could apply them. Accordingly, the effects on production were minimal and no new entrepreneurs were created by offering these new skills.

An anonymous BKKBN's staff member said he realised that it was not easy to convert the poor with inadequate skills, lack of knowledge, and aversion to risk, into entrepreneurs. However, staff had to show that the programme was successful. Often to show success, they attributed any established business activities to the effect of KUKESRA. This phenomenon was similar to the experience of a past government credit programme for farmers in Indonesia. Moll (1989) claimed that the effect of BIMAS on the income of the farmers was positive and led to increases. This was also just to show that the programme was successful (Adams, Vogel *et al.*, 1984:56-57).

SUSTAINABILITY OF MEMBERS' BUSINESS ACTIVITIES

As explained before, some of the new-start self-employment activities survived while others failed. From the information obtained during the interviews it was found that many new start businesses, based on governmental recommendations, experienced many difficulties. Mrs. Sutik, the leader of group of *Teratai 11* in Maduarjo of Ngajum, said that many failed because often the customers took credit with an uncertain time period to pay. Such a procedure eroded the recipients stock of capital. They were glad when the customers came because many more goods could be sold and this meant theh business could grow. However, making transactions on credit meant that they later faced difficulty as they could not plan the period of repayment of credit from the government. Moreover, they did not know how to deal with such a type of customers since they were all theh neighbours.

The study also found that those who had arrears were those whose businesses failed or used theh loans for other purposes than for the business. The failure of businesses in many cases was closely related to the decline in the market, especially during the period of the crisis. However, some businesses survived, especially those dealing with daily basic needs and businesses where there was a definite market. Enterprises dealing with community daily necessities had relatively unchanged demand. During the period of the crisis, due to the increase in general prices, people's real income fell but expenditure on basic consumption remained somewhat stable. Besides businesses dealing with basic household needs, businesses in economic partnership with other parties also managed to survive. The economic partnership meant that the cooperation was based on mutual benefit through market mechanisms and was not just a political arrangement. This type of business had market certainty. This type of business could survive since the partners survived and transactions occurred. In the survey areas, the partners were relatively bigger enterprises dealing with home processing of cassava to make *tape*. Since it was cheap, it also needed cheap packaging. *Besek* produced by self-employed recipients was used.

Thus, the good performance of members businesses is important for the survival of MFI activities as it influences the rate of loan repayment. Good loan repayment is based on a permanent flow of income, especially from the business activities financed by the loan. If it was repaid by income from other sources, then the effectiveness of the of the credit is questionable. In addition, if the income flow was not sustainable, then the continuity of loan repayment and consequently the survival of the MFI would be doubtful.

The evidence indicates that those who succeeded in business had no arrears. The continuous existence of an MFI in this regard could be used as an indicator to represent the performance of the business activities of its recipients. During the period of the crisis, MFIs were still operating, implying that the recipients' businesses were still operational. Interestingly, in the period of the crisis where many formal and large size enterprises collapsed (Booth, 1998) informal business enterprises somehow survived. This was partly due to the fact that small business enterprises were more flexible, partly by being able to easily adjust the use of their funds and partly due to the mobility of businesses from one sector to another.

The study found that the majority of small enterprises which survived had a number of common characteristics. They were either involved in the provision of daily basic needs of the community or they had permanent partnership with other enterprises. The former had market certainty because the demand for basic needs do not change very much. Increases in prices do not lead to a significant fall in demand for basic needs. Consequently, during the period crisis, even though the profitability of such enterprises declined they were still viable and continued to be in operation. The latter also had certainty because the partners could absorb the output of the small enterprises or that of the self-employed. The existence of these types of business activities relied much on the existence of the partners.

As discussed above, some business activities succeeded while others failed. Those which survived comprised of existing businesses and of new-starts. This does not mean that all the enterprises were better off during the period of the crisis. Data shows that income of some of the enterprises increased while in other cases there it declined.

SUSTAINABILITY OF MFIS

An MFI can survive if it has profit, or at least no permanent loss. To achieve this condition, the interest rate charged should be rational. The concept of rational refers to a level where the interest payment can cover all operating costs but is not too high. It should be lower than the rates charged by IMLs in the area, so the recipient can at least benefit from the interest differential between MFI's rate and the rates of IMLs. Beside the interest rate, it is also assumed that there is not much default in repayment. If the default rate is high, whatever the interest rate, it can force the MFI into losses and eventual collapse.

Arrears is a factor which boosts the operating cost. So revenue and cost are important factors determining sustainability. Since revenue is just derived from interest payments from the recipients, the costs will be discussed further.

Serving recipients, MFIs have to bear some types of costs such as initial costs and operating costs. Initial costs are all expenses incurred in relationship with the process of establishing an MFI or its branches. This type of cost is more or less fixed.

Cost structure of MFI

The structure of operating costs is presented in Table 7-19 for KUKESRA and Table 7-20 for MKEJ. In Table 7-19, the two main columns denote economic costs and accounting costs. Accounting costs structure is the structure of costs that the institution or programme actually spent. Since it is a governmental programme and it is attached to a certain governmental department, that is BKKBN, it does not have any other actual costs except the cost for administrative work. Thus the administrative cost is all the actual cost for TA-KUKESRA programme.

However, as an MFI that is supposed to be self-sustaining, the economic cost is more important than the actual (out of pocket) costs. Here economic cost is calculated using the economic prices of MKEJ. In other words, if all the costs have to be spent by the programme on the basis of opportunity cost, then the cost can be regarded as economic costs of KUKESRA.

Economic cost per outstanding loan shows the rate of cost, and each element of cost per total operating costs provides cost structure. All these are presented in Table 7-19 for

KUKESRA and Table 7-20 for MKEJ. In 1997 and 1998, the costs rate of KUKESRA showed that the ratio of operating costs to outstanding loan was reduced. In the survey areas, total economic operating cost was much higher than outstanding loans in 1997. This is due to the fact that the loan outstanding was low in the early period (in 1997) whereas the number of staff was fixed. However, in 1998, the credit expanded but the same number of staff worked. This causes, on the one hand, an increase in loans outstanding, on the other hand, the cost rate to reduce sharply. The cost rate of the labour component, that is the ratio of labour cost to loan outstanding, reduced significantly from 153.20% in 1997 to 34.54% in 1998. The change in this element caused the change in overall cost rate from 175.71% in 1997 to 58.34% in 1998. Other components also changed, but by considerably less.

Table 7-19 KUKESRA Cost Structure

Costs	Economic Cost (%)[1]				Accounting Cost (%)[2]		
	96	97	98		96	97	98
	Cost rate						
			(col)[3]	(col)[4]			
Labour	-	153.20	34.54	34.54	-	-	-
Fund	-	12.00	12.00	36.00	-	-	-
Arrears	-	0.00	5.13	5.13	-	-	-
Administrative cost	-	10.51	6.67	6.67	-	10.51	6.67
Total operating cost	-	175.71	58.34	82.34	-	10.51	6.67
	Cost structure						
Labour	-	87.19	59.20	41.94	-	-	-
Cost of fund	-	6.83	20.57	43.72	-	-	-
Arrears	-	0.00	8.80	6.23	-	-	-
Total admin.trative cost	-	5.98	11.44	8.10	-	100.00	100.00
Total operating cost	-	100.00	100.00	100.00	-	100.00	100.00

Computed

[1] Based on the assumption that KUKESRA pays the same prices for all elements of cost as MKEJ does.

[2] Actual costs structure.

[3] The value in this column assumes that the cost of funds used is the rate before the crisis.

[4] The value in this column assumes that the cost of funds used is the annual average of interest rate.

The effect of labour cost in the cost rate is very significant because of its share as a major component of cost structure. In 1987, labour cost constituted 87.19% of total operating cost while in 1998 it contributed 59.20% (see Table 7-19). The larger the outstanding loan, the lower the share of labour cost since the number of staff used is constant.

However, BKKBN did not incur these costs because these costs did not affect the institution, no expenditure was needed. The actual cost rate was just 7.63% in 1997, reduced to 5.05% in 1998. These rates were lower than the economic rates for this component because the actual cost rate just accounted for the cost of paper work, which was the passbook for each new member. Moreover, since the administrative costs had been spent at the time when the programme was prepared and no cash out when the candidates became members, BKKBN did not feel any cost at all at the time when new members joined the programme. Thus, all the revenue is seen as income or accounting profit.

MKEJ is a non-governmental organization (NGO), thus it has to bear all the operating costs. Its cost rate is about 50% of its loan outstanding, however this rate has continuously decreased. In 1995, its cost rate was 51.15%, increasing to 54.85% in 1996. This was due to the fact that the default rate rose to 5% in 1996 compared to 1.22% in 1995. There was also an increase in the number of new recipients. In 1995, total recipients were 333 people, which increased by 792 in a year to 1125 people in 1996. Thus, the initial cost per new member increased from 0.68% in 1995 to 2.01% in 1996. In this period, the programme also opened a new branch, thus the programme had 2 branches. This also caused an increase in house rental costs for the base-camp of the operation. However, the rate decreased in the following years. In 1997, the rate declined to 43.78% and in 1998 the actual cost rate was 40.21%.

Table 7-20 MKEJ Cost and Profit Rates

MFI cost rate (Operating cost / Outstanding Loan)				
Costs	1995	1996	1997	1998
Labour cost components	34.26%	31.81%	26.12%	23.54%
Renting house /electricity	2.72%	3.58%	2.41%	3.18%
Office supplies	0.27%	0.45%	0.30%	0.20%
Initial cost per new member	0.68%	2.01%	2.36%	0.75%
Default	1.22%	5.00%	0.60%	0.55%
Market interest rate (time deposit)	12.00%	12.00%	12.00%	36.00%
Total operating cost rate	51.15%	54.85%	43.78%	64.21% 40.21%[1)]
Revenue rate	30.00%	58.97%	47.54%	44.85%
Profit to loan outstanding ratio	-21.15%	4.12%	3.76%	-19.36% 4.64%[1)]
SDI	0.705	-0.137	-0.125	0.645 -0.155[1)]

Cost Composition (Cost Structure)					
	1995	1996	1997	1998	1998[1]
Labour cost components	66.97%	57.99%	59.66%	36.66%	58.54%
Renting house /electricity	5.32%	6.53%	5.49%	4.95%	7.90%
Office supplies	0.53%	0.82%	0.69%	0.31%	0.49%
Initial cost per new member	1.33%	3.67%	5.38%	1.16%	1.85%
Default	2.39%	9.12%	1.37%	0.86%	1.37%
Cost of fund	23.46%	21.88%	27.41%	56.06%	29.84%
Total Operating Costs	100.00%	100.00%	100.00%	100.00%	100.00%

[1] if the cost of loanable fund is still the same as it was before the economic crisis. This is also the accounting record where the cost of funds used is the cost before the crisis when the funds were borrowed.
Source: Survey data

In 1998, the economic cost rate of MKEJ was as much as 64.21%. This high rate was caused by the bank increasing the interest rate of time deposit to 65% per annum. The calculated average interest rate in the year was 36%. This interest rate boosted the economic cost of funds and the economic operating cost rate. However MKEJ at that time was still operating using funds borrowed at the previous interest rate of 12%. Based on the latter rate, the actual cost rate came to 40.21%. Because the actual cost rate was low, in 1998 the programme expanded from 2 branches to 4.

The operating cost spent by MKEJ was dominated by labour cost, which comprised 66.97%, 57.99%, 59.66%, and 36.66% in years the 1995, 1996, 1997, and 1998 respectively (see operating cost structure in Table 7-20). Using accounting cost, the cost share of the labour component for 1998 was not 36.66% but 58.54%. This shows that the major component of operating cost is labour cost.

The second largest contribution to operating cost is the cost of funds. Its share was 23.46%, 21.88%, 27.41%, and 56.06% (economic), or 29.84% (accounting) for 1995, 1996, 1997, and 1998 respectively.

The two tables mentioned above (Table 7-19 and Table 7-20) show that operating costs have been influenced most by two cost components, labour cost and the cost of funds. Since the cost of funds relies on other institutions from whom MFIs borrow, a cost minimization strategy should address the labour cost component. Thus, a strategy to increase labour efficiency and labour productivity is essential.

Default rate and the application of Joint liability

Default, interchangeable with the term arrears, is the backside of repayment performance. The lower the repayment rate, the higher the default rate will be, which then forms a part of cost for an MFI. Here the default rate of Malang District and of survey areas will be discussed.

Default Rate

Arrears or default of KUKESRA have only been recorded since January 1998. Thus there is no information on any arrears before this date, or if there was default, there is no precise information on its extent (see Table 7-21). In an interview with Mr. Marjono, a key staff member of BKKBN at district level, it was identified that the record of arrears before 1998 was not urgent because the default rates seemed very low. This shows how this programme has been carried out more as a political economic programme than as a development economic effort to help the poor. Thus the aspect of monitoring and evaluation has had less attention. This is a characteristic of government sponsored credit programmes in Indonesia, as Moll (1989) found. In his study of KIK, KMKP, and BIMAS credit programmes, he found that such financial systems just acted as disbursement agencies. They never attempted to assess the performance of the programmes since all the risks were borne by government. As in the predecessor programmes, KUKESRA staff, PLKB or PKB, just paid attention to absorption and repayment and never to who used the credit and how they used it. They were not much concerned with joint liabilities. This means that they did not want to know who bore the default; the individual recipients, all recipients in the same group, or the leader. They just requhed that the instalment be repaid on time. Thus, they put pressure on the leaders and not on members. The leaders then put the same pressure onto members because, in fact, leaders had to repay any arrears.

In many cases, the leaders had to pay if members repaid instalments late. This is because the staff put pressure onto the leaders to repay all the repayments on time, and then the leaders could collect late repayment from the members. The pressure approach was used by the staff to secure theh situation, because the staff had pressure from theh superiors.

Other points shown by the default figures are related to the crisis of the economy. Since the crisis occurred in Mid-1997, the effect on the rate of default appeared about 6 months after. The effect came fhst to urban areas then rural areas. Furthermore the effect on rural people in terms of default rate was larger than that for urban people. It reflected the greater financial difficulty in the crisis period. This difficulty led to arrears, on the one hand, and the need for more funds for business, on the other hand. Facing this situation and realising that access to higher stages of KUKESRA was uncertain, some cadres and group leaders made theh own decision to redistribute the repayment fund to other members who had not received it before or were still waiting in the queue. The cadres thought that they were doing the best for members in the group, but this strategy certainly boosted arrears. Some cadres also supposed that the fund was from government for the poor, thus they assumed that it was like a grant, which did not need not to be repaid.

Table 7-21 Default Rate of KUKESRA

	Default Rate of KUKESRA Programme (%)									
	Malang District		Sample Region		Sumberpucung		Ngajum		Kepanjen	
Date	KPRK	BNI	KPRK	BNI	KPRK	BNI	KPRK	BNI	KPRK	BNI
9/30/96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/31/96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/30/96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/31/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/28/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/31/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/30/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/31/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/31/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/30/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/31/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/30/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/31/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/31/98	3.94	3.15	2.21	1.68	0.80	0.46	0.00	0.00	4.54	4.74
2/28/98	3.56	2.91	1.80	1.37	1.01	0.55	0.00	0.00	4.05	3.98
3/31/98	3.64	3.25	1.56	1.25	0.74	0.63	0.00	0.00	4.34	2.77
4/30/98	3.74	2.42	1.69	0.93	0.83	0.36	0.00	0.00	4.85	2.95
5/31/98	3.85	2.98	1.47	1.00	0.77	0.39	0.00	0.00	5.59	3.25
6/30/98	2.97	3.60	1.12	1.14	0.81	0.44	0.00	0.00	2.06	4.04
7/31/98	3.56	3.18	1.27	0.90	0.81	0.49	0.14	0.09	2.22	1.76
9/30/98	4.41	3.94	2.77	2.08	1.99	1.43	2.94	2.26	3.29	2.47
10/31/98	10.12	9.56	3.52	3.00	5.09	4.18	3.73	3.40	2.37	1.96
11/30/98	8.97	9.17	2.83	2.62	3.60	2.99	2.69	3.12	2.48	2.01
12/31/98	9.72	10.03	5.33	5.13	9.51	8.26	5.26	7.11	2.27	1.65

KPKR is branch post office in sub-district levels, dealing dhectly with leaders and PKB/PLKB.
Source: BKKBN Malang District

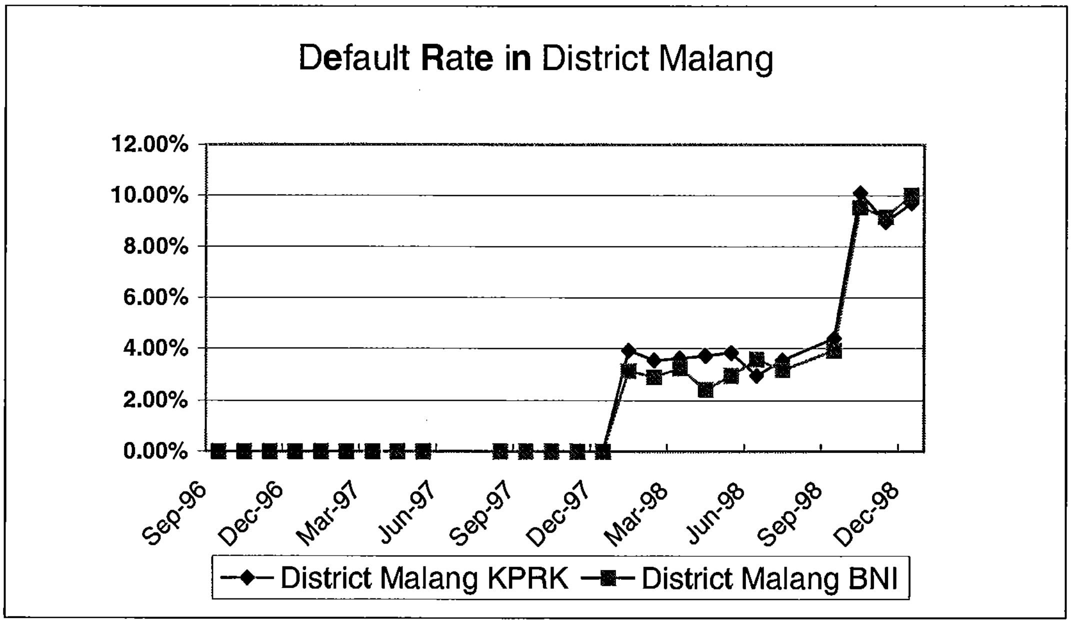
The figures from the district and the survey location (see figure 7-2) show that default appeared after January 1998 or about 6 months after the crisis. This means that after the crisis occurred because of the fall in exchange rate, it took about 6 months for the effect to spread to the cost of living of the poor from capital cities to sub-district levels or village levels.

