Transaction Costs of Lending to the Rural Poor

Non-governmental organisations and self-help groups of the poor as intermediaries for banks in India

V. Puhazhendhi

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Foreword

According to the World Bank, over one billion people in the world live in absolute poverty: that is, they are unable to meet their basic human needs for food, clothing, shelter and minimum health care. About 800 million of these people live in the Asia-Pacific region, over 300 million in India alone.

Most of them, however, are both eager and willing to help themselves — to generate a modest increase in income, small enterprise and employment — if only they are given the opportunity to do so.

Their major constraint is a lack of access to credit. High bank transaction costs and lack of collateral preclude the poor from being able to obtain even the smallest bank loan (for example, between $50 and $1,000, a range roughly corresponding to one year's average per capita income for the Third World poor) that is needed to enable them to help themselves.

But some hope for a breakthrough is beginning to dawn. In recent years, large numbers of self-help groups (SHGs) have been formed in the Third World by the poor themselves, and many non-governmental organisations (NGOs) have assisted them to develop programs of 'revolving credit' for the poor. Some of these programs have been successful in generating additional income, jobs and small enterprises, achieving high rates of loan repayment to banks (in excess of 95 per cent) by alternative methods, and achieving financial viability and sustainability after a number of years.

Taking note of the above problems and achievements, the Board of Governors of The Foundation for Development Cooperation decided in October 1990 to undertake a major project, titled **Banking with the Poor**, in the Asia–Pacific region. The stated objective of the project was 'to explore, demonstrate and publicise the scope for increased access to credit for the very poor on a sound commercial basis' in developing countries, and 'to promote viable, commercially sound linkages between commercial banks and well-managed non-governmental organisations and self-help groups' in those countries.

It sought to do so by bringing together representatives of major Asian banks and experienced NGOs for a regional dialogue on **Banking with the Poor**, and for that purpose convened its First Regional Workshop in Manila in May 1991. The workshop involved representatives of leading banks and non-governmental organisations from Bangladesh, India, Indonesia, Malaysia, Nepal, Pakistan, the Philippines and Sri Lanka.

It proved to be not only a unique but a very productive gathering, resulting in the banks and NGOs agreeing to continue and deepen the dialogue. They decided that in each country detailed case studies would be conducted, examining a range of methods and considering the main issues relating to providing better access to credit for the poor.

Among the issues that the participants agreed should be researched and included in the case studies were: target groups, linkage arrangements, savings mobilisation, credit facilities, security and collateral, interest rates, transaction costs, repayment performance, financial

viability, and the role of banks, NGOs, governments and central banks and international assistance. But of all those issues, there was wide agreement on the critical importance of finding means to reduce the transaction costs of very small loans, if better access to bank credit for the poor was to be established on a commercially viable basis.

At a Second Regional Workshop on **Banking with the Poor**, convened by The Foundation for Development Cooperation in Kuala Lumpur in July 1992, the participants reviewed the detailed case studies they had prepared on the above issues and adopted a series of findings, conclusions and recommendations. The recommendations were addressed to banks, NGOs and self-help groups, governments and central banks, international financial institutions, bilateral aid agencies and other multilateral and non-governmental organisations respectively.[1]

Whilst the detailed case studies and the final report on **Banking with the Poor** drew some positive conclusions regarding appropriate ways and means to reduce transaction costs, the participants in the Second Regional Workshop believed that issue alone to be sufficiently important as to warrant a deeper and more comprehensive investigation.

It is in response to that view, shared also by the Board of Governors of the Foundation, that the Foundation commissioned the present study by Dr V. Puhazhendhi, in collaboration with the National Bank for Agriculture and Rural Development (NABARD) in India.

In parallel with the abovementioned work of the Foundation and its regional partners on **Banking with the Poor**, some very important initiatives were being taken by the Government of India. While these are described more fully in the body of this study, some reference to them and to the involvement of our Indian Bank and NGO partners, and of the Foundation itself, are appropriate here.

In July 1991, the Reserve Bank of India issued a circular directive to Indian commercial banks encouraging them to deal directly with NGOs and self-help groups, to enable them to serve as more effective intermediaries to provide credit to the rural poor. This was followed in February 1992 by a circular from NABARD containing more detailed guidelines as to how this could be done.

The Foundation's partners, VYSYA Bank and MYRADA (a leading Indian NGO which had pioneered the establishment of self-help credit management groups in Southern India), had already agreed at our First Regional Workshop in May 1991 to work together on the Indian case study and to undertake experimental work in this field. They therefore agreed to respond positively to the appeal of the Reserve Bank and NABARD to test out trial linkages with self-help groups in their region.

Accordingly, a first line of credit was given by the Chairman and CEO of the VYSYA Bank to a self-help group established by MYRADA in Mudugooli Village in Southern India. This commitment was made in the presence of a representative of the Foundation, and was

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1 See *Banking with the Poor: Report and recommendations based on case studies prepared by leading Asian banks and non-governmental organisations*, The Foundation for Development Cooperation, Brisbane, 1992.

followed by similar commitments to other SHGs. The Foundation also provided seed funding through MYRADA to another twelve SHGs to test out the validity and effectiveness of the methods being employed to form and train SHGs and to link them to commercial banks. These methods are described in a small manual, *How to Build Self-Help Groups for Successful Banking with the Poor: A Rural Model*, prepared by MYRADA, VYSYA Bank and NABARD (with the participation of Dr Puhazhendhi).

Since then, a large number of other Banks, NGOs and SHGs have been formed and established linkages, with the overall guidance and support of NABARD. Their performance in reducing transaction costs and achieving high loan repayment rates and better access to credit for the rural poor in India, provided a wide and diverse sample for Dr Puhazhendhi's present study.

This study was presented to the Third Regional Workshop on **Banking with the Poor**, held in Brisbane, Australia from 21–25 November 1994. The study proved to be of interest and value to the many bank and NGO representatives from all over Asia (and this time from the South Pacific as well) and benefited from the participants' suggestions for its revision. The Foundation trusts that blended with their own experience in this field, it will enable them to further strengthen their joint efforts to provide better access to credit for the poor in this region.

The Third Regional Workshop, and the conduct of this transaction costs study, were both financed by the UN Development Programme under project RAS/92/006 (Asia-Pacific Regional Poverty Alleviation Programme). The Foundation as an implementing agency for this program was responsible to the Asian and Pacific Centre of Kuala Lumpur, as executing agency for RAS/92/006.

Before concluding this foreword, the Foundation would like to acknowledge the financial and other support that it has received for this project on **Banking with the Poor** from the Asian Development Bank, the World Bank, the United Nations Development Programme, the Australian International Development Assistance Bureau and the Australian Bankers Association.

The publication of this research report is supported by a further grant from the Asian Development Bank under its technical assistance for review of microenterprise development in selected developing member countries.