Furthermore, the effect reflected by the rate of default has two different stages, from January to July 1998 and after July 1998. A moderate level of default characterizes the fhst period while a high default rate characterizes the second period.

The overall figure of the sample areas shows the same tendency as the tendency at the district level. However, data from the survey in the sub-districts reveals a different pattern in the default progress in the crisis period. As shown in Figure 7-3, some sub-districts, such as Kepanjen, were dominated by the fhst stage phenomenon while others such as Ngajum by the second. Kepanjen is a sub-district with a heavy urban envhonment where there is the largest market in the survey areas. The transportation to the central business site is relatively easy. In contrast, Ngajum is a sub-district with heavy rural envhonment, while sub-district Sumberpucung has a market place but not as big as the market in Kepanjen. The urban-rural characteristics have a strong correlation with the stages of default. An urban area such as Kepanjen has been affected faster by the crisis, which raised the default as high as 5%, but the recipients were relatively quick to settle in the new situation after the shock. This is reflected by the decrease in the default rate from 5% to below 2% from in January to December 1998.

A rural area, such as Ngajum, in contrast, shows the opposite (as shown in Figure 7-3). It was relatively unaffected until July-August 1998. However, after July-August 1998 the default rate jumped to about 7%. Sumberpucung is the sub-district showing both phenomena to some extent, though it more closely follows the Ngajum pattern, being, relatively dominated by its rural envhonment.

The arrears were mainly caused by failure in the production sector, including marketing. In the crisis period, the failure in the production sector was due to the high cost of production, often in combination with market reduction or reduction in effective demand. Some cases of arrears were caused by non-economic factors such as the leaders of groups moving to other areas or even overseas. The crisis brought high inflation as discussed in chapter 6. This condition has reduced real income significantly. This leads to the high arrears as presented in Figure 7-2 and Figure 7-3.



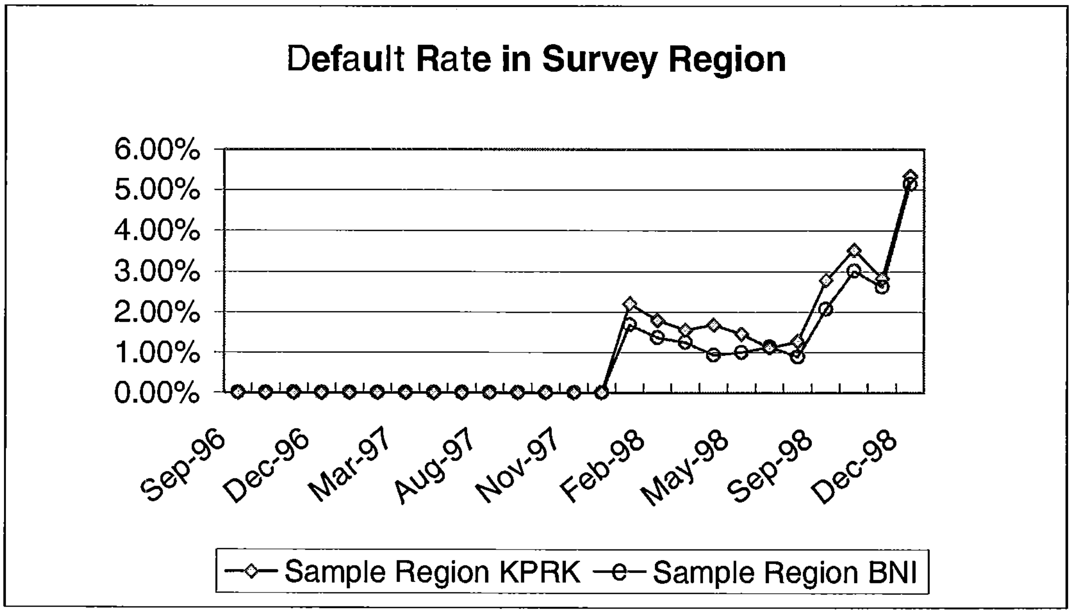
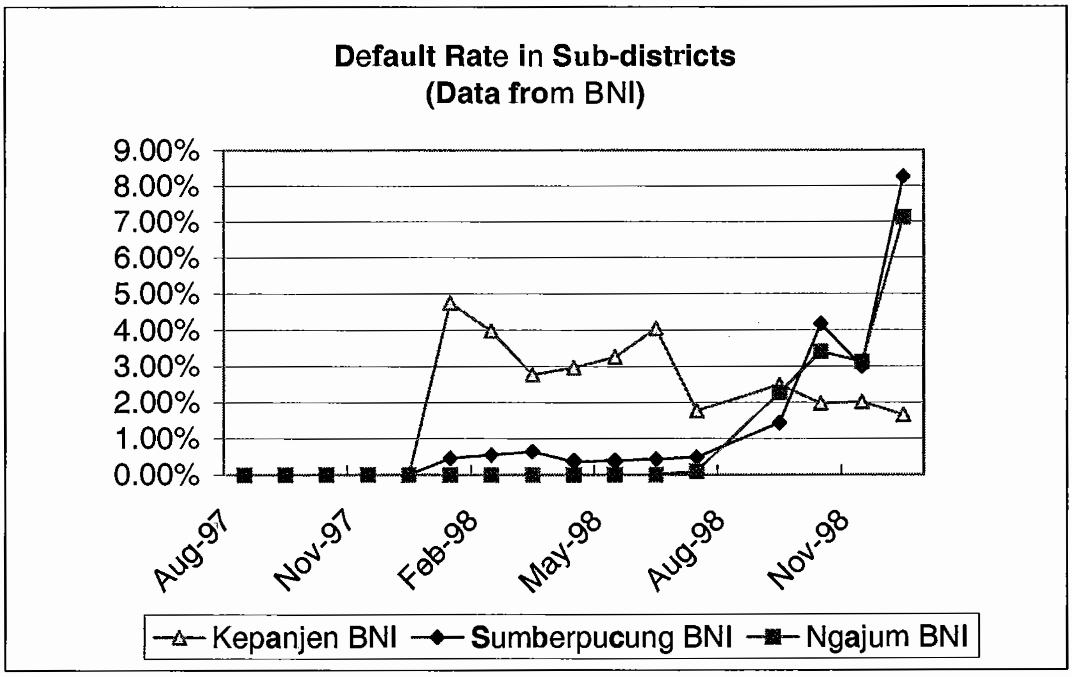


Figure 7-2 Default rate in Malang District and in Survey Area



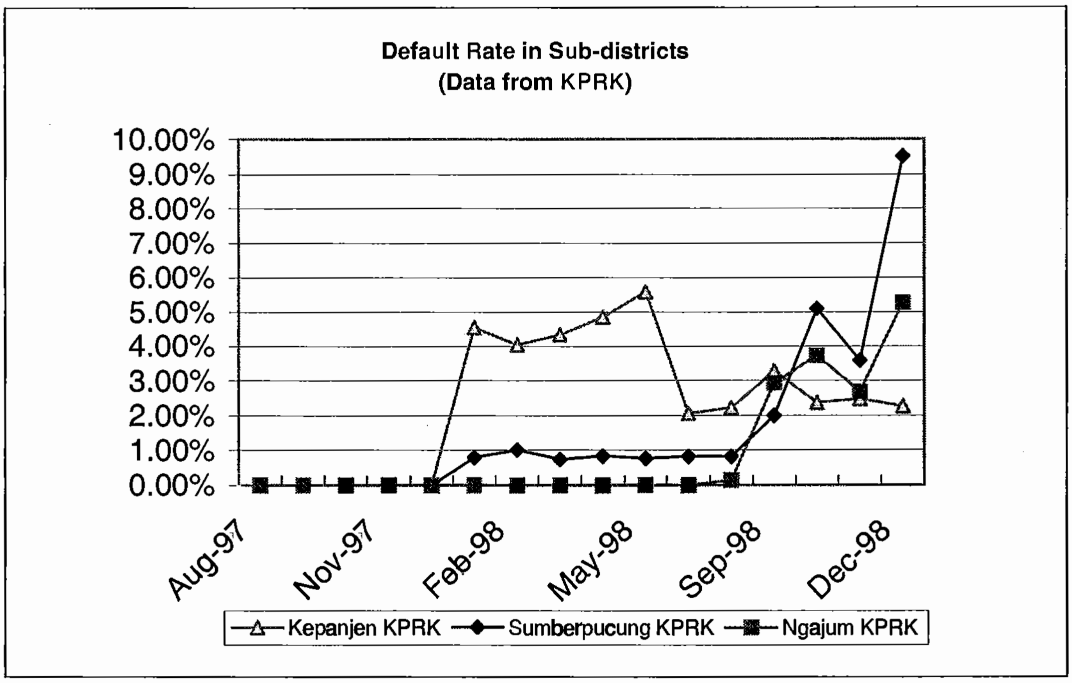


Figure 7-3 Default rate for Each Sub-District

MKEJ also had some arrears. These were 1.7% in 1997, which increased to 4% in 1998. Those who had arrears were those who had some difficulties in theh business activities due to the crisis. In 1998, the rate of default jumped up, but it was much lower than the arrears in the KUKESRA programme.

Both programmes, though, showed relatively low default rate. In the national context the KUKESRA default rate in East Java was below 10%, and this is regarded as low. Thus, Malang District with a rate below 7% was seen to have above average performance. However, studies of MFIs in other countries have shown that one should be cautious when measuring performance by repayment levels. Adams, Vogel, *et al.* (1984:142-143) in theh study on loan delinquency rate in Costa Rica found that the high repayment rate of the poor farmers did not mean that the poor farmers had high productivity. The findings show that they could repay because there was a heavy subsidy content in the credit programme. In addition, low default rate was due to the fact that bank staff were highly selective of farmer candidates. Those who were credit worthy were accepted as members, while others were rejected. Another fact pointed out by Woolcock (1999:20) was that since this indicator is important especially for donors, bank staff in many cases manipulated the repayment figure to show that the programme was successful.

In relation to KUKESRA and MKEJ, the high repayment rate in KUKESRA was not caused by the staff's manipulation such as identified by Woolcock (1999), but it does confirm the finding of Adams, Vogel, *et al.* (1984:142-143). The high repayment rate in KUKESRA could not reflect the productivity of recipients. This was because the real interest rate was negative, and also because recipients wanted to avoid any trouble with government, both local government and the administrator of the programme. MKEJ, in contrast, had high repayment rates even though it had a high interest rate. This is due to recipients' productivity. The difference is, in turn, reflected by profit of the programmes. Both programmes had an accounting profit, but only MKEJ had economic profit. KUKESRA showed an accounting profit due to subsidies. Its economic operating cost was much higher than operating revenue. KUKESRA actually had economic operating losses. Thus, it was not viable as a microfinance institution (Wahid, 1994:10).

The Application of Joint liability

Joint liability principle stipulates that any default raised by any member of the group will become the responsibility of all members in the same group. In the theory of MFI, this is seen as an effective instrument to avoid arrears. Unfortunately, it cannot be appropriately applied in the KUKESRA programme.

Some KUKESRA members knew about the joint liability principle, while others did not. A few members and recipients of KUKESRA who knew about the principle still felt reluctant to adhere to it. It could be argued that people did not want to follow the joint liability principle because there was no incentive to do so. Most MFI can apply this principle if the members can get some benefit from it. If they do not, for example, their group will lose the chance to receive higher stages of credit. Nevertheless, in the case of KUKESRA, since the continued support of KUKESRA was uncertain, recipients felt indifferent to applying the principle. Consequently, each member of the group prefered to fulfil her own duty rather than to bear other members' responsibility. Members then saw arrears as an individual responsibility and not the responsibility of the group.

MKEJ is a business oriented MFI which has strong emphasis on joint liability. The default of a member became the burden of all members in the group. However, MKEJ did not apply this principle completely. It modified it in such a way as to provide the best solution to the default problem. The compromise is that the default is shared between the group and the institution (MKEJ). This aspect has been discussed in chapter 5.

MKEJ established this policy because it has trust in its recipients. Defaults, as they knew from their close monitoring, were not caused by bad character but due to macro economic conditions lying beyond members' control. Thus, solving a problem dealing with the poor should be local, specific, and innovative (Getuhig-Jr. and Shams, 1991; Reinke, 1998:44-45).

Profit rate & SDI

Analysing profit includes cost on one hand and revenue on the other. Profitability can be derived from the interaction between cost rate and the rate of interest. Since the interest rate is fixed and the revenue is just interest payment made by recipients, any further discussion on profitability will deal with the cost rate.

Profitability is necessary for sustainability. For MFI activities where the credit is aimed to support economic activities to create employment (self-employment) and to increase income, the profitability should deal with the situation of both members' businesses and institutions. In order for the members to continue with the programme, their activities have to survive and this means they have to be profitable. The survival of the recipients' business is the requhement for the sustainability of the programme. For the recipients, profit could be boosted by financial expansion, or by lowering the cost of the operation, in this case by replacing the expensive with the relatively cheaper sources of fund.

From the institution's side, the programme can survive if the institution has no permanent loss in real terms. If the institution makes a profit, it can continue its operation and this means the programme can survive. As noted previously, a programme can operate due to subsidies, however these cannot be relied indefinitely. Thus, in order to survive for a long period, the institution or programme has to be self-sustaining and survive without any subsidy. This means efficiency and productivity matter. Survival without any subsidy can be measured by using Yaron's Subsidy Dependence Index (SDI).

The index of SDI justifies whether a programme still depends on subsidies or can survive without any subsidy. It also provides information of how much the rate of interest should be adjusted to free the programme from such dependency. The index has no limit value. It distributes in positive and negative range.

The positive sign of the index indicates that the programme still relies on subsidies and if the sign is negative, this means that the programme is profitable without subsidies or it can self-survive.

Table **7-22** Profitability and SDI

	Accounting Profit to loan outstanding ratio			**Economic Profit to loan outstanding ratio**			**SDI**		
	1996	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**
KUKESRA									
Kepanjen	4.20%	4.168%	4.074%	-13.03%	-10.39%	-45.58%	3.10	2.50	11.18
Ngajum[1]	4.20%	4.154%	4.066%	-16.38%	-7.21%	-92.60%	3.90	1.75	22.77
SumberPucung[2]	4.20%	4.178%	4.078%	-26.90%	-8.06%	-61.87%	6.41	1.93	15.17
Survey Areas	4.20%	4.165%	4.072%	-17.50%	-8.62%	-64.97%	4.17	2.08	15.95
MKEJ	27.70%	17.01%	18.08%	27.70%	17.01%	-34.92%	-0.137	-0.125	0.645 -0.155[3]

Note:

[1] Including Sub-district Wonosari

[2] Including Sub-district Kromengan

[3] If there was no economic crisis. The scenario was calculated as follows: for current situation, all the parameters in the formula of SDI were calculated using the actual figures, while the scenario for no-crisis, the parameter of the cost of fund was used. It was assumed that the same rate of interest (normal period interest rate) would exist if there were no crisis.

Source: Survey data

In Table 7-22, data for the KUKESRA programme for the whole survey area and for each sub-district shows that the programme relied greatest on subsidies and could not live on its own strength. This means that if there were no more subsidies, KUKESRA would close down because its economic cost of operations was much larger than the revenue it got. This is also reflected by the negative economic profit in the above table.

The economic loss was not just caused by arrears, but mainly by the rate of interest charged. The very low, even negative, interest rate in the KUKESRA programme did not cover the operating costs.

In contrast, MKEJ, except in the year of 1998, had negative value of SDI, which means that it could survive without subsidies. The year of 1998 was characterized by a high rate of inflation as well as high interest rates of time deposit in formal banking leading to high cost of funds, both an effect of the economic crisis.

Further investigation on dependency requhes answering the questions of how serious the dependency is or how much effort is needed to remove the dependency. These questions can be answered by paying attention to the magnitude of the coefficient of SDI. Here special attention is paid to coefficients of index having positive sign, meaning those having dependency. It is known that the larger the magnitude, the greater the dependence will be, or the bigger the effort needed to free the programme from dependency.

If adjusting the rate of interest is the remedy for the problem of dependency, then the adjustment in the interest rate should be calculated as "1+SDI" (one plus the magnitude of the SDI). Suppose that the KUKESRA in 1997 had SDI as high as 2.08, in order to eliminate the dependency, the interest rate ought to be increased by (1+2.08) or 3.08 times as high as the rate in 1997. Obviously, the adjustment just follows the magnitude of the index.