K. William Taylor
Vice Chairman
The Foundation for Development Cooperation

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Author's preface

Lack of easy access of credit from existing financial institutions to the poorest of the poor for productive capital investment is one of the most persistent barriers to poverty relief measures in many developing countries. Grouping the poor through a self-help group with the active support of a non-governmental organisation has emerged as a new approach, and banks have identified lending to groups as a viable alternative in the credit flow from institutions. The initial experience of such lending to self-help groups has been found to be more successful, ensuring full utilisation and better recovery as well as reducing the cost of lending for both banks and borrowers.

This report attempts to quantify the cost effectiveness of lending to the poor through the intermediation of non-governmental organisations and self-help groups. This includes conceptualising various components of the transaction costs of banks and borrowers; suggesting a methodology for quantifying the cost of lending and its influencing factors through the use of a time-allocation method and a simultaneous equation model; and empirical discussion of the Indian context. This is likely to be very useful for researchers, policy makers, banks and non-governmental organisations and to convince them of the cost effectiveness of the intermediation of NGOs and SHGs in the institutional credit system.

It is my great pleasure to put on record my profound gratitude to Mr K. William Taylor, Vice Chairman and founder of The Foundation for Development Cooperation, and Dr John D. Conroy, its Executive Director, for their confidence in entrusting me with the task of conducting this research study in India. Their guidance and involvement, beginning from developing a methodology for the study to editing the draft report and developing a final version, has been quite significant. Mr Ganesh B. Thapa, Senior Consultant to The Foundation for Development Cooperation, also contributed greatly to the research. His involvement and discussions during his visit to the study area while the methodology for the study was being finalised as well as further discussions with major bankers relating to the draft report significantly helped in the preparation of this report and the timely completion of the study program.

I am grateful to Sri Y. C. Nanda, Sri S. C. Wadhwa and Dr H. P. Singh, General Managers of NABARD, for their constructive and critical comments on the earlier drafts of the report. I am also thankful to senior officials of the Reserve Bank of India and the Indian Banks' Association for their valuable suggestions for improving the presentation of the report. Mr A. P. Fernandez, Executive Director of MYRADA, was instrumental in facilitating the study, and I am grateful for his encouragement. The project officers of MYRADA and Yuvak Vikas Kendras and the branch managers of selected bank branches extended full support, and their efforts are greatly appreciated.

My personal thanks are due to Dr C. Ramasamy, Professor of Agricultural Economics, Tamil Nadu Agricultural University for all his support in developing the simultaneous equation model for the study. I am also grateful to NABARD for permitting me to undertake the study and relieving me from routine work during the study period.

V. Puhazhendhi

About the author

Dr V. Puhazhendhi is an academician and researcher in the field of agricultural finance and management who later became a banker. He obtained a PhD from Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India in agricultural economics with a specialisation in finance and risk management. He worked in the Tamil Nadu Agricultural University, Coimbatore as Assistant Professor for a period of nine years from 1974, offering a range of courses in agricultural marketing; farm management; agricultural finance; farm financial management; and research methodology for evaluating agricultural projects for both undergraduate and postgraduate students. He has more than fifteen years experience in conducting farm survey/research studies relating to agricultural development, finance, production, project formation, and monitoring and evaluation of projects.

Since 1983, Dr Puhazhendhi has been working as an agricultural economist in the National Bank for Agriculture and Rural Development (NABARD). During this period he has been involved in the preparation of regional credit plans based on the assessment of available potential. He has conducted ten evaluation studies relating to a number of investments refinanced by NABARD (including dairy development, plantation and horticulture, minor irrigation etc.) and these reports have been published by NABARD. In addition, he handles sessions on project appraisal, monitoring and evaluation at both micro and macro levels in the staff training colleges of various banks.

He has published some fifteen research articles in various leading journals in India.
Dr Puhazhendhi has recently been involved in the implementation of a pilot project on linking banks with self-help groups (SHGs) and working closely with non-governmental organisations with a view to establishing alternative systems for a smooth flow of institutional credit to the rural poor. He is currently Manager of NABARD's Department of Economic Analysis and Research.

Acronyms

APRACA	Asia Pacific Rural and Agricultural Credit Association
CAPART	Council for Advancement of People's Action and Rural Technology
DCCB	district central co-operative bank
DICGC	Deposit Insurance and Credit Guarantee Corporation
DWCRA	Development of Women and Children in Rural Areas
FDC	The Foundation for Development Cooperation
IFAD	International Fund for Agricultural Development
IRDP	Integrated Rural Development Programme
MYRADA	Mysore Resettlement and Development Agency
NABARD	National Bank for Agriculture and Rural Development
NGO	non-governmental organisation
PACS	primary agricultural credit society
PLDB	primary land development bank
RBI	Reserve Bank of India
RRB	regional rural bank
SCB	state co-operative bank
SHG	self-help group
SHPI	self-help promotion institution
SLDB	state land development bank

Executive summary

The Indian banking sector has performed impressively in recent times in achieving social goals, extending the geographical reach and functional spread of financial services, especially for the rural poor. However, the viability and profitability of financial institutions, with respect to rural lending, have been eroded due to high transaction costs and poor recovery performance. In this context group lending for the poor is being recognised as an important innovation. Non-governmental organisations (NGOs) and self-help groups (SHGs) are emerging as effective financial and non-financial intermediaries in the institutional credit delivery system in rural areas.

In 1991 the Reserve Bank of India issued a directive to all commercial banks, encouraging them to establish linkages directly with NGOs and SHGs in India, using the latter as financial intermediaries of the banks to reach the poor. NABARD subsequently issued guidelines for a pilot project to link banks with SHGs. The present study attempts to quantify the cost effectiveness of delivering credit to the rural poor through the intermediation of NGOs and SHGs, compared with direct lending.

A number of projects have operated in parallel, employing the linkage concept. These include NABARD's linkage project, actively supported by commercial banks, a women's development project implemented by IFAD in Tamil Nadu State, and the Foundation's case study in South India for **Banking with the Poor**. From this experience a number of different rural credit channels may be distinguished, as indicated below.

Model I Lending directly to the rural poor (benchmark situation).

Model II Lending directly to the rural poor keeping NGOs and SHGs as non-financial intermediaries.

Model III Where banks use SHGs as financial intermediaries and NGOs as non-financial intermediaries.

Model IV Where credit flows from banks to NGOs, and then to SHGs, before reaching ultimate borrowers (both NGOs and SHGs as financial intermediaries).

Since the delivery of institutional credit through these intermediaries during 1992–93 was mainly concentrated in Karnataka and Tamil Nadu, these states were selected purposively for the study. The sample frame includes two major commercial banks (Canara Bank and Indian Bank), one regional rural bank (RRB) (Chitradurga Grameena Bank), and one private commercial bank (Vysya Bank).

Transaction costs of lending, per account as well as for the branch as a whole, were estimated using the cost-allocation method. Estimates of time spent by bank personnel for the identified functions or tasks were used to calculate the cost of loan delivery per account. Transaction costs per loan account were estimated on the basis of data collected from 128 sample accounts in the selected bank branches. With a view to quantifying the transaction

costs of borrowers, a sample of 150 borrowers was selected. The distribution of sample borrowers was made in proportion to the number of accounts financed by each bank. Details relating the various components of the cost of transacting a loan, and factors influencing variations in transaction costs, were collected from the sample borrowers. A simultaneous equation model, with transaction costs and loan demand as endogenous variables, was used to quantify the factors influencing the transaction costs of borrowers in rural lending.

The intermediation of NGOs and SHGs considerably reduced the time spent by bank personnel in identification of borrowers, documentation, follow-up and recoveries. This in turn influenced the reduction in transaction costs of rural lending. The estimated average transaction cost of lending per account was Rs 195, constituting 3.68 per cent of the loan amount, if the loan was delivered via a direct lending channel. The intermediation of NGOs and SHGs helped banks to reduce transaction costs by between 21 and 41 per cent when compared with the benchmark situation (that is, of direct lending). Among the different models involving intermediation, Model III proved to be most efficient. The dynamic nature of the reduction in transaction costs as a result of intermediation effected a downward shift of the marginal cost curve. This was possible because of the active role played by NGOs and SHGs in identification of borrowers, follow-up and recovery, which resulted in significant reductions in the time spent on these functions.

The estimated borrower transaction cost of dealing directly with a bank, per loan account of individual borrowers, was Rs 272. Of this amount about 40 per cent was for cash expenditure, while the balance represents the opportunity cost of time spent by borrowers in negotiating loans with banks and proving their creditworthiness. The intermediation of NGOs and SHGs contributed in reducing the transaction costs of borrowers by about 85 per cent. This reduction in cost was mainly due to the elimination of expenditure on documentation procedures, and a reduction in opportunity cost, in terms of the number of visits and the time spent on bank premises.

The estimated transaction cost of intermediaries was about 2.72 per cent of the loan amount when credit programs to SHGs formed part of their total activities. The cost of intermediation by NGOs includes the expenditure on maintaining the SHG for the first year or two and for negotiating the loan with the bank.

The intermediation of NGOs and SHGs has also proved useful in improving recovery rates. While the estimated default risk was very high for direct lending under Model I (22 per cent), it was negligible under the other models where intermediation occurs.

An attempt to estimate the impact of reductions in transaction costs on the viability of banks revealed that, *ceteris paribus,* if all loans were disbursed through intermediation, regional rural bank (RRB) branches would become financially viable after wiping out current losses. Commercial banks, both public and private, would improve their viability status further. In addition, a significant reduction in default risks would have a cascading impact on the profitability of bank branches.

The results of the simultaneous equation model also supported the hypothesis that the intermediation of NGOs and SHGs has a significant influence in reducing transaction costs.

The finding of a non-significant relationship between interest rate and loan demand confirms that borrowers are relatively insensitive to changing interest rates.

The major conclusion drawn from the study is that the intermediation of NGOs and SHGs in the institutional credit delivery system significantly reduces the transaction costs of both banks and borrowers. Consequently the viability of bank branches is improved. The success of intermediation lies in the effective functioning of NGOs, and in tapping the inherent strengths of SHGs. Periodic workshops and training programs need to be organised to disseminate to concerned parties the experience of intermediation.

An overall qualification to the conclusions of this study derives from the fact that it was conducted at a comparatively early stage of NABARD's pilot project linking banks with SHGs. This had implications for the available sample of banks and the geographic coverage of the survey. It is highly desirable that subsequent studies be conducted to confirm and extend these findings and their policy implications.

Chapter 1
INTRODUCTION

1.1 Main issues in rural lending

The rural financial market in India has undergone a series of changes during the last 24 years, following nationalisation of the country's major commercial banks. The establishment since 1975 of regional rural banks provided scope for easy access of an institutional credit delivery system to the rural poor. The post-nationalisation period witnessed a complete reorientation of the Indian banking system towards 'social banking'. As a result, the quantum of rural credit increased several fold with wider geographical coverage.[2] Thus, the major achievement of banking in general and of directed credit programs in particular has been the expanded outreach of the banking sector to the small and marginal farmers and the poorer sections of the society.

Despite many positive features of this rural credit delivery system, several studies, more recently the report of the Agricultural Credit Review Committee in 1989[3] and of the Committee on Financial System in 1991[4] pointed out the non-viability of institutional lending to the rural poor. The problem is more severe in RRBs, where the total loss incurred by 196 RRBs rose from Rs 928.7 million in 1990–91 to Rs 2,586.6 million in 1991–92, and a staggering Rs 6,150 million in 1992–93. Of these 196 RRBs, as many as 173 are running at a loss. Efforts are being made to improve the viability and profitability of the banks through assessment of factors contributing to such loss in rural lending. Increased transaction cost due to a plethora of small loans disbursed to a heterogeneous, widespread rural population, is one of the major concerns in revamping programs of commercial banks and RRBs to improve their viability.

Further, the fundamental malady of rural credit today is the non-recovery of loans and resultant bad debts. This threatens the very structure of rural lending, making it non-viable and functionally ineffective. Successive declarations of concessions across the board, in violation of banking norms, have proved dangerous to the commercial orientation of the credit structure. The entire recovery climate has been seriously vitiated by the nationwide debt relief provided by the government in 1990 which has encouraged wilful defaulters, thereby denying the necessary relief to genuine borrowers.

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2 A detailed discussion of the institutional credit delivery system is presented in Chapter 4 of this report.

3 Reserve Bank of India, *A Review of the Agricultural Credit System in India*, Report of the Agricultural Credit Review Committee, Reserve Bank of India, Bombay, 1989.

4 M. Narasimmham, *Report of the Committee on Financial System*, Ministry of Finance, New Delhi, 1991.

1.2 Exploration of new mechanisms

In recognition of the need for reduction in transaction costs of lending to the rural poor, and to improve recovery performance for increasing the viability and profitability of the banking sector, new ways and innovative forms of financing are being considered. People's participation in credit delivery and recovery, and the linking of formal credit institutions with borrowers through intermediaries such as self-help groups (SHGs) and non-governmental organisations (NGOs) have been recognised as alternative mechanisms for meeting the credit needs of the poor.

The pilot project, 'Linking banks with self-help groups', implemented by NABARD[5] demonstrated the emergence of new channels of credit for the poor with NGOs/SHGs as financial/non-financial intermediaries. Such intermediation helps the banks in identification of borrowers, effective loan utilisation, better recoveries and reduced transaction costs. Though efforts have already been made to quantify the benefits of NGOs/SHGs intermediation in the credit delivery system, an attempt has yet to be made in quantifying the cost effectiveness in loan transactions.