The comparison of the KUKESRA figures in the years 1996, 1997 and 1998 shows that the index tended to be smaller from 1996 to 1997 before jumping dramatically in 1998. This phenomenon is caused by the fact that, on the one hand, the operating cost of KUKESRA was relatively unchanged because it was dominated by cost components such as the number of operating field staff, which were fixed. On the other hand, the increase in outstanding loans led to larger revenue. Consequently, the loss became smaller and the index reduced.

Data indicate that, whether the economy is in crisis or not, KUKESRA always has positive sign of SDI. This means that KUKESRA as a microfinance institution is not self-sustained. The facts so far show that the programme is still alive due to government subsidies. Obviously, this programme is not economically motivated but rather politically motivated similar to the *Inpres Desa Tertinggal* (IDT) that eventually failed to achieve its objectives (Manning, 1998:15).

In contrast, MKEJ, even though it had a loss in its early period in 1995 (not stated in Table 7-22, but it can be seen in Table 7-20), later became profitable. As a newly started non-governmental MFI, its performance has been good. If there were no crisis, the MKEJ's SDI would have been –0.137, -0.125, and –0.155 for 1996, 1997, and 1998 respectively. The 1998 figure can be interpreted to state that MKEJ would have survived even if it had reduced its interest rate by as much as 15% of the existing rate. Since the existing rate is 30%, MKEJ would have survived if it charged the rate of 25.5%. In comparison, BRI-UD in 1994 had an SDI –0.43. BRI-UD charged 32.9% nominal interest rate. By this index, it would have still survived if the rate was reduced to 18.7% (Yaron, 2001).

However, in 1998 when the effect of the economic crisis appeared, the cost of funds jumped because banking increased the interest rate of time deposit to 68% per annum. As a result, the programmes, KUKESRA and MKEJ, suffered large economic losses. This was reflected by the increase in the magnitude of SDI. However, in that difficult year, the programmes, in particular MKEJ, still had financial profit because they were still operating using funds borrowed under previous low rates.

SUMMARY

From the above description, it is clear that many members of KUKESRA took advantage of the opportunity to do business using the fund. Some of them still survive but a few of the new-starts eventually collapsed as an effect of lack of knowledge and skills together with the situation of the economic crisis.

Even though many business activities were affected by the crisis, the majority of small business enterprises still survived. In the survey area, it was found that the survival was of those either dealing with the community's basic necessities or having partnership with other surviving business enterprises. Small businesses with such characteristics would survive because they had their own secure market.

Recipients whose businesses survived tended to have had a good performance in loan repayment. This was particularly apparent in MKEJ clienteles but not so clear in the case of KUKESRA. This was because loans from MKEJ is for supporting business activities where the income generated is the main source for repayment. In contrast, KUKESRA recipients used the fund for many types of expenditure and the source for repayment does not dhectly come from the business income. As the sustainability of the MFIs is indeed derivative of the sustainability of the recipients' business enterprises, those who did not have income generating activities tended to have arrears.

The sustainability of an MFI relies much on the costs and revenue, which together shape profitability. For efficient MFIs, this means that sustainability depends on the repayment rate and the rate of interest charged. For inefficient MFIs, besides these two factors, efficiency in operation is still a factor determining its sustainability.

KUKESRA and MKEJ both have good performances in repayment rates. However, factors behind the performance are different. MKEJ performance is driven by factors such as the incentive to get a bigger size loan, intra-group social pressure and monitoring due to the application of joint liability, and quality of field staff to support the recipient activities and to monitor recipients' behaviour in repaying the instalment. In contrast, KUKESRA's good performance in repayment in Malang District has other stimuli. It has no relationship with the income from business because they use other sources to repay the instalments. They just repay it because most of them do not want to have problems with government and also with the staff that help them not only in relation with TA-KUKESRA but also with Family-Planning related services. It is also not supported by the application of the principle of joint liability because this principle is inapplicable for KUKESRA members. Each recipient has to repay her own debt, unless the leader takes responsibility. The factor pressing them to repay is the social control of the community, since the programme uses an existing vital community institution to collect the repayment, such as a prayer meeting. They repay the loan to avoid dishonour.

Both programmes show that, financially, they are profit making operations, but only MKEJ has economic profit while KUKESRA, with its operating costs heavily subsidised by government, has no economic profit. In fact, it has economic loss, when the subsidies are excluded. This means that only MKEJ is self-sustained while KUKESRA is not self-sustained.

APPENDIX CHP.7

APPENDIX CHP.7.1 INTEREST RATES

Table 7-23 Interest Rates of KUKESRA and MKEJ

KUKESRA

Stages	Nominal Interest rate (monthly repayment)			
	Flat rate		Exponential	
	Official	Unofficial	Official	Unofficial
I	3.75%	15.00%	3.80%	15.76%
II	3.50%	10.00%	3.53%	10.25%
IIi	3.38%	7.50%	3.40%	7.59%
IV	3.30%	-	3.31%	-
V	3.25%	-	3.25%	-
Stages	**Effective rate (monthly repayment)**			
I	4.17%	16.67%	4.25%	18.00%
II	3.89%	11.11%	3.95%	11.69%
IIi	3.76%	8.33%	3.82%	8.66%
IV	3.67%	-	3.68%	-
V	3.61%	-	3.61%	-

MKEJ

Stages	Nominal Interest rate (weekly repayment)			
	Flat rate		Exponential	
	Official	Unofficial	Official	Unofficial
1	30.00%	30.00%	37.43%	37.43%
II	30.00%	30.00%	36.73%	36.73%
III	30.00%	30.00%	36.33%	36.33%
IV	30.00%	30.00%		
V	30.00%	30.00%		
Stages	**Effective rate (weekly repayment)**			
I	30.00%	30.00%	37.43%	37.43%
II	30.00%	30.00%	36.73%	36.73%
IIi	30.00%	30.00%	36.33%	36.33%
IV	30.00%	30.00%		
V	30.00%	30.00%		

Calculated from primary data

Supposing that the institution in the beginning period (beginning of the year) has, for example, Rp 180.000 and would like to disburse it as loanable fund of KUKESRA.

In Stage I:

The MFI can distribute it to 10 members where each has Rp 18,000. This is the take home money. However, in theh accounts, each of them has a Rp 20,000 loan constituted by Rp 18,000 take home loan and Rp 2,000 as TAKESRA "blokir". Therefore, they have Rp 20,000 credit but actually, they only receive Rp 18,000 as the effective credit. Then they have to repay it in 4 months starting from the next month after getting the credit. Each payment is as much as Rp 5,062.5, a total of Rp 20,250 in 4 months. Therefore, the interest payment is Rp 250 in four months. For a full year, this figure is tripled and amounts to Rp 750. The rate of interest in nominal terms is as high as Rp 750/Rp 20,000*100% = 3.75%. But the effective interest rate is higher, because each member has contributed her own Rp 2,000 TAKESRA. Thus, the value of loan repayment is effectively Rp 18,250 since the interest payment she has to pay for a 4-month loan is Rp250. So the flat effective interest rate is Rp 750 /Rp 18,000*100% = 4.17%.

However, information on the ground is slightly different from that stated officially. The repayment is not as much as the stated one but higher. In the fhst stage, for instance, each repayment is as much as Rp 5,250. The staff argue that the amount has been voluntarily agreed to by members to contribute to the staff's transport costs, especially those involved in taking the group's repayment to the post office. This situation has raised unofficial rates of interest, both the nominal and the effective. Each member actually repays in 4 months as much as Rp 21,000, so the interest payment for 4 months as much as Rp 1,000. Therefore, the flat interest payment for a full year is as much as Rp 3,000. Following the above calculation, the nominal unofficial rate will become Rp 3,000/Rp 20,000 * 100% = 15%, and the effective rate will be Rp 3,000/Rp 18,000*100% = 16.67%. The same calculation will be applied for other stages, with some adjustment based on their specifications. For simplicity, the calculation can be summarised in the following formula:

APPENDIX CHP.7.2 INTEREST RATE FORMULA

A. Interest Rate Formula for KUKESRA

Flat rate

Official rates annually

$$i_{ofc} = \left(\frac{(mrp_{ofc} * frp) - L}{L} \right) * \left(\frac{12}{mprd} \right)$$

$$r_{ofc} = \left(\frac{(mrp_{ofc} * frp) - L - Blokir}{EL} \right) * \left(\frac{12}{mprd} \right)$$

Unofficial rates annually

$$i_{uofc} = \left(\frac{(mrp_{uofc} * frp) - L}{L} \right) * \left(\frac{12}{mprd} \right)$$

$$r_{uofc} = \left(\frac{(mrp_{uofc} * frp) - L - Blokir}{EL} \right) * \left(\frac{12}{mprd} \right)$$

Where
i is nominal rate
r is effective rate
mrp is monthly repayment
frp is frequency of repayment
L is nominal credit
EL is effective credit.
Blokir is the part of credit taken as compulsory saving.
mprd is period of repayment in months
Subscripts, ofc and uofc, are for official and unofficial respectively.

However, for efficiency, the MFI could run with all resources without any waste. Therefore, the calculation has some modification. Based on the above figures, the operation without wasting resources can be calculated as follows:

Table 7-24 Simple Computation of Interest Rate (Official)

Period	Nominal credit	Effective credit	Total official repayment for a cycle minus blokir	Interest rate for the period
1st 4 months	Rp 20,000	Rp 18,000	Rp 18,250	1.39%
2nd 4 months		Rp 18,250	Rp 18,503	1.39%
3rd 4 month		Rp 18,503	Rp 18,760	1.39%
Full year		Rp 18,000	Rp18,760	4.23%
If the recipients pay once in 4 months		(1+0.0139)^(12/4)-1*100% =	4.23%	
If they pay monthly		(1+0.0034722)^12-1*100% =	4.25%	

Table 7-25 Simple Computation of Interest rate (Unofficial)

Period	Nominal credit	Effective credit	Total unofficial repayment minus blokir	Interest rate for the period	Avg. Interest rate per month
1st 4 months	Rp 20,000	Rp 18,000	Rp 19,000	5.56%	1.39%
2nd 4 months		Rp 19,000	Rp 20,056	5.56%	1.39%
3rd 4 month		Rp 20,056	Rp 21,170	5.56%	1.39%
Full year		Rp 18,000	Rp 21,170	17.62%	
If the recipients pay once in 4 months			(1+0.0556)^(12/4)-1*100% =	17.62%	
If they pay monthly			(1+0.0139)^12-1*100% =	18%	

This calculation can be summarised in the following formulas:

In KUKESRA:

Official compound rates annually

$$i^{c}_{ofc} = \frac{\left(\frac{(mrp_{ofc} * frp) - Blokir}{L}\right)^{12}}{mprd} - 1$$

$$r^{c}_{ofc} = \frac{\left(\frac{(mrp_{ofc} * frp) - Blokir}{EL}\right)^{12}}{mprd} - 1$$

Unofficial compound rates annually

$$i^{c}_{uofc} = \frac{\left(\frac{(mrp_{uofc} * frp) - Blokir}{L}\right)^{12}}{mprd} - 1$$

$$r^{c}_{uofc} = \frac{\left(\frac{(mrp_{uofc} * frp) - Blokir}{EL}\right)^{12}}{mprd} - 1$$

In some cases, the rate can be higher, but the unofficial repayment above the official one goes into the staff's pockets.

Let us take the same stage as above for simplicity. For example, a member has to have Rp 20,000 credit where Rp 180,00 is the take-home loan and the remaining Rp 2,000 is put into her TAKESRA account. Since the member is reluctant to accept the money, it is suggested to her that she take only part of it. For instance, she only takes Rp 10,000 effectively. In this case, her repayment is sometimes not proportional. Let us say that she pays Rp 3,000 for each payment. Or if she takes Rp 8,000, she pays Rp 2333.3 each payment or even higher.

Table 7-26 Summary of **KUKESRA** Borrowing Cost

Effective credit	Each payment **Official**	Each payment **Unofficial**	Effective rate		
			Official (flat)	**Unofficial (flat)**	**Unofficial (compound)**
Rp 18,000	Rp 5,062.5	Rp 50,250	4.17	16.67	17.61
Rp 10,000					
Proportional	Rp 2,812.5	Rp 2,916.7	4.17	16.67	17.61
Transport cost for each payment	Rp 187.5				
Each repayment Rp2,812.5+Rp187.5 = Rp 3,000	-	Rp 3,000.-	-	26.67	29.11
Rp 80,000					
Proportional	Rp 2,250.0	Rp 2,333.3	4.17	16.67	17.61
Transport cost for each payment	Rp 187.5				
Each repayment Rp 2,250+Rp187.5 = Rp 2,437.5	-	Rp 2,437.5	-	32.29	35.89

Assuming that TAKESRA is shared proportionally and the transport cost contribution is fixed, it follows that the less the amount of loan taken the higher the rate of interest charged.

B. Interest Rate Formula of MKEJ:

$$i^c = \left\{1 + \left(\frac{(wrp) - \left(\frac{L}{wprd}\right)}{L} \right)\right\}^{52-grcprd} - 1$$

Where
grcprd is the number of weeks as grace period
wrp is weekly repayment
wprd is period of credit in week number (=52-grcprd)
res is the interest rate where compulsory saving has been included in repayment.
Cs=compulsory saving

$$r_{cs}^{c} = \left(1 + rcs^{wprd}\right) - \frac{(cs * wprd)}{L} - 1$$
$$= \left(rcs^{wprd}\right) - \frac{(cs * wprd)}{L}$$

CHAPTER-8: EVALUATION OF KUKESRA AND MKEJ: THE WELFARIST APPROACH

INTRODUCTION

The impact of MFI on poverty reduction can be analysed by examining some indicators including changes in the performance of some basic elements of poverty and in the poverty index. The former shows how MFIs improve the performance of each element of poverty. It does not imply that the overall poverty incidence will reduce, but it shows which aspects are sensitive to change and which are not. It also shows that some elements of poverty are more responsive to changes than others. This implies that if some elements are getting better, while others do not then the overall poverty incidence need not necessarily decline. It is also possible that all elements may show an improvement, but the degree of improvement may differ across each element. Some elements may have significant impacts while the effects on others are insignificant. Thus, the overall incidence of poverty may not be significantly altered.

To show whether poverty is reduced overall, an analysis of the poverty index is requhed. Changes in the index will reveal changes in poverty. Therefore, an analysis of both the elements and the poverty index would reveal a complete picture how MFIs affect poverty.

The two well-known approaches used in order to see the impact of a particular programme are to analyse the "before and after" effects, or the effects "with and without" the programme. The reliability of the “before and after” approach is based on the assumption that the situation of the people outside the programme remains unchanged. Thus, the change in the situation of recipients before and after participating in the programme would be a measure of the impact of the programme. However, this assumption is unlikely to be satisfied since the situation of all people is always changing. Therefore, differences in the situation before and after involvement in the programme reflect a combination of the impact and the general trend in the society.

The "with and without" approach is not affected by general societal trends. However, the differences in the situation between recipients and non-recipients would show the impact of the programme only if an underlying assumption is also satisfied: that both groups, recipients and non-recipients, begin from the same situation before the programme was launched. If this assumption is not satisfied, then any differences in the performance between the two groups may be due to the combination of impact and any bias in the sample selection.

A compromise to overcome the weaknesses in the two approaches to programme evaluation is to combine the two methods. This means that the impact can not only be seen from the difference between the situation before joining and after joining the programme (A), or from the difference between the situation of recipients and of non-recipients (D), but the difference between the Δ of recipients and of non-recipients or ($\Delta_{recipient} - \Delta_{non\text{-}recipient}$) or ($D_{before} - D_{after}$). This means a combination of time series, at least one lag, and cross-section data.

A methodological problem appears to exist since the survey undertaken used cross-sectional data. Many cross-sectional studies overcome this problem by using historical data of the variables investigated. However, dealing with the poor, the majority of whom are uneducated or illiterate, historical data are not available. To overcome this situation some studies, such as the study of the economic impact of KIK/KMKP in Indonesia (Bolnick and Nelson, 1988), adopted an alternative approach. Bolnick and Nelson (1988) termed it the "memory recall" approach. Data about the past was obtained based on the respondents' ability to remember theh past experience. This approach has been subjected to much debate in the literature and has long been, as many variables are influenced by the reliability of memory recall.

As ah alternative approach, especially in dealing with people with little or no education, "memory recall" was used in this study to test whether this approach was reliable. Studies carried out elsewhere have tried to apply some questions related to respondents' experience in the past, particularly before the programme was launched, and before the economic crisis appeared. For the related variables, the corresponding questions in the survey asked the respondents fhstly about theh current status, and then about theh condition in the past, before the programme was introduced. The current situation was asked first, because it is relatively easier to respond to, and in this way the respondents knew and understood well the content of the questions which helped them to recall their past experiences.

In this study, even though the researcher assisted the respondents to recall their situation in the past, they found it difficult to recall the exact situation they were in before and to distinguish it from the current situation. They tended to answer that the situation was unchanged and was the same as before participating in the programme. The situation before the programme was launched was difficult to recall partly because of the small size of the loan and credit programme[48] and therefore they could not remember whether there had been something significantly different. They knew administratively that they had been involved in the programmes but they did not see any significant difference in the economic conditions in which they lived. Variables such as income from business activities, hours worked, and basic need elements such as nutrition intake are among the

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[48] For KUKESRA, in stage I, each recipient received Rp 20,000 which is divided into two parts: Compulsory saving (TAKESRA Blokir) Rp 2,000, and a take-home loan of Rp 18,000. In stage II, III, IV, and V, the size of loan in a stage was twice as much as the size of the previous loan. In addition, 10% of the loan is retained as compulsory savings (TAKESRA Blokir) and the remainder is the take-home loan. In stage II, for instance, each recipient received Rp 40,000 (TAKESRA blokir Rp 4,000 and a take-home loan of Rp 36,000).

variables affected where the memory recall were poor. Past information on these variables was vague and this may well explain why there seemed to be no significant changes in these variables before and after participating in the programme.

The situation before and after the crisis of 1997 was a major problem for the poor to recall. For the above-mentioned variables, the respondents were only able to say whether the economic situation had changed or not changed, but were unable to say by how much.

Thus, for the purpose of this study, in order to investigate the effects of the credit programmes, in particular small-size credit on the poor, the 'memory recall' approach is not an appropriate approach to use. Data about the past are highly unreliable, and it is extremely difficult to obtain valid information.

Due to the failure of the 'memory recall' approach, this study adopted an alternative approach, of using cross-sectional data with a comparison of the performance of the recipients at different stages of credit. As discussed above, the 'with and without' the programme approach has its weakness if the two groups do not start from a similar situation at the initial starting point. In view of the 'bias' of the 'with and without' method, the effectiveness of the programme is investigated among those who obtained credit at different stages.

This chapter on the impact of MFI programmes on poverty alleviation is divided into two parts. Part I discusses the dhect effects on aspects of poverty alleviation. In this section, for each key indicator/variable, the mean value of those who are in the lower stage of credit is compared with that of those who are in the higher stage. To test for The Difference between Means, t-statistics is used in the analysis. Part II will discuss the impact of the programme using micro-econometric analysis.

PART I: IMPACT OF THE PROGRAMMES (A COMPARISON OF MEANS)

Since most of the respondents in the study were in stage one or stage three in the lending cycle, the statistical test performed was based on differences in the means between stage one and stage three. The test was conducted to investigate whether there was a significant difference in the economic life of members of the programme at different stages of credit. All the results of the tests are presented in Table 8-1 to Table 8-5. In each table, the indicators of poverty such as income from wife's business activities, employment effects, and aspects of basic needs were measured.

Income Effects

In examining the income effects, fhst, a general picture of the effect of the programmes on income will be undertaken followed by an analysis of the effects of the specific programmes. This will provide a description of how small size credit programmes affect the income of the poor, especially income derived dhectly from the activities financed by the loan. A further analysis by programme type will investigate whether there is any significant difference on income recipients.

The overall effects on wives business income

Table 8-1 shows that, in general, there was no significant difference in incomes of recipients generated from business activities between those at the credit stage level I and credit stage level III. The mean of wives' business income of those in stage I was Rp131,182.80 per month which was less than the mean business income of wives in stage III, at approximately Rp 147,182.54 per month. Nonetheless, the difference was insignificant since there was a wide variation of income in both the groups. The standard deviation of income in stage I was Rp 81,780.83 compared to Rp 96,456.2 for stage III.

Table 8-1 **Differences in Performance of Interesting Variables (Whole Sample)**

Measures	Stage I	Stage III	t value
Wife's Income	131182.80	147182.54	-1.19
	(81780.83)	(96456.2)	
Daily effective working hours	7.15	6.23	2.82***
	(1.88)	(2.04)	
Number of workers involved	1.47	1.37	0.32
	(1.961)	(0.827)	
Lack of Education Achievement	0.066	0.051	0.67
	(0.158)	(0.122)	
Lack of Health services Achievement	0.19	0.152	1.05
	(0.251)	(0.21)	
Lack of Housing services Achievement	0.627	0.556	1.71*
	(0.253)	(0.303)	
Lack of Nutrition Achievement	0.21	0.189	0.65
	(0.2)	(0.221)	

Number in brackets is Standard Deviation.
* denotes significance at 10% level.
* * denotes significance at 5% level.
* ** denotes significance at 1% level.
(-) sign in t statistics means the mean of fhst group is less that that of the second.
Source: Survey data

This result leads to the conclusion that the small credit did not have much impact on the income of the poor income. However, the effect might have been significant in some different aspects. In order to examine this, a further analysis using various other dimensions were undertaken.

Table 8-2 to Table 8-4 describe the effects on income from three different dimensions, namely: location, starting-time, and level of poverty, respectively. Table 8-2 and Table 8-3 also yield the same conclusion that the credit programmes did not have a significant effect on income. However, both the tables showed that there was a tendency that the higher the stage of credit, the larger the income from business activities.

Table 8-2 Differences in Performance of Interesting Variables with Respect to Location

Measures	Stage I	Stage III	t value
Far from Local Market			
Wife's Income	134333.33	138888.89	-0.26
	(90957.87)	(75963.94)	
Daily effective working hours	7.647	6.34	3.22***
	(1.63)	(2.08)	
Number of workers involved	1.714	1.42	0.62
	(2.46)	(1.01)	
Lack of Education Achievement	0.088	0.062	0.78
	(0.183)	(0.122)	
Lack of Health services Achievement	0.218	0.108	2.40**
	(0.271)	(0.126)	
Lack of Housing services Achievement	0.633	0.570	1.16
	(0.244)	(0.30)	
Lack of Nutrition Achievement	0.213	0.162	1.23
	(0.195)	(0.217)	
Near from Local Market			
Wife's Income	125454.55	155476.19	-1.53
	(63319.09)	(113346.15)	
Daily effective working hours	6.263	6.13	0.25
	(2.00)	(2.029)	
Number of workers involved	1.059	1.33	-2.65**
	(0.243)	(0.610)	
Lack of Education Achievement	0.027	0.04	-0.51
	(0.088)	(0.123)	
Lack of Health services Achievement	0.141	0.195	-0.99
	(0.206)	(0.262)	
Lack of Housing services Achievement	0.618	0.541	1.10
	(0.274)	(0.308)	
Lack of Nutrition Achievement	0.205	0.216	-0.22
	(0.206)	(0.223)	

Number in brackets is Standard Deviation.
*** significant at level below 1%
** significant at level below 5%
* significant at level below 10%
(-) sign in t statistics means the mean of fhst group is less that that of the second.
Source: Primary data

Table 8-3 Differences in Performance of Interesting Variables Respect to Starting time of Wife's Business Activities

Measures	Stage I	Stage III	t value
In-Place Business			
Wife's Income	139496.86	163641.30	-1.53
	(84105.135)	(103430.46)	
Daily effective working hours	7.24	6.47	2.13**
	(1.89)	(2.02)	
Number of workers involved	1.47	1.42	0.16
	(2.13)	(0.9)	
Lack of Education Achievement	0.07	0.044	0.88
	(0.163)	(0.12)	
Lack of Health services Achievement	0.189	0.158	0.76
	(0.247)	(0.216)	
Lack of Housing services Achievement	0.649	0.562	1.89*
	(0.242)	(0.307)	
Lack of Nutrition Achievement	0.209	0.199	0.30
	(0.189)	(0.221)	
New-Starts			
Wife's Income	82222.22	102647.06	-1.19
	(43164.74)	(54247.40)	
Daily effective working hours	6.57	5.62	1.22
	(1.81)	(2.025)	
Number of workers involved	1.43	1.24	0.82
	(0.535)	(0.577)	
Lack of Education Achievement	0.067	0.071	-0.08
	(0.132)	(0.129)	
Lack of Health services Achievement	0.20	0.135	0.64
	(0.287)	(0.192)	
Lack of Housing services Achievement	0.50	0.538	-0.35
	(0.292)	(0.294)	
Lack of Nutrition Achievement	0.211	0.162	0.53
	(0.252)	(0.222)	

Number in brackets is Standard Deviation.
*** significant at level below 1%
** significant at level below 5%
* significant at level below 10%
(-) sign in t statistics means the mean of fhst group is less that that of the second.
Source: Survey data

In Table 8-2, the mean income of those in stage I was less than the mean income for those in stage III, whether living in remote areas or in areas surrounding the local market. However, both the coefficients of The Difference between Means of income were not significant. A similar picture is obtained from the data in Table 8-3, which divides the recipients according to the time theh business activities began. For those who had a business 'in-place' before the credit programmes was launched, the mean income of those in stage III was higher than the mean income of those who were in stage I. The same message comes from the group of recipients who started theh business in the period after the credit programmes were launched. The differences lie just in the difference of the means of income between 'in-place' and 'new-start' businesses. The mean income of the in-place business was much higher than the mean income of the new-starts.

Table 8-4 provides information classified into poor and non-poor recipients. The poor are classified as those who had income below the poverty line, and the non-poor are defined as those whose income was above the poverty-line. The income used for the classification here was per capita family income and not just business income. From the table it is clear that credit had a significant effect on the wives' business income, in particular, the wives of recipients from poor families. There was also a significant difference between the mean income of wives of poor families who were in stage I from those who were from stage III. The difference was significant at the 5% level of confidence. In contrast, there was no significant difference in the wives' business income of non-poor families between stage I or stage III.

Table 8-4 **Differences in Performance of Interesting Variables Respect to the Level of Poverty**

Measures	Stage I	Stage III	t value
Poor			
Wife's Income	125066.67 (70333.64)	157238.81 (92945.42)	-2.13**
Daily effective working hours	7.32 (1.68)	6.19 (1.96)	3.18***
Number of workers involved	1.51 (2.01)	1.43 (0.98)	0.21
Lack of Education Achievement	0.08 (0.17)	0.078 (0.15)	-0.05
Lack of Health services Achievement	0.21 (0.25)	0.19 (0.223)	0.33
Lack of Housing services Achievement	0.71 (0.125)	0.687 (0.165)	1.02
Lack of Nutrition Achievement	0.234 (0.192)	0.225 (0.225)	0.22
Non poor			
Wife's Income	90000 (38890.87)	102000 (50674.86)	-0.62
Daily effective working hours	5.5 (3.416)	6.44 (1.795)	-0.54
Number of workers involved	1.25 (0.5)	1.28 (0.634)	-0.11
Lack of Education Achievement	0.06 (0.134)	0.034 (0.97)	0.41
Lack of Health services Achievement	0.32 (0.349)	0.183 (0.211)	0.86
Lack of Housing services Achievement	0.64 (0.055)	0.686 (0.124)	-1.42
Lack of Nutrition Achievement	0.26 (0.23)	0.25 (0.223)	0.10

Number in brackets is Standard Deviation.
*** significant at level below 1%
** significant at level below 5%
* significant at level below 10%
(-) sign in t statistics means the mean of first group is less that that of the second.
Source: Primary data

Therefore, even though there was no effect on income in general from business activities, the really poor families derived an increase in business income. Wives from non-poor families experienced no effect, presumably due to the small size of the loan but this was important in the case of the poor.

Effect on wives' business income by Programmes

Table 8-5 presents the figures for KUKESRA and MKEJ. The table shows that for KUKESRA the difference in the stage of credit does not result in differences in the mean income from the wives' business. This finding indicates that there is no, or only a weak, connection between loan and business activities of the recipients.

Unlike KUKESRA, the effect on wives' business income under MKEJ was significant. The higher the stage of credit, the larger was the income generated from business financed by the loan. In MKEJ, all the loans were spent dhectly to support the recipients' business activities, the majority of recipients being self-employed women. The size of the loan for MKEJ recipients cannot be regarded as too small. Those who joined are those who considered that the loan was sufficient for theh needs.

Table 8-5 Differences in Performance of Interesting Variables Respect to Programmes

Measures	Stage I	Stage III	t value
KUKESRA			
Wife's Income	176000	145582.52	0.76
	(81780.83)	(103156.79)	
Daily effective working hours	6.25	6.128	0.07
	(3.5)	(2.02)	
Number of workers involved	1.00	1.32	-4.16***
	(0.00)	(0.761)	
Lack of Education Achievement	0.00	0.0534	-4.28***
	(0.00)	(0.127)	
Lack of Health services Achievement	0.06	0.137	-1.73
	(0.126)	(0.199)	
Lack of Housing services Achievement	0.19	0.535	-3.38***
	(0.307)	(0.314)	
Lack of Nutrition Achievement	0.11	0.182	-1.01
	(0.213)	(0.214)	
MKEJ			
Wife's Income	122564.102	154347.826	-2.03**
	(70151.92)	(58819.92)	
Daily effective working hours	7.225	6.722	0.90
	(1.723)	(2.137)	
Number of workers involved	1.512	1.75	-0.50
	(2.051)	(1.215)	
Lack of Education Achievement	0.079	0.039	1.25
	(0.17)	(0.103)	
Lack of Health services Achievement	0.215	0.217	-0.03
	(0.262)	(0.246)	
Lack of Housing services Achievement	0.715	0.648	1.25
	(0.123)	(0.229)	
Lack of Nutrition Achievement	0.228	0.222	0.12
	(0.190)	(0.250)	

Number in brackets is Standard Deviation.
*** significant at level below 1%
** significant at level below 5%
* significant at level below 10%
(-) sign in t statistics means the mean of first group is less that that of the second.
Source: Primary data

Employment Effects

One of the main purposes of MFIs is to enable the poor, especially women, to obtain employment, in particular, self-employment. Employment is an important aspect of any attempt to reduce poverty. Here, the effect on employment will be analysed from two aspects: the general effects and the effects by individual programme.

Overall Employment Effects

The overall effects on employment will be examined from three different angles: new self-employment, working hours, and the number of workers involved in the activities financed by the loan.

New-Self-employment

Common indicators of employment are the participation rate and working hours. One of the objectives of the small credit distributed by MFIs is to create self-employment activities (Rahman and Khandker, 1994:50). This means that those who are still underemployed can become fully employed by creating suitable self-employment activities, especially among women. Before we can analyse the overall picture of the employment situation based on the mean difference test, it is necessary to identify those starting new businesses or new entrepreneurs.

If the time frame is divided into the period before the introduction of the KUKESRA programme (that is, June 1996) and after it was introduced (since June 1996)[49], there were a few business activities that had been in place before the programme started, while others started during the period of the programme (called: new-start). These two types of business could belong to recipients or non-recipients of the programmes. The analytical question here is whether the new-starts came as a result of the credit provided or was it simply due to other factors.

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[49] KUKESRA started in the District of Malang in June 1996 while MKEJ began in 1993. However, in order to have the same time frame for the analysis, the author took the period of KUKESRA as the cut-off point.

As one of the objectives of MFIs was to create or promote self-employment, new self-employment may be the result of the MFI programme. However, almost at the same period as KUKESRA was becoming established, the macroeconomy experienced an economic crisis resulting in high unemployment in the formal sectors of the Indonesian economy (Manning, 1999; 2000; Ramstetter, 2000). The economic contraction which followed was indicated by a decline in GDP (Booth, 1998) and an high inflation rate (BPS Kabupaten Malang, 1989; BPS, 1998; 1999; BPS Kabupaten Malang, 1999). This situation led to the migration of the urban unemployed to the rural areas (Booth, 1998). However, the migration of the urban unemployed to the rural areas would have encouraged the growth of self-employment in the rural areas.

The data indicate that some new enterprises began as a result of this economic pressure as people took any opportunity to seek income generating activities. Others, on the other hand, began new business activities due the pressure imposed from BKKBN staff as an objective of TA-KUKESRA.

Table 8-6 Start Time of Business Activities

Time of Start business	Receiving credit	Not receiving credit	Total
KUKESRA			
	Column Percentage (%)		
Existing business	69.6	80.0	70.1
New-start business	30.4	20.0	29.9
Total	100	100	100
	Row Percentage (%)		
Existing business	94.1	5.9	100
New-start business	96.6	3.4	100
Total	94.8	5.2	100
MKEJ			
	Column Percentage (%)		
Existing business	87.3	-	87.3
New-start business	12.7	-	12.7
Total	100	-	100
	Row Percentage (%)		
Existing business	100	-	100
New-start business	100	-	100
Total	100	-	100

Source: Survey data

When the survey was carried out, the economy was still in a recession, which people generally referred to as an 'economic crisis'. Due to this critical situation, there were many who became self-employed. Some succeeded while others failed. Those who succeeded and who were in KUKESRA and MKEJ programmes were interviewed and the results are presented in Table 8-6. In general, due to the economic slowdown, net addition of self-employment was nearly 20% of total self-employment. The new self-employment for KUKESRA was as much as 29.9% of members of this programme, while for MKEJ as much as 12.7% of MKEJ members. This can be seen in Table 8-6. This table shows that 80% of the self-employed had started theh business activities before the period of KUKESRA while the remaining 20% started the activities after the launch of KUKESRA irrespective of whether they received KUKESRA or not. The fact that some of the 'new-start' took credit and others did not, obviously indicates that credit is not the only factor conhibuting to new self-employment.

When the government introduced KUKESRA, it asked the recipients who did not have income generating activities to become self-employed. It was then found that 30.4% of those receiving KUKESRA started new business activities. Without government intervention, only 20% of TA-KUKESRA members who did not receive KUKESRA did so. Thus, it is likely that, the new-start increased as much as 10.4% due to KUKESRA.

MKEJ also had employment effects, but the picture was very different. It did not encourage the poor to undertake business activities, since some form of income generating activities was a prerequisite for an MKEJ loan. Some candidates did not have businesses, but they obtained credit on the assurance from other members of the group that they would undertake businesses.

Data .shows that MKEJ helped as many as 12.7% of its members to start new self-employment. This therefore indicates that MKEJ also has employment effects. We can conclude here that some of the 12.7% of MKEJ members who started new self-employment were due to MKEJ.

Comparing the performance of KUKESRA and MKEJ, KUKESRA supported more new start recipients to undertake self-employment both in absolute number as well as in percentage terms.

Working hours and number of workers involved

Other indicators of employment as pointed out by Rahman and Khandker (1994:50) are hours worked and number of workers involved in the business activities. As shown in Table 8-1, on the average, there was no significant difference in the number of workers involved in the business activities between recipients between stage I and stage III.