1.3 Scope and limitations of present study

Keeping this in view, the present study attempts to discuss in detail the various components of transaction costs of lending to the rural poor and the advantages of NGOs/SHGs being used as intermediaries, and to assess the impact of these intermediaries on bank viability by comparison with direct lending. The report limits the discussion to transaction costs of lending only, and does not analyse the transaction costs of the bank as a whole; hence, the findings need to be treated with caution. Further, since lending to the rural poor through NGOs and SHGs under the NABARD pilot project has been conducted only since 1992, available populations for sampling were restricted in size, especially in the case of Model IV, discussed below. Interpretations of the study findings should be appropriately qualified.

1.4 Structure of the report

Chapter 2 reviews the theoretical and conceptual framework of transaction costs of banks, borrowers and intermediaries such as NGOs/SHGs. Chapter 3 specifies the objectives, sample design and methodology used for deriving findings from primary and secondary data collected from sample bank branches and borrowers.

Chapter 4 describes the lending methods of various programs implemented for the benefit of the rural poor, and methods of intermediation by NGOs and SHGs in the credit system. Chapter 5 profiles selected bank branches and their lending patterns.

Chapter 6 quantifies the transaction costs of loans delivered through different channels, and identifies various factors responsible for variation in transaction costs between different situations. Various factors influencing transaction costs involved in lending to the rural poor,

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5 See Appendix 3 which reprints the NABARD circular to banks which introduced this project in 1992.

and effects of the intermediation of NGOs/SHGs are quantified using a simultaneous equation model, and these results are discussed in Chapter 7. Chapter 8 summarises the findings of the study.

Chapter 2

TRANSACTION COSTS THEORETICAL AND CONCEPTUAL FRAMEWORK

2.1 Introduction

The cost involved in transferring resources between markets or between participants in the same market can be defined as transaction cost. In the financial market, transaction costs refer to resources required to transfer one unit of currency from the bank (which collects deposits from the saver or borrower or from other sources on agreed terms) to a borrower, and to recover that unit of currency at a later date with some agreed interest charge. Unlike transactions in other markets, financial transactions always involve some risk because the contract is not completed until some future date when the loan is repaid.[6]

The costs incurred by all the participants (that is, banks, financial intermediaries and borrowers) in a loan transaction constitute the total costs. The level and distribution of these costs among the participants are affected by changes in technology, consumer preference, financial regulations, internal efficiencies of banks and financial intermediaries, and the interaction of demand and supply of credit.

2.2 Bank/intermediary transaction costs

The financial institutions (banks) incur the costs while raising funds which includes the cost of mobilising deposits, interest paid for the deposits, and the cost of loan delivery. On the other side, the borrower pays the costs of loan negotiation and proof of his creditworthiness, as well as the interest on the loan which he receives. The total cost incurred by the banks, intermediaries and borrowers is conceptualised and presented in Figure 2.1.

According to Cuevas,[7] the financial transaction cost is the interest paid by the bank on the deposits received from savers, and on borrowings received from various sources which are regulated by the monetary authorities in the country.

Cuevas also argues that the cost of mobilising deposits and the cost of lending are the major non-financial transaction costs incurred by banks. The former corresponds to the labour and material resources utilised in handling deposit accounts, and in documentation and record keeping. The cost of lending refers to cost associated with identification of borrowers, loan

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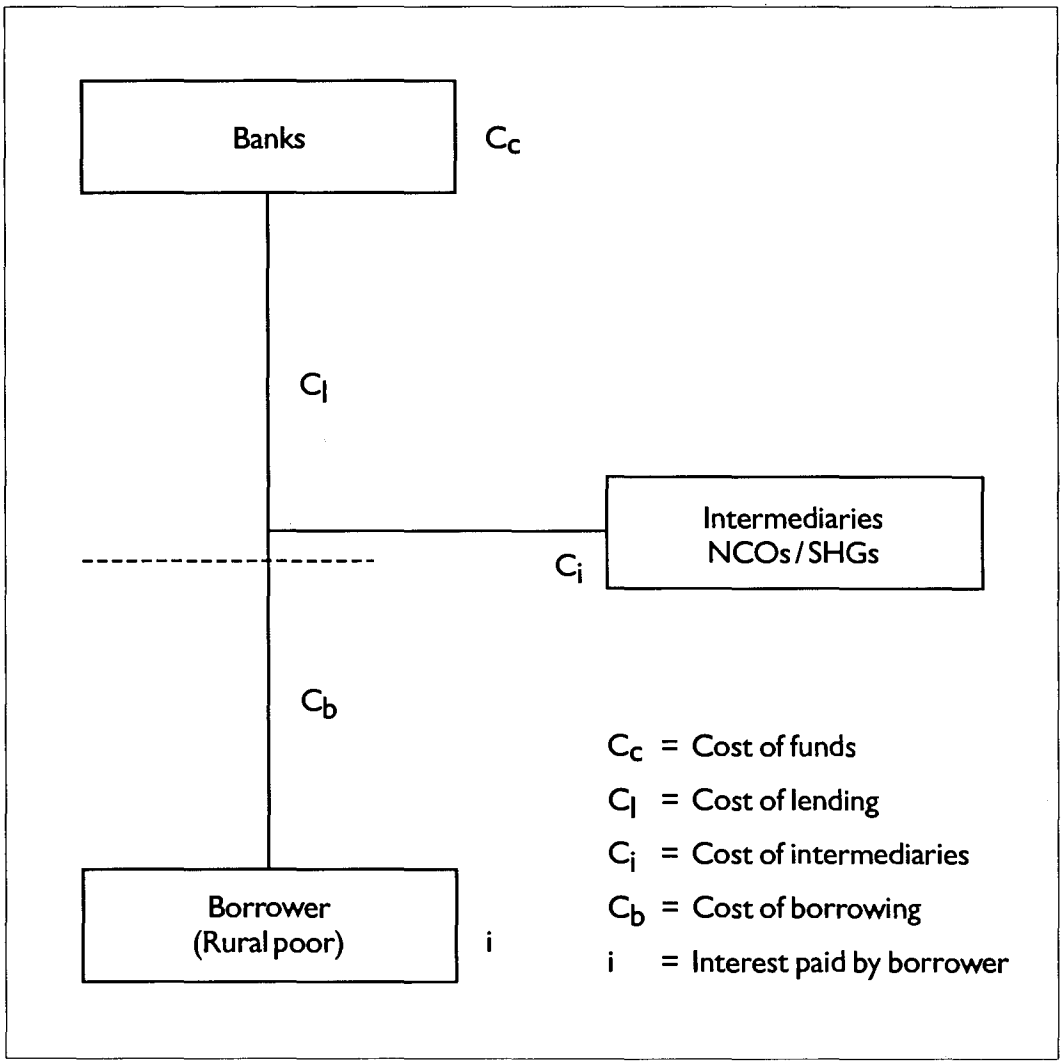
6 Richard L. Mayer & Carlos E. Cuevas, 'Reducing the transaction costs of financial intermediation: Theory and innovations', *Economics and Sociology*, Occasional paper no. 1,710, Department of Agricultural Economics and Rural Sociology, Ohio State University, Columbus, Ohio, May, 1990.