However, there were differences in the number of working hours between stage I and stage III. The mean difference shows that this was significant at the 1% level. However, more importantly, the number of working hours tended to fall at the higher stages of credit. The higher the stage the less the hours spent on working. This observation was different from what was expected. It is also contrary to the expectation that credit increases the number of working hours. These findings should be interpreted with caution based on the observations in the field.

Thorbecke and Puijm (1993) found that the relationship between the numbers of hours worked and the level of education follows a J-shaped curve. For uneducated and low level of education people, an increase in knowledge will be followed by a decrease in the number of working hours, but when they have enough knowledge, they will increase the number of hours worked to get more income. The data of the current study showed that for the recipients who had very low levels of education, the number of hours worked declined as they improved theh educational level, conforming to the findings by

Thorbecke and Puijm (1993).

It can be seen from Table 8-1, that the higher the stage of credit the less the working hours will be, except for women coming from non-poor families (see Table 8-4). Most of the women from non-poor families had better levels of education. Accordingly, as predicted, the number of working hours increased with the stage of credit for non-poor families.

Table 8-2 to Table 8-4 show the effects from different dimensions. In Table 8-2, where recipients are divided on the basis of location, either far or near the local market, the effect on employment in terms of working hours appeared to be significant for recipients dwelling in remote areas. It was significant at the 1% level. In contrast, for recipients living in areas surrounding the market areas the effect on working was insignificant. This finding confirms that the effects of the economic crisis were felt in the rural areas at a relatively late period (Booth, 1998). Those living near the market areas who had experienced the transition earlier were relatively stable. This is indicated by fewer working hours for recipients in all stages of credit. During the time when the survey was carried out (that is in the second half of 1998), the effect of the crisis had just reached the rural areas and seemed to have affected working hours. This is substantiated by the fact that the default rate of recipients near the local market fell, while that of rural areas increased at a faster rate (see default rate in chapter 5).

Employment measured in terms of the number of workers involved in the activities showed a different picture. Recipients dwelling near the market areas showed a significant increase between stage I and stage III. While those living in the rural areas generally hired more workers in theh activities, there was no notable differences between those in the lower and higher stages of credit.

In general, based on employment either in terms of working hours or the number of workers involved, the figures for those living in remote areas tended to be larger than for those living in areas surrounding the local market.

Table 8-3 shows a different dimension of the effect on employment. Here recipients are divided into those whose business started before the credit programme was introduced (in place) and others whose business started later (new-starts). This table shows that there was no difference in the effects on employment between those in lower and in higher stages of credit except for daily working hours for recipients who aheady had a business. For those who had the businesses a long time before the period of credit, they had knowledge of the behaviour of the demand for theh products, especially those involved in petty trade. Therefore, a fall in demand is expected to dhectly affect theh behaviour in relation to hours worked.

If the recipients are divided into those who are poor and non-poor, the effect on employment can be seen in Table 8-4. In this table, the poor had employment effects in terms of the number of hours spent working. The poor spent more time working than the recipients from non-poor families. Furthermore, the poor in the lower stages of credit spent more hours working than the poor at higher stages of credit.

Effects on employment under different Programmes

Analysis by programme shows that KUKESRA recipients spent fewer hours working than recipients of MKEJ (see Table 8-5). However, in both KUKESRA and MKEJ there was no significant difference in the number of working hours according to stages of credit. However, KUKESRA recipients in the lower stages of credit tended to work solo while in the higher stages they hhed others to help.

Effects on Basic Need Satisfaction

Theoretically, poverty should not be seen just in terms of income and employment. The element basic needs must also be taken into account. In this section an analysis of the shortfall in basic needs among recipients of MFI will be considered. The shortfall in basic needs requhement is analogous to the poverty gap where achievement is compared to the minimum satisfaction of basic needs for all below the threshold. The items of basic needs investigated were education service, health service, housing service, and nutritional intake.

Table 8-1 to Table 8-5, describe the shortfall in basic need items mentioned above among recipients in different stages of credit. From the tables, it is clear that fulfilment of many of the basic needs components did not change significantly at different credit stages, but some, from certain angles, showed differences. Table 8-1 shows that for whole sample analysis, there were no significant differences in basic needs achievement between those who were situated in the lower stage and those in the higher stage. Only housing services showed some difference between those in the lower and in higher stage of credit. In general, those who were in the higher stages of credit experienced better consumption of housing services.

An analysis of basic need achievement on the basis of location of recipients (see Table 8-2) showed that there were differences in the consumption of health services according to location. The higher the stage of credit received, the better the consumption of health services for those living in remote areas, while there was no noticeable difference for those living near the market.

Analysis of basic need satisfaction by type of programme showed that MKEJ recipients had no improvement in any elements of the basic needs investigated, while KUKESRA recipients showed some improvement in theh basic needs at different stages of credit (see Table 8-5). Education and housing services were the two important aspects of basic needs which improved among KUKESRA recipients. Interestingly, those who were at the lower stage of credit showed better consumption of education and housing services. The lack of achievement in these two aspects of basic needs was lower for those in stage I than that for those in stage III.

However, this finding has to be interpreted with caution due to bias in the selection process. In many cases, the poor were allowed or encouraged to accept the credit earlier when the amount of loans was still small, and the less poor, many of whom were aheady better off in basic needs satisfaction, became involved as recipients when the credit reached a higher stage. The poorer more frequently received credit than the less poor, suggesting a bias in the distribution of loans.

Other aspects of poverty

Voicelessness reflects powerlessness, which is seen as a type of poverty (UNDP, 1997). This is often articulated when poverty is discussed, in particular, in relation to women. Thus, talking about poverty alleviation in relation to women means empowering. Empowering means to enhance the women's ability in relation to freedom of thinking, expressing of ideas such as speaking, and freedom of making choices, in regard to theh own investment (Goetz and Gupta, 1996).

As the objective of MFIs is to help the poor out of poverty, it implies that programmes such as KUKESRA and MKEJ should assist theh recipients to freely express theh ideas or make choices. In short, the recipients should be assisted in this empowerment. Unfortunately, the researchers observation in the field showed that KUKESRA recipients in many cases sacrificed individual freedom and choice in order to ensure the "success' of the programme. In particular, BKKBN staff did not allow recipients to exit from the programme. Thus, in the implementation of TA-KUKESRA members could not use the right to make the choice of whether to stay or to exit the programme. If they were free to choose, many members would have left TA-KUKESRA, and this would have implied that BKKBN was unsuccessful in running the programme. On the contrary, forcing them to remain in the programme, even if they did not want to, meant denying them the right to make a choice, the very opposite of empowerment.

MKEJ on the other hand is a different story. It gave complete freedom to recipients to remain in the programme or to exit whenever they wanted. MKEJ staff assisted the recipients with little or no education to give theh own signatures, as an example.

PART II: ECONOMETRICS ANALYSIS

INTRODUCTION

Testing for the impact of MFI on poverty related variables is not complete if the analysis is restricted to the use of institutional measurements such as outreach and sustainability. More importantly it is essential to see the extent to which the MFIs affected the variables which determined the welfare of the poor (Woller, Dunford *et al.*, 1999). This section will discuss the effects of MFIs on the poor using micro-econometric analysis. This approach is adopted to see whether the services provided by MFIs had significant effects on related economic variables of all recipients, in particular those affecting the recipients who were poor.

The assessment impact as described in chapter 3 is based on a comparison of outcomes between those who joined the programme and those who did not. Roy (1951) is regarded as the pioneer in the application of this model of assessment. The model comprises 2 basic equations: selection equation and an outcome equation. Thus, this model is basically a type of Heckman model. Many analysts have applied this type of model across various disciplines.

Hagan and Parker (1985) used this method to analyse white-collar crime and punishment, while Goldhaber et al (1999) used this method in education. Many economists including Lalonde (1986), Schafgans (2000), Ashenfelter (1978), Heckman and Hotz (1989), Gronau (1974), Hoffman and Link (1984) and Luo *et al* (1990) have used this method of analysis in various studies. Luo *et al.* (1990), for instance, used a similar model structure, called 'switching regression' to analyse the effects of credit on the productivity of input in agricultural production in Northeast China.

As explained in chapter 3, the selection equation for this model procedure is as follows:

The choice (Z) between 0 and 1 follows the function of unobserved variable Z* as:

$Z_1^* = cX_{zi} + u$ See Equation 3-31

Z=1 if $(cX_z + u) > 0$
=0 otherwise

If Z* >0, this indicates that the individual is participating in the programme, if not participating in the programme (Z=0). This equation is solved by using a probit function.

Using Maximum Likelihood for probit, we can write:

$L = \Pi_{z=0}(1 - F(cX_z))\Pi_{z=1}(F(cX_z))$ see equation 3-37

The function will provide the normal distribution (ϕ) and the cumulative normal dishibution (Φ) that will be used for further computation. However, since we do not have the actual ϕ and Φ, we can use the computed $\phi(\hat{c}x_i)$ and $\Phi(\hat{c}x_i)$ respectively.

The comparison of outcomes between participants and non-participants as described in chapter 3 has some important coefficients.

From the above models, the coefficients of interest are:

$(a_1 - a_0)$

$(b_i - b_0)$

$(\sigma_{ue0} - \sigma_{ue1})$

In order to find the size and sign of the coefficients, the operational model used in the calculation is:

$$Y_i = a_0 + b_0 X_{Yi} + [(a_i - a_0) + (b_i - b_0) X_{Yi}]\Phi_i + (\sigma_{ue0} - \sigma_{uei})\phi_i + \omega_i \qquad \text{see: Equation 3-38}$$

where ω has a zero mean and variance σ_ω^2 by construction.

Integrating these coefficients into the equation of the real effects of the programme (see equation 3-35), we can determine/measure the impact of the programme on each individual and on the average individual.

Identification of variables:

In many cases, the exploratory variables in the selection equation are the same or almost similar to those for the outcome equation because the 2 equations in the system are closely related. Both equations are related to poverty. Berma and Shahadan (1994) formulate the poverty function, measured in income, as a function of several explanatory variables such as age of respondent, years of schooling, age of children under seven years old, children age between 7-12 years old, years of working experience, working status: whether full time or part time, and income from children.

Selection Equation:

The selection equation explains how an individual decides whether or not to participate in the programme. Here the variables used are:

Endogenous variable (Z):

The choice between participating (PTCPN) and not-participating in the microfinance programme. PTCPN takes 2 values: 1 means participating in the programme, 0 means not participating. Each respondent will take either 1 or 0.

Explanatory Variables (Xz):

Members' status in the Group (STTS) is one explanatory variable. A Group of members is different from treatment and control groups. In the KUKESRA programme, those rejecting or receiving the loans have been grouped into 10 to 30 members. Some act as leaders while others are ordinary members. There are two values for STTS; 0 is for ordinary members and 1 is for leader.

Location (LOC) is also a variable identified as explanatory. Those living around the local market tend to behave differently with regard to small sized loans compared to those living in remote areas . Here LOC takes 2 values; 0 is for remote areas and 1 is for areas near the local market.

Age of respondents (wives) (AGEW). AGEW is measured in number of years of age.

Education (EDUCF). The levels of education of husband and wife are both important variables affecting credit decisions. A family's level of education is measured by Max(EDUCH, EDUCW). It is measured in full years of formal education completed.

Household monthly income (HMINC) is the most crucial variable. In many studies related to income analysis, due to the difficulty of obtaining accurate data on income, researchers have used expenditure as a proxy. The household income of most of the rural people involved in the agricultural sector depends on the type business operated and also on the type of agricultural product. It is well known that the pattern of expenditure in an agricultural community is not stable due to the seasonal nature of agricultural production, so the proxy for household income is the average of 4 monthly expenditures. It is more appropriate to use this monthly average than full year expenditure since respondents generally find it difficult to remember their expenditure for a whole year. They are more likely to remember the expenditures for the last 4 months.

FSIZE is the household size. If there are 2 or more families in a household and each family received the loan, then the variable FSIZE measures family size. This is to adjust the concept of household and family in order to avoid double counting.

WKPL is the size of working capital used in the business activities financed fully or partially by the loan.

PTTRAD and HCRAFT are variables related to the type of business activity. All business activities can be categorised as petty trade, home industry, and others. The fhst two are the types of businesses the majority of the poor in the programmes were involved in. PTTRAD and HCRAFT are dummy variables each of which can take 2 values; 1 for those involved in the corresponding type of business and 0 otherwise.

STRTM is the time when the business started. STRTM will have 2 values; 0 for existing business activities which started before KUKESRA was launched in June 1996, and 1 for new starts that started theh business in the period of KUKESRA.

Besides measuring the effect of each variable separately, the effects of the interaction need to be seen . Here the interactions to observe are the interactions between HMINC and WKPL consecutively with LOC and with Age.

Outcome Equation:

The outcome equation is the function of the implication of the choice made which is represented in the selection equation. Since the choice made is related to the poverty alleviation programme, the outcome can be measured by an indicator of welfare. This is to see whether those who made different choices have different impacts, or if those involved in the programme can benefit by increasing theh family welfare.

Endogenous Variable (Y):

Wahid (1994) used variables of women's participation, employment, productivity, income, housing, and nutritional status, for measuring poverty. Here the two main variables used, as indicated in part I of this chapter, are as follows:

Firstly, business income (BUSINC) is the income generated from wives' business activities, financed fully or partly by the loan. Business income is measured in Rp (0000). Secondly, working hours (WHRS) is measured in the number of hours spent working.

Besides these two main variables, other variables such as basic needs components will be applied.

Explanatory Variable (Xy):

A number of explanatory variables in the selection equation will be used again in the outcome equation, namely: Location (LOC), working capital (WKPL), and two variables of types of business (PTTRAD) and (HCRAFT). Besides these, some other explanatory variables are:

Age of respondents (wives) (AGEW) is measured in full years of age.

Education of wives (EDUCW). Since only the wives were usually involved in theh business activities, the productivity of the business depends on the level of education of of wives. Here the education level of wives is used as a determining variable. It is measured by full years of formal education completed.

STRTM is the time when the business started. STRTM takes 2 values; 0 for existing business activities before KUKESRA was launched in June 1996, and 1 for new starts that started their business in the period of KUKESRA.

Due to the model structure as described in chapter 3, two additional variables derived from the selection equation appear: probability density function (PDF) ϕ and cumulative density function (CDF) Φ.

The results will be based on the analysis as follows:

For each variant of the effects such as discussed above, a comparison will be made over several sub-samples. Bhatt (1991) claimed that analysis on poverty should classify those ultra poor (really poor, very poor) and less poor. Based on the literature, ultra poor are defined as the bottom 25% of the poor (Bhatt, 1991). Getuhig-Jr. and Shams (1991) on the other hand claimed that the ultra-poor comprise the lowest 10-15 income percentile of society. Based on this, all the poor included in the survey are classified as follows:

Not-poor	($PINC\ i \geq PLn_{BPS}$)
Poor	($PINC\ i < PLn_{BPS}$)
Less poor	($PINC \geq Q3$)
Really poor	($Q1 < PINC < Q3$)
Poorest	($PINC \leq Q1$)

Where PINC and PLn are household per capita income and income at the poverty line respectively. The Q_i is the i^{th} quartile.

PROBIT ANALYSIS

It is generally accepted that the poor need small credit. In extreme cases, it has been argued that the poor will take credit without even considering the cost; the availability of credit is the only determining factor. Many practitioners of microfinance tend to adopt this opinion because they believe that the poor seriously lack cheap credit. Microfinance institutions simply select and provide loans to those who are eligible. This is also true for other programmes that provide credit for those seeking loans.

The poor tend to avoid risk, in particular those poor who do not have fixed income. If the poor believe that the benefit, measured usually by earnings, does not significantly overweigh the cost, they will reject the loan offered. It is also possible that the decision does not depend on the expected earnings but also on many others factors related to existing values toward credit in the rural community. KUKESRA is a programme where the loan is offered to the poor without any initial request. In fact, some of the poor have accepted credit, while some others have rejected it.

From all those who are eligible for small credit there are some who reject while others accept the loans. It is useful to take them as the treatment and control groups. Comparing and analysing these groups can help evaluate the effect of the credit programme for the recipients. Treatment groups are those who receive loans, and control groups consist of those who have rejected the offer of credit. Since all those who are eligible for the programme constitute both groups, then both are very comparable.

An important aspect in the comparison is to investigate how members arrived at the decision to accept or reject an offer of credit. By assuming that the decision to participate (PTCPN) in the programme is systematic, then we can trace the factors behind the decision. Factors that are expected to contribute to this decision will be included to see whether these factors are significant.

The results of Probit Analysis are as presented in Table 8-7 below. Variables having significant effects on the decision to receive credit are: status in the group, location of the respondent relative to the local market, working capital, type of business (either petty trade or handicraft), starting time of the business activity, the interaction between household income and location, the interaction between household income and age of respondents, and the interaction between working capital and age of respondent.

Regarding the status of members in the group, data show that leaders tend to receive credit. The change in status from ordinary member to leader contributes to the increase in probability to receive the loan by as much as 14.1 percentage points. This means that fewer leaders rejected the loan compared to the ordinary members. Location is also an important variable influencing the decision. The probit result shows that the probability of receiving credit, particularly KUKESRA, was lower in locations near a market than in the remote areas. The change in location from remote to "near" will reduce the probability of receiving the credit by 25 percentage points. This may be due to the fact that there are many types of financial services surrounding the market area and people have many alternatives sources of funds to choose from. While in the remote areas there few financial services catering for the needs of the poor.