7 Carlos E. Cuevas, 'Transactions costs of financial intermediation in developing countries', *Economics and Sociology*, Occasional paper no. 1,469, Department of Agricultural Economics and Rural Sociology, Ohio State University, Columbus, Ohio, October, 1988.

Figure 2.1 Financial transaction costs



processing, sanction, disbursement, follow-up, recoveries and record keeping. Assessment of the creditworthiness of the borrower forms part of the lending cost.

The interest rate charged on loans represents the income earned by the banks to cover interest paid on deposits, cost of mobilising funds, cost of lending and a net surplus or profits which may be positive or negative.[8]

8 Richard L. Meyer & Carlos E. Cuevas, 'Reducing the transaction costs of financial intermediation: Theory and innovations'.

For the present study transaction costs are defined as implicit and explicit expenses incurred by participants in the financial market to effect financial transactions excluding interest payments of lender/intermediaries. The major components of lender transaction costs are the following.

1) Identification of borrower — gathering and processing information required to screen borrowers.
2) Collection of application and document verification — processing/ examining collaterals.
3) Pre-sanction visit.
4) Loan appraisal, sanction, disbursement and maintaining account.
5) Post-sanction visit.
6) Monitoring, follow-up and recoveries.
7) Other costs not enumerated above.

The increasing defaulting trend poses a serious problem to banks. It results in high risk cost, and hence this cost has to be considered in the context of bank viability.

The risk premium is quantified in terms of default risk. This explains the consequential cost which arises due to default and is expressed in the following form.

$R_p = (D/1-D)(1 + a + f)$ where

R_p = Risk premium (Default risk)

D = Default rate

a = Loan administrative cost

f = Opportunity cost of fund

Innovations introduced in the institutional credit delivery system in India recognise the non-governmental organisations or voluntary organisations (NGOs) and self-help groups (SHGs) as financial intermediaries, and credit to the poor is channelled through these institutions. Hence, the costs incurred by NGOs and SHGs also form part of the total costs.

2.3 Borrower transaction costs

The interest rate ceilings imposed by the monetary authorities in a regulated environment prevent the interest rate from moving to the market equilibrium rate. This results (Figure 2.2) in an excess demand for credit (Q_sQ_d) at the ceiling rate of i_r. A lower interest rate than the market equilibrium fixed at i_e leads to greater unsatisfied demand for credit.[9] The restricted credit supply necessitates the banks apportioning this short supply among all those who are applying for a loan. This results in a more complicated credit delivery system involving various kinds of selection/screening procedures by lenders to decide the prospective borrowers.

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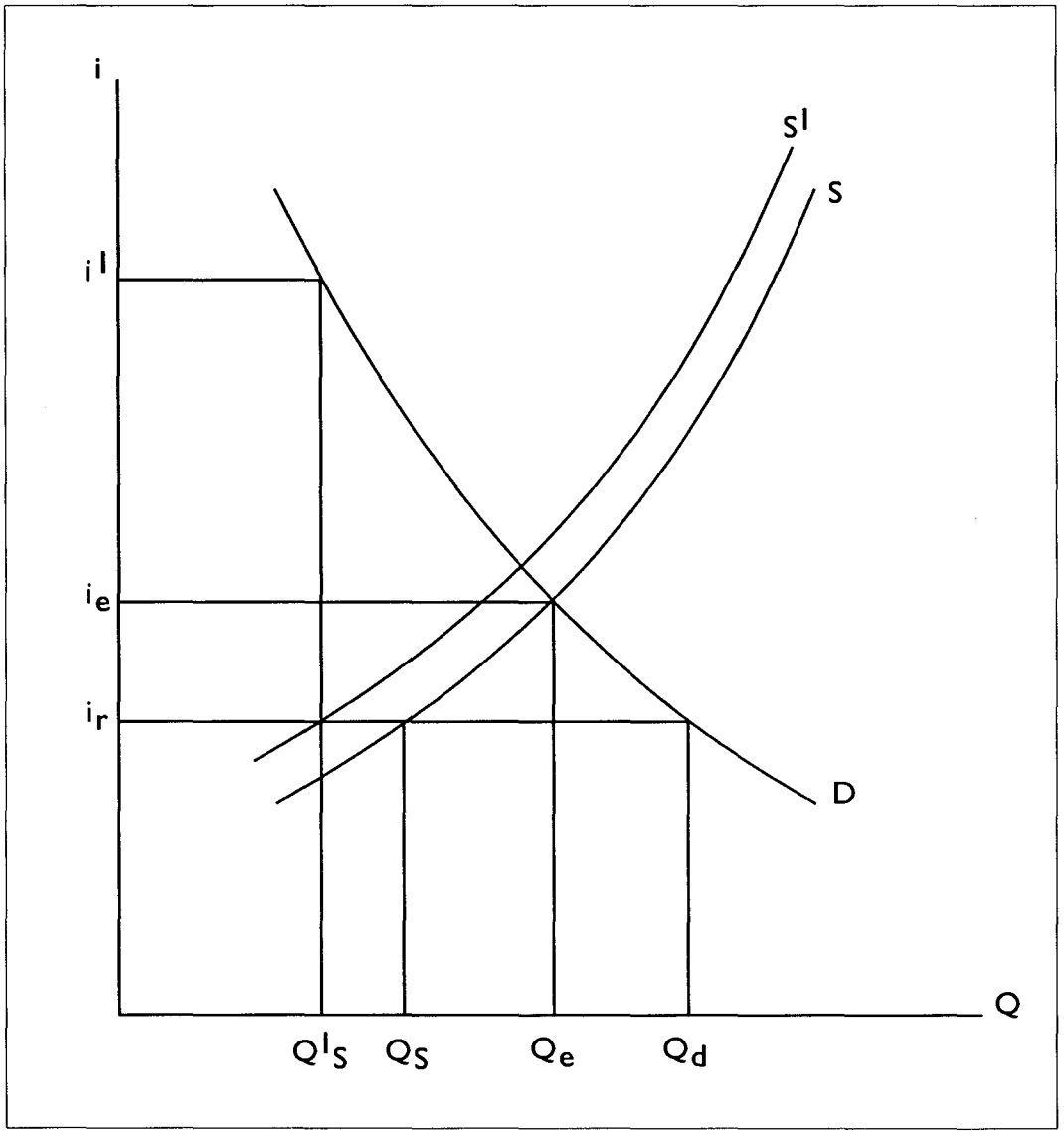
9 Virginia G. Abiad, Carlos E. Cuevas & Douglas H. Graham, 'Borrower transactions costs and credit rationing in rural financial markets: The Philippines case'. Working paper no. 88–09, presented during the ACPC-PIDS-OSU sponsored workshop, 'Financial intermediation in the rural sector: Research results and policy issues', held at Central Bank of the Philippines, September, 1988.

Figure 2.2 Borrower transaction costs



The process of assessing the creditworthiness of a borrower results in transaction costs to the bank which increase the marginal costs (MC) of financial institutions and shift the supply curve to the left (S in Figure 2.2). At a regulated interest rate, therefore, banks are willing to lend out Q^1_S, an amount smaller than Q_S.