The size of working capital also influences the probability of receiving loans. The sample of those who were eligible for KUKESRA showed that the larger the working capital the lesser the probability of requesting credit. An increase in the working capital of Rp 100,000 will reduce the probability by 16.1 percentage points. The larger the working capital, the bigger the size of the loan required, and consequently smaller loans are rejected.

Type of business activity, in particular petty trade and handicraft, were the types that needed small sized credit. Consequently, the probability of acceptance was 31.2 and 19.9 percentage points for petty trade and handicraft respectively.

Table 8-7 Probit Estimation

$$PTCPN=C+a_1*STTS+a_1*LOC+a_2*AGEW+a_3*FEDUC+a_4*HMINC+a_5*FSIZE + a_6*WKPL+a_7*PTTRAD+a_8*HCRAFT+a_9*STRTM+a_{10}*WKPL*LOC +a_{11}*HMINC*LOC+a_{12}*HMINC*AGEW+a_{13}*WKPL*AGEW$$

Variable	Coefficient	DP/DX	Signif.
C	-0.394	-0.064	
	(-0.321)		
STTS	0.872	0.141	**
	(2.518)		
LOC	-1.543	-0.250	***
	(-3.447)		
AGEW	0.022	0.004	
	(0.822)		
FEDUC	0.039	0.006	
	(1.001)		
HMINC	0.415	0.067	
	(1.510)		
FSIZE	-0.088	-0.014	
	(-1.176)		
WKPL	-0.995	-0.161	**
	(-2.482)		
PTTRAD	1.925	0.312	***
	(7.912)		
HCRAFT	1.229	0.199	***
	(4.202)		
STRTM	-0.453	-0.073	*
	(-1.889)		
WKPL*LOC	-0.092	-0.015	
	(-0.706)		
HMINC*LOC	0.301	0.049	***
	(2.957)		
HMINC*AGEW	-0.016	-0.003	**
	(-2.088)		
WKPL*AGEW	0.030	0.005	***
	(2.638)		

Log Of Likelihood Function	=	-98.13
Number Of Observations	=	34
Number Of Positive Observations	=	28
Percent Positive Observations	=	0.82
Sum Of Squared Residuals	=	29.63
R-Squared	=	0.40
Percent Correct Predictions	=	0.88

Figures in brackets are t statistics
* denotes significance at 10% level.
* * denotes significance at 5% level.
* ** denotes significance at 1% level.

The starting time of business activity shows that those who have been running a business had a higher probability of receiving credit compared to those who intended to begin a business activity. Those who were trying to enter a business activity have less probability of receiving credit by 7.3 percentage points.

The interaction effects between the variables household income and location, household income and age, also between working capital and location, and working capital and age are as follows:

The interaction between household income and location shows that household income for those living near a market area has a positive effect on the probability of receiving credit. The higher the income, the larger the probability would be. This can explain the fact that many poor people living near a market do not get credit but those who have higher levels of income tend to receive it. In many cases, they whom we are talking about are those who get larger loans than the specified size. The interaction between household income and the age of respondent shows that the higher the income and age, the lower the probability of accepting the loan offered. In contrast, the interaction between working capital and the age of respondent shows that those who have a larger size of working capital and higher age will tend to receive the credit.

These results are consistent with the tabulation provided in a previous chapter which shows that some receive more funds or even that most of the funds go to a limited number of recipients.

OUTCOME EQUATION

The owner of an MFI programme expects that the credit will succeed in improving the earnings of recipients and also enhance theh employment, in particular self-employment. Employment can be seen as the change in status from unemployed to employed, and can be seen the change in working hours.

Here, the outcome measured by income from the wives' business activities and by working hours in the activities is the function of variables: location, age of respondent, educational level of respondent, working capital, type of business activities (either petty trade, handicraft or others), and starting time of the activity.

The comparison of the outcome from members of the treatment group and of the control group highlights the impact of the programmes. The comparison integrates the outcome equation of the treatment group and the outcome equation of control group into Impact equation (see equation 3-35). The interested coefficients are a1-a0 and σ_{ue0}-σ_{ue1}. The difference of coefficients of each explanatory variable shows the change in the effect of the corresponding variable as an impact of the programme.

Table 8-8 Impact on Earnings and Working hours§§

$$Y=a_0+b_{01}*LOC+b_{02}*AGEW+b_{03}*EDUCW+b_{04}*WKPL+b_{05}*PTTRAD+b_{06}*HCRAFT+b_{07}*STRTM$$
$$+(b_{11}-b_{01})*LOC*\Phi+(b_{12}-b_{02})*AGEW*\Phi+(b_{13}-b_{03})*EDUCW*\Phi+(b_{14}-b_{04})*WKPL*\Phi$$
$$+(b_{15}-b_{05})*PTTRAD*\Phi+(b_{16}-b_{06})*HCRAFT*\Phi+(b_{17}-b_{07})*STRTM*\Phi+(\sigma_{ue0}-\sigma_{ue1})*\phi+(a_1-a_0)*\Phi$$

	KUKESRA		MKEJ		KUKESRA		MKEJ	
DEP. VAR:	Earnings		Earnings		Working hours		Working hours	
C	1.267	*	1.831		8.965	*	4.821	
	(1.819)		(0.719)		(1.972)		(0.363)	
LOC	0.420	*	0.536		-3.008	*	-2.869	
	(1.804)		(0.778)		(-1.671)		(-0.769)	
AGEW	-0.020	*	-0.062	*	0.058		0.200	
	(-1.798)		(-1.762)		(0.524)		(1.091)	
EDUCW	-0.056	*	-0.009		-0.063		0.918	**
	(-1.690)		(-0.108)		(-0.267)		(2.045)	
WKPL	0.022		-0.061		0.144		-2.885	
	(0.474)		(-0.105)		(0.405)		(-1.070)	
PTTRAD	0.768		-0.834		8.203	*	-1.647	
	(1.613)		(-0.805)		(1.808)		(-0.282)	
HCRAFT	-2.404		-2.999	**	-2.210	***	-5.413	
	(-1.088)		(-2.102)		(-2.929)		(-0.716)	
STRTM	0.478	**	-0.700		-2.532	*	-4.390	
	(2.172)		(-0.703)		(-1.918)		(-0.902)	
LOC*Φ	-0.686	**	-0.564		2.272		4.307	
	(-2.582)		(-0.751)		(1.106)		(1.110)	
AGEW*Φ	0.032	**	0.073	*	-0.124		-0.265	
	(2.501)		(1.892)		(-1.036)		(-1.291)	
EDUCW*Φ	0.084	**	0.037		-0.084		-1.012	*
	(2.162)		(0.384)		(-0.305)		(-1.926)	
WKPL*Φ	0.052		0.204		0.233		3.624	
	(0.934)		(0.326)		(0.493)		(1.245)	
PTTRAD*Φ	-0.539		1.266		-7.666		0.653	
	(-1.017)		(1.137)		(-1.559)		(0.106)	
HCRAFT*Φ	2.755		3.348		2.510	***	4.080	
	(1.231)		(2.267)		(2.989)		(0.529)	
STRTM*Φ	-0.787	***	0.614		1.975		5.235	
	(-3.124)		(0.581)		(1.221)		(1.009)	
φ	1.107		3.388	***	-3.954		-9.766	
	(2.243)		(2.797)		(-1.099)		(-1.448)	
Φ	-1.237		-2.048		-0.265		5.961	
	(-1.565)		(-0.768)		(-0.053)		(0.418)	
N:	145		117		120		105	
R-SQRD	0.262		0.314		0.221		0.149	
J-B TEST	4.294		0.307		1.153		0.611	
ADJ.R-SQ	0.170		0.204		0.100		0.006	

Figures in brackets are t statistics
* denotes significance at 10% level.
* * denotes significance at 5% level.
* ** denotes significance at 1% level.

§§ In view of the low R-squared value, the results in this table and subsequent discussion of the findings should be read with caution

IMPACT EQUATION RESULT

Impact on Earnings

Effects on earning from business activities financed by the loan are as follows:

In general, the programmes have effects on the recipients, particularly those running business activities. However, the effects are not strong enough to change the levels of earnings significantly. This is indicated by the insignificance of the coefficient of difference between intercepts, a1-a0, (represented by coefficient of variable Φ). Thus, there is no difference of earning between those receiving and not receiving the credit if other variables are kept constant. This result is valid for KUKESRA and MKEJ programmes.

Another interesting coefficient to investigate is σ_{ue0}-σ_{ue1}. This coefficient shows comparative advantage (Maddala, 1983:262). If the coefficient is positive, this means that the programme has a comparative advantage for the recipients based on self-selection. This means that the recipients benefit more from this programme than without the programme. Those involved in the programme by borrowing funds for business activities will get greater earnings than those do not borrow. This is valid for those involved in KUKESRA, as well as MKEJ. The coefficient for those involved in KUKESRA is 1.107 with a standard deviation 0.4934, while for MKEJ recipients, it is 3.388 with standard deviation 1.212. The number of cases for KUKESRA and for MKEJ are 145 and 117 respectively. Thus, from the figures, it is found that the benefit received by recipients of MKEJ is greater than that received by the recipients of KUKESRA with t statistics for the difference between means as high as 19.119 (significant at level below 1%).

Table 8-9 Level Impact and Comparative Advantage[§§§]

	KUKESRA			MKEJ
	ϕ	Φ	ϕ	Φ
	a_1-a_0	σ_{ue0}-σ_{ue1}	a_1-a_0	σ_{ue0}-σ_{ue1}
Earnings	-1.237	1.107	-2.048	3.388
	(-1.565)	(2.243) **	(-0.768)	(2.797) ***
Working hours	-0.265	-3.954	5.961	-9.766
	(-0.053)	(-1.099)	(0.418)	(-1.448)
Lack of Education	-0.563	-0.315	1.895	0.655
	(-1.814) *	(-1.602)	(1.377)	(1.012)
Lack of nutrition	-0.118	-0.408	0.788	0.489
	(-0.274)	(-1.343)	(0.447)	(0.705)
Lack of health services	-0.035	0.189	-1.314	0.559
	(-0.106)	(0.734)	(-0.691)	(0.627)
Lack of Housing services	0.143	0.162	-0.818	-0.267
	(0.266)	(0.457)	(-0.373)	(-0.238)
Lack of sanitation	0.028	0.095	-0.173	-0.219
	(0.055)	(0.232)	(-0.109)	(-0.248)

Figures in brackets are t statistics
* denotes significance at 10% level.
* * denotes significance at 5% level.
* ** denotes significance at 1% level.

The credit plays a role in changing productivity. Feder et al. (1990) studied the impact of credit constrained on the change in productivity of agricultural factors of production. They found that the productivity of the factors differ between those that experience a constraint and those that do not.

In this study, some coefficients of explanatory variables have changed significantly. If the explanatory variables are factors of production, then a change in theh coefficient means a change in productivity. But since many of the variables are not factors of production, then change in theh coefficient just means a change in theh marginal effect.

In the KUKESRA case, in Table 8-8, the explanatory variables which have a significant change in theh marginal effects on earnings are location, age of respondent, educational level of respondent, and the starting time of the business carried out.

§§§ in view of the low R-squared value, the results in this table and subsequent discussion of the findings should be read with caution.

Regarding the location, if there is no credit, the poor living near a market area tend to have higher income from their business. However, with the credit, the poor in remote areas or living far from market benefit more. The change is significant at the 5% level.

The variable age of respondent is also significant for the effect of the credit. For those who do not get credit, the older tend to have lower incomes from business, but for those who get credit, the older benefit more. The programme also leads to more efficient use of resources. The higher the level of education of those who live in rural areas, the greater the tendency to deal with a type of work more focussed on prestige than earning. In this case, they tend to reject the KUKESRA loan. Thus, many of the higher level of education respondents just receive a lower income from their businesses. When they become involved in the credit programme or are dealing with credit, theh orientation is a bit different. Earning becomes the focus and theh incomes tend to be higher.

The last is the variable of starting time of the business activity. The respondents who freely intend to run new business activities tend to show a beneficial change. They tend to get a better income. In case of KUKESRA where the credit is distributed to many non-business recipients who were forced to start a business, the effect is different. In this case the new entrepreneurs are usually not well prepared. Most of them will be grateful if their business activities can run. Theh incomes from the activities are generally lower than those of individuals who have been involved in business activities for some time.

In the case of Mitra Karya (MKEJ), the credit has a greater effect on earnings depending on the variables age of respondent and type of business particularly handicraft (see Table 8-8). Similar to the change in the effect of variable age in KUKESRA, the older the recipients in the Mitra Karya programme the more they tend to benefit from the credit programme. The credit also influences the effect of variable handicraft. Those involved in the handicraft business tend to benefit more from the credit. MKEJ recipients involved in new-start handicraft have lower income but this is not significant because the peer group is effective in helping the members. They can be included in handicraft activities that have a stable link with other bigger businesses as a pool.

Impact on working hours.

In general, by investigating the coefficient of intercept, a1-a0, and between means of covariances, σ_{ue0}-σ_{ue1}, there is no significant proof that the programmes have effects on the improvement of working hours. However, by checking the coefficients (b1-b0) it is found that the credit significantly influences the effects of some explanatory variables. The effect of the variable level of education tends to be lower. The higher the level of education of the recipients, the less the working hours tend to be. This confirms the J-shape relationship between education and employment as discussed before. It is true, in particular, for women with a low level of education working in economic necessity (Thorbecke and Puijm, 1993). The effect of the variable of education for those who do not take the credit is -0.63, and the difference of the effects between those taking and not taking the credit is -0.084. This means that the effect of this variable for the recipients is -0.147 on average, even though it is not significant. For Mitra Karya, the effect for those who do not take the credit is 0.918, and the difference of the effect between recipient and non-recipients is -1.012 and is significant. Thus, the effect for the recipients is -0.094. This means that in a time where there is a market contraction and the demand for the product reduces, the more educated tend to reduce their working hours.

An influence is also seen in the effect of variable type of business, in particular handicraft. The coefficients of the difference between means between recipients and non-recipients are positive for KUKESRA and for Mitra Karya. This means that the credit programmes increase the number of hours spent working in handcraft jobs. It is significant in KUKESRA but not significant in the case of Mitra Karya as shown in Table 8-9.

Regarding the results of outcomes, earning and working hours, it is found that programmes impact more on earning than on working hours. However, although the recipients consume the benefit, the effect is not large enough to make a difference in the level of earning between recipients and non-recipients. Thus, on average theh earnings are unchanged.

As theory has predicted, if there is no change in earnings, there will be little change in basic needs consumption. Computation shows that the programmes have no effect on basic needs achievement such as education, nuhition, health service, housing, and sanitation[50].

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The benefit received by the recipients of the credit, in particular the recipients conducting business activities, varies. Some will obtain benefit greater than zero (positive) while others obtain it less than zero (negative). Thus, the average benefit received could be positive, zero or negative. From the data on individuals we can investigate who gets the positive or negative benefits. Furthermore the effect of the programme can also be seen on the poor and non-poor people, on very poor, really poor and less poor people.

The benefit received is measured by outcome variables, either earnings or working hours. The average benefit received by recipients in each programme can be seen in Table 8-10. The impact in terms of average earnings per individual, ignoring how much they have borrowed, shows that there is net benefit received by the recipients of both programmes. The mean benefit received is positive for both programmes, but that

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[50] Since there is no effect, the computation is not presented in this part.

received by recipients of Mitra Karya is much greater than that received by the recipients of KUKESRA. The difference between the average benefits received by the recipients of both programmes is significant at the 1% level.

If the benefit is evaluated per value of loan borrowed, then the average benefit per value of loan of KUKESRA is negative, while that of Mitra Karya is still positive. The difference between the average impacts of both programmes is still significant at 1% level.

Table **8-10** Impact on Average Individual and Loan

	N	Mean	St. Dev	T value
Outcome (Earnings)				
Impact (per individual)				
KUKESRA	108	0.0209	1.455	-10.95 ***
Mitra Karya	113	2.339	1.689	
Impact (per value of loan)				
KUKESRA	108	-0.0724	2.295	-7.24 ***
Mitra Karya	113	2.02	1.98	
Outcome (Working Hours)				
Impact (whole)				
KUKESRA	108	-2.996	11.374	-1.93746 *
Mitra Karya	113	-0.692	4.944	
Impact (per value of loan)				
KUKESRA	108	-3.407	15.112	-1.95469 *
Mitra Karya	113	-0.418	5.028	

* denotes significance at 10% level.
* * denotes significance at 5% level.
* ** denotes significance at 1% level.

Regarding the impact in terms of working hours, both programmes whether evaluated by per value of loan or per individual ignoring the size of loan received, show that the impact on working hours is negative. Furthermore, the reduction of working hours is greater in the KUKESRA programme than in the Mitra Karya programme. The difference between both programmes is significant. However, this result should be interpreted with caution since it can not be separated from the impact of the change in economic condition in general.

Further analysis will see the distribution of the impact evaluated at the level of individual performance. Table 8-11 shows that recipients experiencing a positive impact of credit show no difference in per capita income compared to the per capita income of recipients experiencing negative impact of credit. The same information is valid for KUKESRA and Mitra Karya. This indicates that the impact of the credit, either earnings or working hours, is indifferent to the level of per capita income of the recipients.