At Q^1_S, while banks continue to charge the interest rate i_r, borrowers are willing to pay a much higher rate for credit, i^1. Borrowers will therefore continue to seek credit equivalent to Q^1_S as long as their transaction costs are less than or equal to margin $i^1 i_r$. The lower the

restricted interest rate, the greater the transaction costs that borrowers will be willing to absorb and vice versa.[10]

Thus, the borrower transaction costs deal with three major components: (1) the costs of loan negotiation, receipt and repayment which include the expenditure relating to travel and incidental expenses; (2) documentation expenses which include expenditure incurred by the borrower in connection with obtaining necessary certificates from village authorities and no-objection certificates from other banks; and (3) opportunity cost of time spent for negotiating loan which is estimated by imputing the average wage rate prevailing in the village. The present study attempts to quantify the above mentioned cost components through analysing primary data collected from 150 sample borrowers. The results are discussed in the following chapters.

10 Virginia G. Abiad, Carlos E. Cuevas & Douglas H. Graham, 'Borrower transaction costs and credit rationing in rural financial markets: The Philippines case'.

Chapter 3
STUDY DESIGN AND METHODOLOGY

3.1 Introduction

Easy access to credit on a sound commercial basis for the poor in developing countries through establishing linkages between financing banks, indigenous non-governmental organisations (NGOs) and self-help groups (SHGs) has been identified as an innovative approach in recent years. The project **Banking with the Poor** implemented by The Foundation for Development Cooperation (FDC) has already documented many of the positive features of bank financing to the poor through the intermediation of NGOs and SHGs.

This project documented a detailed case study of a pilot project undertaken by Vysya Bank in cooperation with MYRADA in South India. SHGs established by MYRADA received Vysya Bank credit, and channelled these funds to their members, the rural poor. The case study showed that effective utilisation and recovery through such intermediaries encourages the financial institutions to recognise this channel of credit dispensation as a viable and workable alternative in supplementing the institutional credit delivery system.[11] That cost effectiveness is one of the distinct advantages in credit delivery to the poor via this channel has been discussed in various fora. However, rigorous quantification of such cost benefit has not been attempted so far.

With this in view, the present study attempts to compare the transaction costs of micro lending for the poor through the intermediation of NGOs and/or SHGs compared to direct lending in the Indian context. The hypothesis to be tested in the study is as follows. Using NGOs and/or SHGs of the poor as financial intermediaries in the institutional credit delivery system significantly lowers the transaction costs compared to direct lending; such intermediation would significantly contribute to the viability and profitability of financing banks.

3.2 Objectives of the study

The specific objectives of the study were the following.

1) To analyse the extent of institutional credit flow for the poor and the factors that prevent banks from lending to the poor.
2) To identify and describe various direct lending schemes implemented for the poor by banks, and to determine their transaction costs from lender to ultimate borrowers.

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11 *Banking with the Poor*

3) To describe different channels of credit using NGOs and/or SHGs as intermediaries (both financial and non-financial), and to estimate their transaction costs while lending to the poor through these channels.
4) To compare the transaction costs of lending to the poor under different identified channels and to estimate various cost variables which influence cost effectiveness among different channels.
5) To determine the extent of any influence upon the viability and profitability of the banks when credit for the poor is channelled through different identified channels.
6) To suggest a cost-effective model for lending to the poor using NGOs and SHGs as intermediaries.

3.3 Model specification

Since the specific objective of the study is to quantify cost effectiveness in rural lending when NGOs and SHGs are used as financial intermediaries, identification of a benchmark situation becomes essential. At present, banks are providing financial support through various credit programs designed for the rural poor with the support of the government. Hence, the situation where NGOs and SHGs are not involved (direct lending) forms the benchmark situation. The experience of NABARD in India of implementing a pilot project involving linking banks with SHGs provides scope for studying four different situations (including the benchmark) which constitute the selected channels of credit flow (Figure 3.1).[12]

Model I Where banks lend directly to the ultimate borrowers without having NGOs and SHGs as intermediaries (benchmark situation).

Model II Where banks lend directly to the ultimate borrowers, and NGOs and SHGs are involved as non-financial intermediaries.

Model III Where banks use SHGs as financial intermediaries to lend to the borrowers, with NGOs as non-financial intermediaries.

Model IV Where credit flows from banks to NGOs and then to SHGs before reaching the ultimate borrowers (both NGOs and SHGs as financial intermediaries).

3.4 Sample design

The implementation of the pilot project, 'Linking banks with self-help groups' by NABARD, together with the Vysya Bank/MYRADA collaboration described in **Banking with the Poor**, opened a new channel through which the rural poor have better access to the intermediation of NGOs and SHGs in the institutional credit delivery system. Since this present study focuses mainly on the quantification of cost effectiveness of the credit flow through this new channel, the area where the pilot project and the case study were conducted forms the study area.

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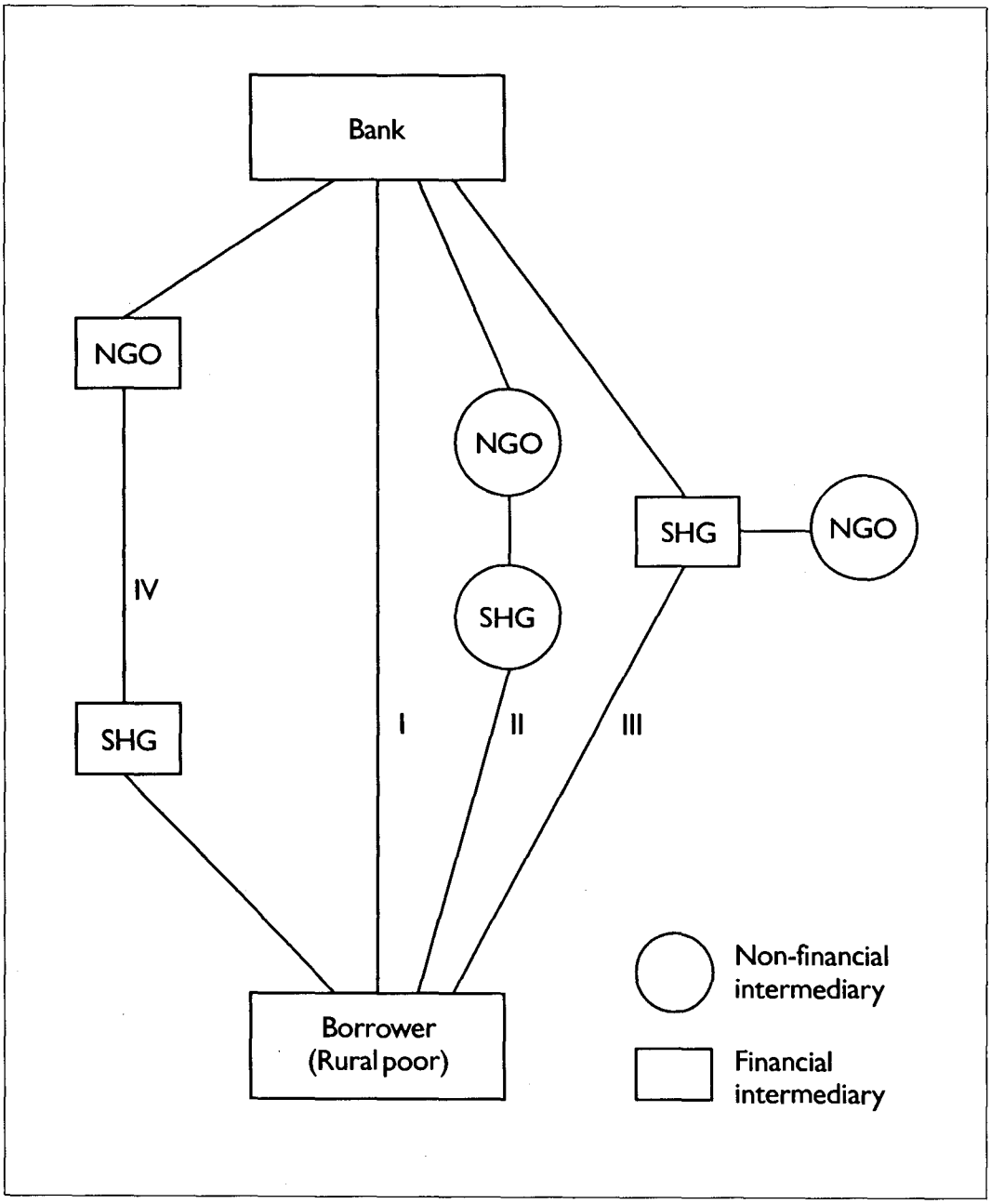
12 See also the models described for case studies in *Banking with the Poor*, pp. 20–21.

Figure 3.1 Institutional credit channels to the rural poor (Models I, II, III, IV)



A coverage of NABARD's pilot project during the year 1992–93 as presented in Table 3.1 indicates that about 81 per cent of the groups linked with the banks were functioning in the states of Karnataka and Tamil Nadu. Though many NGOs in other parts of India are adopting the group concept for implementing many of their own community development and credit programs, formal linkage of these groups has not been established so far. Hence, Karnataka and Tamil Nadu States were purposively selected for the study. The purposive choice of these states establishes the representative nature of the study population, since the groups in these areas were functioning effectively, and the linkages of SHGs with banks were well established.

Table 3.1 Pilot project on linking banks with SHGs implemented by NABARD: a review of progress during the period 1992–93

States	SHGs linked with banks (in no.)	% to total
Karnataka	108	51
Tamil Nadu	64	30
Andhra Pradesh	15	7
Maharashtra	10	5
Gujarat	13	7
	210	100

MYRADA, an NGO which had conceived the concept of credit management groups, has formed more than 2,000 groups of rural poor in the southern states of India, including Karnataka, Tamil Nadu and Andhra Pradesh. Most of the groups linked with the banks under the pilot project during 1992–93 were organised by MYRADA, and hence the experience of SHGs organised by this NGO forms the basis for this present study. Chitradurga District in Karnataka State is a single stratum where a maximum number of groups were linked with different financial institutions (RRBs, commercial banks in both public and private sectors). Hence, this district was selected mainly to discuss the Model III situation for the study.

Many commercial banks (both public and private) and regional rural banks (RRBs) are actively involved in the linkage exercise, involving NGOs and SHGs as intermediaries in the lending process. Since the RRBs are established exclusively for the rural poor with a micro enterprise focus, there is every possibility that the variables which are influencing their cost pattern differ widely from other financial institutions. The public sector commercial banks adopted the 'social banking' approach since their nationalisation in 1969. However, some private sector commercial banks are now also demonstrating their keen interest in providing financial support to the rural poor. Vysya Bank is an example of a private sector commercial bank which has provided financial support to SHGs (with the active encouragement of FDC). Since the basic approaches of private and public sector commercial banks differ, it is

likely that these differing approaches might have a strong influence on cost patterns in delivering credit to rural poor. Keeping these criteria in view, the study findings are discussed separately for the following three types of institutions, and also collectively for all the financial institutions for a comprehensive understanding of the cost aspects of the institutional credit delivery system as a whole.

1) Regional rural bank
2) Commercial bank (public sector)
3) Commercial bank (private sector)

The benchmark situation (Model I) which represents direct lending to the rural poor was identified in all three types of institutions and in all four banks surveyed in this study. The situation representing Model II was available only in Tamil Nadu State where Indian Bank had financed directly to rural poor, keeping NGOs and SHGs as non-financial intermediaries. Though this channel is in operation in five districts of Tamil Nadu, the Indian Bank branch in Shoolagiri, Dharmapuri District, which had financed the maximum number of groups under the IFAD project for women's development, was selected for the study to represent the commercial bank (public) situation. Financing to SHGs by banks (Model III) under the pilot project implemented by NABARD has been done by all the identified financial institutions.

Chitradurga Grameena Bank was the major regional rural bank which had financed the maximum number of groups during 1992–93. Hence, its branch at H.N. Pura (where more groups were linked under the pilot project implemented by NABARD) was selected to represent the RRB situation under Models I and III. In addition, for representing commercial banks (private sector), the Vysya Bank branch at Challakere was selected, again based on the criteria of maximum number of groups financed. Two groups from Indian Bank represented public sector financing.

Representing Model IV, where the banks were to lend to NGOs which in turn lend to SHGs and to ultimate borrowers, the only situation available in the country occurred where Canara Bank in Bijapur District of Karnataka State provided financial support to the NGO, Yuvak Vikas Kendra. Hence, these cases were selected for the purpose of the study. Canara Bank in Bijapur is located in an urban area and its cost parameters totally differ from other banks branches selected for the study. This bank branch was therefore omitted from the selected commercial bank (public) situation for the analysis of transaction costs at bank level. Though a co-operative credit structure is well established in India, financing to SHGs is yet to be started by these institutions. Hence, co-operative institutions were not included for the study. Thus, the sample bank branches selected ultimately for the study were three, representing each of the above identified banking institutions.

In selecting the bank branches, care has been taken to maintain the representativeness of each branch for the bank as a whole, based on general criteria including volume of loan transactions in comparison with staff strength, location of branch representing rural/semi-urban area etc. The small sample size of bank branches did not restrict the analysis since the cost allocation method employed for estimating transaction costs requires few sample bank branches. This gave more scope for the researcher to understand the activities

and procedures performed by the institutions, apart from enabling effective use of the time allocation schedule with a small sample.[13] The model specification of banks and NGOs involved is given in Table 3.2.