Table 8-11 The Impact of the Programmes on Income and Working Hours

	N	Per capita Income	St-Dev	T-Stat
Income				
KUKESRA				
Receive Negative Impact	72	0.759	0.374	0.28
Receive Positive Impact	36	0.739	0.337	
Mitra Karya				
Receive Negative Impact	5	1.015	0.368	1.60
Receive Positive Impact	108	0.742	0.487	
Working Hour				
KUKESRA				
Receive Negative Impact	76	0.741	0.389	-0.55
Receive Positive Impact	32	0.778	0.285	
Mitra Karya				
Receive Negative Impact	65	0.709	0.551	-1.22
Receive Positive Impact	48	0.815	0.371	

Source: Survey data

These findings have been confirmed by the results in Table 8-12. This table shows the impact on recipients with different levels of per capita income. Those who have per capita income above the poverty line, according to BPS, in the reference region, are categorised as non-poor, while others having per capita income below the line are regarded as poor. The BPS poverty line for Malang district, based on SUSENAS Data February 1999, is Rp 69248 (per head per month).

Regarding the earnings, the table shows that there is no significant difference between the impact received by the non-poor and the poor. Also, there is no difference between the impact received by the less poor and the very poor recipients, in either the KUKESRA programme or in the Mitra Karya.

Regarding working hours as an outcome, there is no difference in impact on different groups of KUKESRA recipients based on levels of income. But for Mitra Karya there is some difference. Non-poor recipients tend to increase the hours worked while the poor tend to reduce it. The difference is significant at the 5% level. Moreover, in the poor sub groups, there is a significant difference between the impact on working hours between very poor and less poor recipients. The very poor tend to reduce the hours while the less poor tend to increase them. The difference is significant at the 1% level.

Table 8-12 Impact on different levels of Poverty

	KUKESRA				MITRA KARYA			
	N	Average Impact	St-Dev	T-Stat	N	Average Impact	St-Dev	T-Stat
Non-Poor	55	0.22	1.48	1.45	62	2.353	1.928	0.10
Poor	53	-0.186	1.413		51	2.323	1.362	
Very-Poor (<Q1)	16	0.26	1.703	0.48	21	2.736	1.302	1.05
Less-Poor (>Q3)	55	0.0317	1.467		58	2.326	2.03	
Non-Poor	55	-1.985	11.636	0.94	62	0.206	4.773	2.16 **
Poor	53	-4.045	11.108		51	-1.784	4.974	
Very-Poor (<Q1)	16	-1.624	13.525	0.07	21	-2.123	4.007	-2.79 ***
Less-Poor (>Q3)	55	-1.87	11.336		58	0.863	4.69	

Q1, Q3 are quartile 1, and 3 respectively.
* denotes significance at 10% level.
* * denotes significance at 5% level.
* ** denotes significance at 1% level.

T statistics for difference between means is calculated by using the following formula:

$$t = \frac{b_1 - b_2}{\sqrt{\frac{SE_1^{\ 2}}{N_1} + \frac{SE_2^{\ 2}}{N_2}}}$$

b_i is the coefficient i.
N_i is the number of observation of sub-sample i.
SE_i is the standard error of the coefficient i.
i=1,2

SUMMARY

From the analysis of the comparison of means between members who were situated in different stages of credit, the effects of credit on income, employment, and components of basic needs can be identified.

For the analysis on the whole sample, it was found that the impacts of credit are specific. Even though the results of the whole sample analysis did not show significant effect on many indicators investigated, from some certain dimensions and for some specific members, the credit has impacted significantly. The whole sample analysis shows that the credit has had impact only on effective working hours and on the achievement of housing services. The credit did not appear its impacts on business income, nor on other aspects of basic needs.

When the analysis separate the members according to location of dwelling, it becomes clearer the impact on employment identified before. For those living in a distance from market area, the impact on the number of working hours became more significant, but for those living near the market, the impact did not appear. The separation also brings result that the impact on housing services as identified before did not appear in relationship with location Here, in both locations, the impact on housing services consumption was not significant. It should be identified from any other dimensions.

From different locations analysis, it was found that those living in remote areas tended to have better health services following the increase in the stages of credit received. In addition, those living near market areas showed that the higher the stage of credit, the more unit of labour they tended to use.

If the analysis is based on the dimension of time when a business activity starts, it shows that the credit had only impacts on the existing business activities, in particular in relation to the number of working hours.

Furthermore if the analysis is carried out on the basis of the difference in economic situation of the members, it shows that the effect of credit appeared just on the working hours of the members who were poor. There was no impact appearing for the other members who were not poor.

If the mean comparison is conducted in respect to programme where members involved in, it is found as follows. The impacts of credit, KUKESRA, for its recipients were significant on: the unit labour used, the achievement of education, and achievement on housing services, while the impact of MKEJ credit for its recipients was just significant on business income.

Referring to the aspects investigated, it can highlight some fact that MKEJ was more dhected to increase the income from business funded by the credit than KUKESRA was. KUKESRA showed some impacts like on some elements of basic needs such as education and housing services. However the significance of the coefficients regarding these elements was more due to bias in the distribution of credit than the impact of credit itself.

The impact of KUKESRA appeared significantly on the number of unit labour used in the business activities. But none of the programmes had impact on the number of working hours. The impact on working hours was not due to the programme but more due to knowledge and experience in business and the economic situation of members. All these mentioned factors affecting the hours worked showed that the number of hours tended to decrease following the increase in the stage of credit. This support the finding of Thorbecke and Puijm (1993) that Indonesian labour supply follows a J-shape, in particular for those who have low levels of education.

Results from regression analysis also support that from means comparison. The regression results show that both small credit programmes, KUKESRA and MKEJ, had no level impacts on income of recipients. This means that the levels of income of the recipients when they took credit were not much different from their levels of income of the others who did not take credit. However, the recipients had benefit in terms on the increase in income by involving in the programmes. The programmes had comparative advantages. This means that the recipients became better off to be recipients than to be non-recipients. The comparative advantage in MKEJ was larger than that in KUKESRA.

Regression also shows that the recipients tended to have better education achievement than the non-recipients. Furthermore, the credit KUKESRA had significant impact on earnings, if the credit came in relation to some variables such as location, age of wife, wife levels of education, and starting time of the business. The effect of location on earnings advantaged those living in remote areas if there was credit, unless it advantaged more those living near the market.

For the recipients, the higher the age, the better the earning the could obtain. The levels of education had the similar impact. Regarding the time when the business activities start, many of new-starts business activities of non-recipients got better earnings compared to the existing business activities, but for the recipients of KUKESRA, the phenomenon tended to be opposite. This because the recipients did not have good preparation for conduction a business.

Regression on earnings for MKEJ programme shows that the credit had significant impact to increase the effect of the age of wife. For members non recipients, the older the members, the less the earnings. With the credit, the older got the higher earnings. This was because of the self-selection. The age preferred in self-selection was the working age, but not too old.

Regarding the impact of programmes on working hours, KUKESRA credit increased the effect of variable type of jobs, in particular handcraft. Without KUKESRA, those involved in handcraft jobs spent less hours working than others who involved in other types of jobs. With KUKESRA, the time spent for working in handcraft tended to be more than spent by other type of jobs. Unfortunately, this phenomenon did not exist in MKEJ members. In MKEJ case, the credit changed the effect of variable education. Without credit, the higher the level of education, the more the hours spent for working, but when the credit was provided, the higher the levels of education, the less the hours working. This phenomenon also existed in KUKESRA, but not significant.

The effects on basic needs components were not significant. But the presence of some significant coefficients in relation to some basic needs components in KUKESRA case, was more due to bias in credit distribution than the impact. A bias in credit allocation occurred in the programme when a staff administering the KUKESRA programme deliberately selected those who were better educated, were of higher social status and thus were more credit worthy.

In sum, both programmes had net impact on income. On average, each recipient of MKEJ obtained larger impact on her income than the impact received by each recipient of KUKESRA. With regard to working hours, each recipient of both programmes reduced the hours working, but recipients of KUKESRA reduced it more than reduced by recipients of MKEJ. In terms of per value of loan received, on average, each Rp spent by KUKESRA, had no impact on earnings but by MKEJ had impact on the increase in income of recipients. All the impacts vary among recipients according to other factors such as location, starting time of business activities, and also the economic situation of the recipients.

APPENDIX CHP.8

Table 8-13 Impact on Basic Needs

	KUKESRA		MKEJ		KUKESRA	MKEJ	
DEP. VAR:	LEDU		LEDU		LNUT	LNUT	
C	0.746	**	-1.462		0.385	-0.481	
	(2.510)		(-1.140)		(0.996)	(-0.282)	
LOC	-0.018		0.267		0.061	0.017	
	(-0.287)		(0.761)		(0.526)	(0.033)	
AGEW	-0.010	**	0.017		-0.002	-0.004	
	(-2.083)		(0.994)		(-0.250)	(-0.149)	
EDUCW	-0.042	**	0.026		0.009	-0.022	
	(-2.729)	*	(0.611)		(0.427)	(-0.343)	
WKPL	0.036		0.112		-0.013	0.500	*
	(1.340)		(0.403)		(-0.481)	(1.678)	
PTTRAD	0.535	**	-0.644		0.047	0.984	
	(2.313)		(-1.231)		(0.169)	(1.652)	
HCRAFT	-0.199		-1.389	*	-0.657	0.404	
	(-0.507)		(-1.808)		(-0.681)	(0.425)	
STRTM	0.092		0.644		-0.137	0.529	
	(0.859)		(1.178)		(-1.091)	(0.835)	
LOC*Φ	0.019		-0.326		-0.063	-0.021	
	(0.246)		(-0.878)		(-0.431)	(-0.038)	
AGEW*Φ	0.007		-0.020		-0.003	0.000	
	(1.362)		(-1.030)		(-0.421)	(0.012)	
EDUCW*Φ	0.037	**	-0.045		-0.002	0.018	
	(2.243)		(-0.938)		(-0.080)	(0.262)	
WKPL*Φ	-0.036		-0.140		0.018	-0.544	*
	(-1.260)		(-0.487)		(0.509)	(-1.796)	
PTTRAD*Φ	-0.529	**	0.564		0.119	-0.972	
	(-2.216)		(0.996)		(0.373)	(-1.459)	
HCRAFT*Φ	0.180		1.346	*	0.642	-0.344	
	(0.446)		(1.714)		(0.650)	(-0.346)	
STRTM*Φ	-0.075		-0.668		0.131	-0.542	
	(-0.621)		(-1.139)		(0.833)	(-0.806)	
ϕ	-0.315		0.655		-0.408	0.489	
	(-1.602)		(1.012)		(-1.343)	(0.705)	
Φ	-0.563	*	1.895		-0.118	0.788	
	(-1.814)		(1.377)		(-0.274)	(0.447)	
N:	145		117		145	117	
R-SQRD=	0.242		0.112		0.199	0.183	
ADJ.R-SQ=	0.147		-0.030		0.099	0.053	
DW-STAT=	1.550		1.659		1.362	1.627	

Table 8-14 Impact on Basic Needs (continued)

	KUKESRA		MKEJ		KUKESRA		MKEJ	KUKESRA	MKEJ
DEP. VAR	LHLT		LHLT		LHS		LHS	LSANT	LSANT
C	0.276		1.841		0.374		1.090	0.313	0.846
	(0.933)		(1.015)		(0.786)		(0.524)	(0.702)	(0.552)
LOC	0.068		-0.085		-0.209		-0.306	0.002	-0.486
	(0.683)		(-0.174)		(-1.241)		(-0.431)	(0.016)	(-1.067)
AGEW	-0.006		-0.047	*	-0.002		-0.001	0.003	-0.005
	(-1.458)		(-1.861)		(-0.201)		(-0.029)	(0.366)	(-0.248)
EDUCW	-0.001		-0.105		-0.015		-0.105	-0.026	0.044
	(-0.039)		(-1.647)		(-0.542)		(-1.225)	(-1.010)	(0.788)
WKPL	-0.016		0.013		-0.006		0.509	0.012	0.071
	(-0.811)		(0.031)		(-0.140)		(1.115)	(0.319)	(0.241)
PTTRAD	0.143		0.666		-0.191		0.108	-0.371	0.202
	(0.583)		(0.891)		(-0.443)		(0.131)	(-0.872)	(0.265)
HCRAFT	3.934	**	-0.116		4.127	*	2.102	4.779	1.836
	(3.783)	*	(-0.095)		(2.306)	*	(1.630)	(3.037)	(1.830)
STRTM	-0.050		-0.686		0.146		0.828	0.023	-0.671
	(-0.515)		(-0.893)		(1.009)		(1.011)	(0.153)	(-1.158)
LOC*Φ	0.048		0.074		0.348	*	0.212	-0.028	0.394
	(0.357)		(0.143)		(1.773)		(0.283)	(-0.156)	(0.800)
AGEW*Φ	0.003		0.047	*	-0.005		0.002	-0.005	0.002
	(0.500)		(1.742)		(-0.503)		(0.072)	(-0.585)	(0.099)
EDUCW*Φ	-0.012		0.088		-0.009		0.084	0.009	-0.086
	(-0.525)		(1.288)		(-0.291)		(0.888)	(0.300)	(-1.337)
WKPL*Φ	0.016		-0.050		-0.013		-0.619	-0.035	-0.130
	(0.601)		(-0.122)		(-0.267)		(-1.319)	(-0.736)	(-0.430)
PTTRAD*Φ	-0.074		-0.887		0.225		0.099	0.692	0.007
	(-0.242)		(-1.115)		(0.475)		(0.113)	(1.485)	(0.008)
HCRAFT*Φ	-3.820	**	0.085		-4.055	*	-2.126	-4.757	-1.782
	(-3.597)	*	(0.070)		(-2.218)	*	(-1.599)	(-2.959)	(-1.673)
STRTM*Φ	0.029		0.804		-0.199		-0.899	-0.094	0.714
	(0.221)		(0.982)		(-1.193)		(-1.041)	(-0.544)	(1.133)
ϕ	0.189		0.559		0.162		-0.267	0.095	-0.219
	(0.734)		(0.627)		(0.457)		(-0.238)	(0.232)	(-0.248)
Φ	-0.035		-1.314		0.143		-0.818	0.028	-0.173
	(-0.106)		(-0.691)		(0.266)		(-0.373)	(0.055)	(-0.109)
N:	145		117		117		113	117	116
R-SQRD=	0.218		0.187		0.238		0.200	0.230	0.217
ADJ.R-SQ=	0.120		0.057		0.116		0.066	0.107	0.090
DW-STAT=	1.242		1.394		1.358		1.696	1.639	1.506

Figures in brackets are t statistics
* denotes significance at 10% level.
* * denotes significance at 5% level.
* ** denotes significance at 1% level.

CHAPTER-9: CONCLUSION

This study has examined the role of microfinance in particular KUKESRA and Mitra Karya East Java in the alleviation of poverty in Indonesia during the period 1996 till 1999. As in many Developing Countries, the issue of poverty alleviation has been a major concern of the Indonesian government since Independence in 1945. As a result of many antipoverty programmes which have been implemented since independence, the incidence of poverty continuously declined in the period before the period of the crisis in 1997. The incidence of poverty decreased from 40.08% in 1976 to 11.34% in 1996. The same trend occurred not only in Java but also in the outer islands, both in the urban and rural areas. The decline in poverty occurred both in absolute and in percentage terms. This achievement has been regarded by many scholars as a case of successful poverty alleviation (Dewanta, 1995; Manning, 1998). On the other hand, others have criticised this achievement on the grounds that the poverty line used to define the poor as was too low. Many of those categorised as non-poor are still not able to satisfy even theh minimum physical needs (White, 1996). Furthermore, some people such as Asra (1998), claimed that the incidence of poverty in Indonesia was sensitive to the poverty line used. This implies that the number of poor in Indonesia is much more than that estimated by government sources. A small change in the poverty line income would result in a significant increase in the number of poor.

Numerous studies have indicated that there is a strong positive correlation between economic growth and the rate of poverty alleviation. In this regard, factors behind the rapid economic growth and how they affect the reduction in poverty are important aspects to be investigated. The government has implemented many policies and programmes that are designed dhectly or indirectly to assist the poor since Independence, especially during periods of rapid economic growth. Many kinds of assistance have been provided in the various sectors including the production sector, trade, and services which directly assist the poor in their economic activities, ranging from assistance in agriculture to non-farm small credit. The government also constructed numerous public facilities in the rural areas which help in generating off-farm income for people in these areas.

However, the majority of the programmes implemented are dependent on the government budget capacity. During the period of the oil boom in the 1970's and 1980's the revenue from oil export increased, and many types of credit facilities were provided not only in the urban areas but also in the rural areas. However, when oil prices dropped, revenue also fell and most of these programmes were scaled down to some extent.

The banking sector could not provide as much credit as the business sector requhed because of the ceiling imposed on credit. However, after the central bank cancelled the regulation on credit ceilings on 1st June 1993, generally known as the deregulation period, the business sector had more access to financial resources and as much credit as requhed. Deregulation benefited the urban sectors resulting in the further development of the sector, which in turn generated more rural to urban migration. Studies have shown that intra sectoral development and population mobilisation had a positive impact on poverty alleviation (Ravallion, 1991).

Since mid-1997, the Indonesian economy has experienced a political and economic crisis. The effect of this crisis appeared markedly in 1998. The economy had a negative growth in 1998. This increased absolute and relative poverty significantly, in particular in the urban areas (Cameron, 1999). Unemployment also increased markedly. Unemployment among males was higher than for females.

In the sample survey undertaken for this study, various aspects of poverty were examined: income poverty, village level poverty, family level poverty and poverty using the basic needs satisfaction approach. It was found that the proportion of respondents having per capita income below the poverty line was quite high. However, this was not consistent between the income poverty classification carried out by BPS and the poverty classification based on BKKBN's welfare family approach.

The incidence of poverty based on the poor group according to BKKBN's classification is much larger than the poverty incidence based on the poverty line approach. The findings from the survey on families in the region show that the poverty incidence based on the poverty line was about 18.3%, while based on BKKBN's category it was around 54%. In addition, it was found that the income disparity among the families receiving credit from MFI was large. Furthermore, the disparity of income of KUKESRA member families was larger than that of MKEJ.

During the period since the crisis, the incidence of poverty has increased as a whole. However, based on BKKBN classification, the number of poor has remained unchanged since the crisis, especially in the rural areas. Among the many poverty reduction programmes in recent years, one measure which has received much attention relates to the provision of finance to the poor, in particular small credit. Together with government programmes, many other non-governmental bodies have initiated programmes designed to help the poor financially.

The establishment of microfinance institutions (MFIs) to help the poor is not a new effort in the Indonesian economy. An analysis of the history of rural finance both in banking and non-banking institutions, showed that many types of microfinance institutions have existed in Indonesia since it was a Dutch colony. Some institutions were established by the Dutch Colonial administrators, while others were formed out of the people's own initiatives. A few of them were unsuccessful while others have been developed to become modern banking institutions such as the BRI. Based on the method of credit delivery, all MFIs can be categorised as belonging either to the individual lending or group-lending method. Due to the success of BRI through its *Unit Desa* using an individual lending approach, this approach is more prevalent than the group lending approach.

Even though the group lending approach is not frequently used, this method has been in operation for a long time in Indonesia. De Wolff, a Dutch colonial officer applied the group lending approach in *lumbung*. The reason behind this application was the principle of *gotong-royong*, a form of self-help group widely prevalent in Indonesian society especially in the rural areas. However, this method did not prove to be as well suited as an individual credit delivery approach. Even though recently, due partly to the exposure and the success of the Grameen bank in Bangladesh which applies a group-lending approach, many countries including Indonesia have tried to replicate this form of lending. However, group lending is not a new approach in the case of Indonesia.

The study revealed that there were cases of failure of MFIs in Indonesia. The failure of several MFIs was caused partly by management, lack of control, and corruption. However, the characteristics of the poor, such as honesty, are instrumental in the success of MFIs.

Following the high level of growth in the Indonesian economy, especially between 1976 and 1997, together with the social pressures on government to focus more deeply on poverty orientated development programmes, the government created IDT and TA-KUKESRA among others. These two institutions were designed to provide finance for the poor. The former was related to financing the poor as a whole at the sub-district level while the latter is concerned with financing the poor through individual families. IDT was to help the backward villages by offering an amount of funds to a subdistrict, and then the sub-district would decide on the use of the funds for the benefit of its people. Eventually this programme failed and was discontinued. MKEJ was initially established as a semi governmental institution which later became privately managed. TA-KUKESRA and MKEJ were MFIs which used the group-lending approach to help the poor out of their poverty.

KUKESRA, the government programme, uses large group lending (30 members) while MKEJ, a non-government initiative, uses small group (5 members) lending. In the case of KUKESRA, both poor and non-poor people were included as group members. It was found that KUKESRA lacked proper control while Mitra Karya was closely supervised. The close supervision resulted in better performance (Reinke, 1998:44-45). This current study shows the factors contributing to the failure of MFIs in the past are still repeated, especially in government MFIs. Consequently, the outcome or performances of MFIs in recent times are similar in many ways to those which existed in the past.

The current study assumed that the effectiveness of KUKESRA on poverty alleviation could be measured after 3 years of implementation of the programme. An evaluation of whether KUKESRA and MKEJ, the two MFIs which were the focus of this study, were effective in its objective of improving the income of the poor, and theh living standards, was analysed using two alternative approaches found in the literature. The fhst is the institutional approach. The standard criteria used under this method are sustainability and outreach. The second is the welfarist approach which examines, by using a more quantitative analysis, whether the poor actually become better-off as a result of the MFIs.

From the institutionalist approach, the government MFI performed poorly compared to the non-governmental programme. For the government supported MFI, the quality aspect of outreach was worse compared to the non-government programme. The government supported microfinance programme was not sustainable due to heavy government subsidies. This programme was operating at a loss. On the contrary, the non-governmental MFI grew steady, although its coverage was much smaller than the coverage of the governmental one. In addition, the sustainability of the non-government MFI is much better, meaning that such programme is operating profitably.

Even though KUKESRA has better breadth compared to MKEJ, the breadth is low in intensity. All MKEJ clients fully participated in the programme while for KUKESRA many of the members were inactive or passive. KUKESRA included many members from outside the target group. The outsiders, however, absorbed relatively more funds than members originating from the target group. Besides the inequality between the target group and outsiders, there was inequality in the distribution of credit within each group.

The distribution of credit among the recipients in the target group is more homogenous compared to those from outside the target group. This means that there are limited numbers of outsiders receiving much bigger loans while others received less. MKEJ, on the other hand, had no such bias because it was not aimed at any specific target group, and all recipients received loans of the scheduled size.

The extent of the recipients' involvement in the programme was measured by the length of time members remained in the programme. For successful members who were involved in the programme actively, the length of time is associated with the highest level of credit stage they received. Those who were not successful dropped out of the programme. The dropout rate continuously fell for MKEJ. The nature of the administration of the KUKESRA programme meant there was no explicit dropout rate. This was partly explained by the fact that staff did not allow and often prevented the recipients from quitting the programme. Field observations, however, showed that many recipients would have preferred to quit the programme if they were permitted to do so.

Outreach can also be seen in the aspect of costs expended. Officially, KUKESRA did not have any other costs, except the cost of fund; that is, interest payment. However, it was found that there were additional costs. Besides foregone income due to the attendance at meetings, there was the cost of transport and other related costs. In addition, the recipients also had to bear the cost of transport of staff members. This additional cost was much higher than the interest they had to pay to the institution. All the components of costs incurred for KUKESRA were much higher than that for MKEJ.

Unlike MKEJ where all the recipients had businesses, those who received KUKESRA came from those who had businesses plus those without any business. Those who did not have any business, were encouraged by the officials to engage in some form of business. In spite of this, there were still many members who did not yet have any business.

For those who had businesses, how the loan was used was not clear- whether for the business or for consumption, as many found it difficult to separate the funds between the two. However, the most obvious benefit appeared to be that the funds from KUKESRA initially replaced more expensive sources of funds such as that from the informal moneylenders. Unfortunately, this benefit was temporary as most of the clients eventually returned to the services of the IML for various reasons.

The benefit of saving as an objective of the programme was mostly not realised. TAKESRA is not an interesting way for the recipients to save money. In contrast, the saving accounts of the clients in MKEJ showed frequent transactions indicating that saving under MKEJ is much more interesting than in TAKESRA.

Finally, it can be said that most of the aspects of outreach showed that the performance of TA-KUKESRA was less satisfactory, even though it reached a larger number of the poor. In contrast, even though the coverage of MKEJ was relatively small, many aspects of outreach indicated that it was better than TA-KUKESRA.

Clients who had successful business enterprises tended to have a good performance in loan repayment. This particularly happened in MKEJ clienteles but was not so clear in the case of KUKESRA. This was because loans from MKEJ are given to support business activities where the income generated is the main source for repayment. In contrast, KUKESRA clients used the fund for many types of usage, and the source of income for repayment did not directly come from business income.

The sustainability of an MFI relies much on the costs and revenue which all-together shape profitability. KUKESRA and MKEJ have a good performance in repayment rate. However, factors behind the performance are different. MKEJ performance is driven by factors such as the incentive to get a bigger size loan, intra-group social pressure and monitoring due to the application of joint liability and the quality of field staff to support the client activities and to monitor clients' behaviour in repaying the instalments. hi contrast, KUKESRA's good performance in repayment in the district of Malang has other stimuli. It has no relationship with the income from business because the clients have other sources to repay the instalments. They repaid the loans because most of them did not want to have any problems with government and with the staff who assist them, not only in relation to TA-KUKESRA but also with Family-Planning related services. It is also not supported by the application of the principle of joint liability because the principle is inapplicable for KUKESRA members. Each client has to repay her debt, unless leaders were responsible. The factor enabling them to repay is the social control of the community since the programme uses existing vital community institutions to collect the repayment such as prayer meetings.

Both programmes show that, financially, they made a profit in theh operation, but economically only MKEJ has economic profit while KUKESRA, the operating costs of which are subsidised by government, has no economic profit. In fact, it made losses when the subsidies were excluded. This means that only MKEJ is self-sustainable while KUKESRA is not.

The welfarist approach tests whether the economic situations of the recipients significantly changed as a result of the MFIs. The two key variables which were dhectly affected by the small credit were the income derived from business activities and employment. The changes in these two variables are in turn expected to influence elements of basic needs such as education, health, housing, sanitation, and nutrition. The study found that there was some impact on employment in terms of new self-employment and changes in the number of working hours. The positive effect on income only appeared in the non-governmental programme. However, this change in income did not seem to have changed the consumption of basic needs. In particular, those who had a shortfall in basic needs consumption remained at the same level as before.

On the whole, the programmes had little impact on poverty alleviation based on the recipients' income from businesses. However, when the recipients are divided into poor and non-poor categories, then those who were poor had a notable improvement in income while the income of the non-poor did not improve significantly. In addition, if the clients are investigated according to the type of programme, those who were involved in MKEJ showed a significant positive effect on income.

The results of the regression analysis showed that the incomes of clients increase as a result of joining the programmes. The coefficient of the comparative advantage is significant, meaning that those involved in a programme benefited from the programme. Moreover, the effects on MKEJ clients was larger and more significant than that of KUKESRA. However, the change is not large enough to make a significant difference in the level of income

The average benefit received by members of MKEJ is greater and more significant than the average benefit received by clients of KUKESRA. So is the benefit per value of loan received. However, not all clients received positive benefits. In KUKESRA, only 33.3% of its clients benefited while the remaining 66.7% did not. Per capita income was not a factor in determining who benefited and who did not. In conhast, for MKEJ, ninety four percent of the recipients benefited, while only 4% did not show any improvement. In MKEJ, it is clear that those who benefited, on the average, tend to have lower per-capita income than those who did not, even though the difference is not statistically significant.

If the benefit is analysed based on the state of welfare of the clients in each programme, then the results show that, on the average, there was no differences in the benefit received between the poor and the non-poor clients for both the programmes. Further analysis of the poor group shows the same results.

The effect on employment from cross-tabulation data shows that even during the time of economic difficulty, more of the poor tried to carry out new business activities. KUKESRA in particular was more successful in transforming the recipients to become self-employed.

In terms of working hours and the number of workers involved, the results showed that there was no notable difference between the different stages of credit. Credit as a whole had a positive effect on the number of working hours. This finding confirms the existence of a J-shaped curve in low or uneducated labour (Thorbecke and Puijm, 1993). Furthermore, it shows that the effect on employment in terms of working hours appeared significant in clients dwelling in remote areas. In terms of the number of workers involved in the activities, clients dwelling near a market showed a significant difference between those in lower and those in the higher stages of credit.

The effect on employment shows that the poor had positive employment effects in terms of the number of hours worked compared to the non-poor families. Furthermore, the poor in the lower stages of credit tended to spend more hours working than the poor in the higher stages of credit.

Analysis by programme shows that KUKESRA clients spent fewer hours working than those of MKEJ. However, in both KUKESRA and MKEJ there was no difference between the number of working hours for those in the lower credit stage and those in the higher stages of credit. The number of workers engaged in business activities did not change significantly with the stage of credit in the MKEJ case, but there was a difference in the case of KUKESRA. That is, under KUKESRA, clients in the lower stages of credit tended to work on their own while in the higher stage they tended to hire others for assistance.

The results from the regression analysis showed that even though in each programme there was no difference in working hours by stage of credit, participation in the programme had marginal effects on some variables. The average impact of credit obtained by clients of KUKESRA was much less than in the case of MKEJ. There was no difference in performance between the poor and non-poor groups and between the very poor and less poor sub groups in the case of KUKESRA. In contrast, for MKEJ there was a significant difference in impact of credit between the poor and the non-poor clients.

In regards to basic needs, consumption of most of the basic needs components did not change according to stage of credit. Only the consumption of housing services showed some improvement between those in the lower and higher stages of credit. In the case of health consumption, the higher the stage, the better the consumption of health services especially for those living in remote areas. The effect on housing service consumption for those who had existing businesses is that the higher the stage of credit, the more the fulfilment of housing services. Analysis on the basis of the type of programme showed that MKEJ had no effect on any component of basic needs, while for KUKESRA some elements of basic needs showed improvement at different stages of credit. Education and housing services were the important components showing improvement in consumption. Interestingly enough, those who were in the lower stage had better consumption of education services and housing services than those at higher stages of credit.

The conclusions that can be drawn from the analysis are as follows:

1. The performance of the two types of MFIs undertaken in this study is different. The governmental MFI tends to emphasize coverage while the non-governmental MFI emphasizes sustainability. The governmental MFI tends to emphasise administrative performance such as the number of the poor covered, the amount of funds disbursed and the high repayment rate without much attention paid to the recipients, and how they make use of the funds. To show a good performance on paper, key parameters are just taken into account while the essential aspects of the MFI itself, such as joint liability were abandoned. Motivation of field staff in the governmental MFI was lacking, because it was an additional duty imposed on staff members without any reward. They tended to do just the minimum amount of work, as theh incomes were not dependent on their productivity. The non-governmental MFI, on the contrary, applies the principle of 'best practice' as an instrument to achieve high performance in its operation. Self-selection, joint liabilities, and close supervision are innovatively applied. Field staff also have the incentive to increase theh productivity because high productivity leads to higher income. However, since this type of MFI has to operate using theh own private funds, sustainability was more important than outreach.
2. In general, loans had no major impact on recipients' incomes derived from business activities financed by the loans. However, the performance was different between the programmes. The effect on income was positive and significant for MKEJ while for KUKESRA the impact was not significant.
3. There was notable creation of new self-employment from the two programmes, especially from KUKESRA. MKEJ also supports employment creation, but since its emphasis is on those who aheady have business activities in place, the new self-employment generated was relatively low. In terms of working hours, MKEJ had a larger impact on employment compared to KUKESRA. Furthermore, KUKESRA did not significantly affect the change in working hours of its recipients.

4. Neither of the programmes significantly improved the consumption of basic needs among the recipients. This could be due to the relatively short duration of the programmes considered, a period of only 3 years, and partly due to the small nature of the credit provided.
5. KUKESRA has better outreach in terms of breadth since it is an extensive massive programme, but in other aspects of outreach, the performance of KUKESRA lagged behind MKEJ.
6. Even though KUKESRA is a highly government subsidised MFI, the real cost of borrowing borne by the recipients is not cheap. The real interest rate is negative but other extra costs are large. In contrast, MKEJ charged a higher rate of interest but other associated costs of borrowing were small.
7. KUKESRA did not allow for dropout from its programme, although many recipients would have preferred to exit out of the programme at some stage. In general, bad management of the programme resulted in much dissatisfaction among the members.
8. It was found that KUKESRA is not self-funding and sustainable in the longer term, unlike MKEJ.
9. The credit services provided by KUKESRA temporarily resulted in the recipients moving away from the services provided by informal moneylenders, but eventually almost all of them returned to the services provided by the IML. This was partly due to the impact of the economic crisis of 1997, but more importantly due to the bad management of KUKESRA. In the case of MKEJ, while some of its members returned to IMLs, a majority of them succeeded in breaking the ties permanently with the IMLs.
10. The crisis of 1997 had an impact on the saving and the repayment rates of recipients. It affected theh real income through market contraction and inflation.

Some of the minor findings of this study are as follows: risk sharing does not work under the KUKESRA programme because the members do not have a sense of belonging to the group due to the nature of top-down group formation. The good performance of repayments in the survey regions was caused by two types of linkages. The first is the linkage with a vital institution of the local society such as prayer meetings. In many cases, transactions in KUKESRA were conducted through a meeting after prayers finished. The second type of linkage is the linkage with all government programmes for rural people under the management of BKKBN. Since programmes such as family planning are essential for the poor, the repayment of KUKESRA becomes a priority in their monthly budget allocation.

Sustainability and outreach as the indicators for evaluating the performance of MFIs are not sufficient for government operated MFIs. They should be accompanied by an analysis of credit usage and credit concentration. The concentration is not based purely on the number of people who receive a loan but also on the value of loans received. In Governmental MFI, the scheduled size of credit was not generally followed. Some received more while others got less or at times nothing.

Bad design led to many problems such as mixing the target group with outsiders, and the rejection of credit by target group members. The assumption that the poor need funds does not necessarily imply that they will demand loans. They tend to be risk averse and do not want to take a risk on a loan if they felt it was not necessary. Consequently, many poor families, in particular those who did not have any business activities, rejected the loans offered.

Most of the supporting services provided by the MFIs were not effective in helping the recipients. Some technical skills provided to the leaders were not appropriate for the poor, and often the skills the leaders acquhed were not transferred to the ordinary members. Consequently, there was no significant impact on production and the marketing skills of ordinary members.

Finally, the history of MFIs in Indonesia and elsewhere reveal that the poor are constantly in need of various aspects of finance to assist them to improve their income. In this regard, the concern of government for poverty, with its established network of infrastructure from the central to the district and remote areas renders government as the most appropriate agent to deal with aspects of microfinance and effectively reach the poor.

The government also has the resources and the capacity to help the poor. However, to be effective and successful, MFIs should be financially sustainable in the longer term. In this respect, this study of KUKESRA and MKEJ have highlighted several areas which would improve the effectiveness of these two programmes, especially the government sponsored MFI. These include improvement in the crucial aspects of management, coordination, supervision, and design. Redesigning the programme with an emphasis on being demand driven, being targeted just at wives having businesses, self-formation of groups, freedom of entry and exit, cost recovery, and more flexibility would all make the programme more effective.

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