Table 3.2 Model specification of identified bank branches and NGOs involved

Model specification	Model description	Bank	NGO
Model I	Commercial bank (public)	Indian Bank/ Canara Bank	–
	Commercial bank (private)	Vysya Bank	–
	Regional rural bank	Chitradurga Grameena Bank	–
Model II	Commercial bank (public)	Indian Bank	MYRADA
Model III	Commercial bank (public)	Indian Bank	MYRADA
	Commercial bank (private)	Vysya Bank	MYRADA
	Regional rural bank	Chitradurga Grameena Bank	MYRADA
Model IV	Commercial bank (public)	Canara Bank	Yuvak Vikas Kendra

The transaction costs of lending at branch level were estimated by analysing both primary and secondary data collected from the selected bank branches. This involved canvassing a time allocation schedule for different operations, followed by detailed discussions with branch officials. For the purpose of estimating transaction costs of individual loan accounts both under Models I and II, a sample of 92 accounts was selected which were proportionately distributed among different institutions according to quantum of loan disbursed under the priority sector. In Models I and II, this resulted in samples of 54 and 38 cases, respectively. As discussed elsewhere in the report, financing to SHGs was being undertaken on a pilot basis by banks. Hence, the population available for sampling under some models is small. All 14 SHG accounts representing Model III were thus included in the study.[14] In view of the limited sample size in Model IV, both the groups (entire population) had been selected. Data for Models III and IV should more properly be regarded as case study data, rather than the sampling approach employed for Models I and II. The distribution of sample accounts according to different models and institutions is presented in Table 3.3.

13 Carlos E. Cuevas, 'Transaction costs of financial intermediation in developing countries'.
14 A profile of selected groups for Models II, III and IV is presented in Appendix 1.

Table 3.3 Distribution of sample accounts by model and by bank

Bank	Model				
	I	II	III	IV	Total
Indian Bank	9	38	2	–	49
Canara Bank	17	–	–	2	19
Regional rural bank	15	–	5	–	20
Vysya Bank	13	–	7	–	20
Total	54	38	14	2	108

In addition, with a view to estimating the transaction cost of larger loans (above Rs 5,000), a sample of 20 accounts was selected and on this basis marginal cost was estimated. A time allocation schedule was employed through which the time taken by officials for performing various banking operations at different levels in the bank was quantified. With a view to assessing the cost involved for NGOs and SHGs, the required details were collected through a pre-designed questionnaire, covering a detailed break-up of various cost components.

The transaction costs of borrowers were estimated through primary data collected from a sample of 150 borrowers who represented different situations selected at random for the study. The distribution of sample borrowers among various banks for different models is presented in Table 3.4.

Table 3.4 Distribution of sample borrowers (in number)

Bank	Model				
	I	II	III	IV	Total
Indian Bank	15	15	10	–	40
Canara Bank	15	–	–	15	30
Regional rural bank	15	–	25	–	40
Vysya Bank	15	–	25	–	40
Total	60	15	60	15	150

3.5 Method of analysis

The cost allocation method which is used to estimate the cost components in the loan transaction is based on an implicit assumption of a fixed co-efficient production function. Consequently, returns to scale are constant throughout the entire output domain where technology indicators are predetermined under this method. The basic assumption of the cost allocation method is that, with a few exceptions, non-personnel inputs in the

production of banking services are allocated to different activities in the same proportion that personnel costs are.[15]

The major data inputs used are the financial statements of the sample bank branches for the reference year 1992–93; salary and allowances of branch personnel; average loans and deposits[16] statistics; and time allocation of bank employees for different functions. The identified functions of the branches are classified into four major aspects: loan advance; deposit collection; banking operations; and developmental activities which are non-financial in nature. When the functions relating to loan advances include the work relating to assessment of the creditworthiness of the borrower, loan delivery and recovery of loan at future dates, the deposit collection functions refer to works relating to mobilising funds from savers. The banking operations define the functions of maintaining saving bank accounts, current accounts for business purposes, and money transfer operations. The developmental activities include the functions undertaken by the selected bank branches for the benefit of borrowers which are non-financial in nature; for example, literacy programs, arranging cattle shows, awareness programs, health camps, and community development programs.

The time spent by each of the branch personnel for the above identified functions was quantified through a pre-designed time allocation schedule; corresponding costs in terms of salaries and allowances for branch staff were estimated in proportion to the time allocation for each of the functions. The other expenditure incurred by bank branches relating to rent, tax, stationery, depreciation etc. were allocated to each of the functions proportionately to time allocation.

For the purpose of estimating the transaction costs of individual loan accounts, the delivery process at the bank branch level was disaggregated into specific functions and the time spent by different levels of branch personnel (for example, officers and clerks) was assessed using the time allocation method. While selecting the sample accounts, care was taken to have the same average loan amount for the purpose of comparison among different models. Though banks had sanctioned and disbursed loan to SHGs/NGOs in a single account (Models III & IV), for the purpose of comparison with the benchmark situation, time and cost incurred for transacting SHG accounts were apportioned to individual beneficiaries in the group with the average loan amount of Rs 5,000. Since the procedure for loan delivery up to Rs 25,000 of term loans was almost the same irrespective of the purpose of the loan, classification of loans by purpose was not attempted in the present study. Sample accounts of different loan sizes were analysed to derive the marginal cost in transacting the loan delivery and to examine the relationship between transaction cost and loan sizes.

Borrowers transaction costs include actual cash expenditure incurred during visits to bank branches for both receipt of loan and for recovery; this includes travel and other incidental

15 Carlos E. Cuevas, 'Transaction costs of financial intermediation in developing countries'.

16 Average loans and deposits refers to the estimated monthly average (to avoid seasonal variations) of loans and deposits outstanding (by month).

expenses and expenditure involved with establishing creditworthiness (for example, providing documents, stamp paper, photo, 'no-objection' certificates from other expenses etc.). Various factors which influence the transaction cost of borrowers (location of branch, literacy level of borrower, assets position etc.) were quantified using a simultaneous equation model.

The opportunity cost of time spent by the borrower in the bank premises and travelling to the bank was estimated based on the average wage rate prevailing in the area, and expected wage earnings given labour market conditions in the area. The viability of bank branches was discussed with the assumption of loan delivery through different identified channels for which different efficiency indicators were used. Break-even analysis was used to try to estimate the optimum level of loan business to be reached by banks to make the branch viable.

The impact of the linkage model was quantified in terms of reduction in transaction costs and risk premium, and its influence on margins. Default risk assumes greater importance while assessing the institutional performance, and it is included in the lending cost. Risk premium summarises the consequence of default (that is, the loss of principal and uncollected interest), the administrative cost incurred in handling the loans in default, and the opportunity cost of these funds (specification as given in Chapter 2).

3.6 Simultaneous equation model

Transaction costs influence both lender and borrower behaviour, and it is assumed that transaction costs are considered by borrowers as part of the total loan prices. Under this situation, the simultaneous equation model with transaction costs and loan demand as endogenous variables would be an appropriate method of analysis for this study. Hence, the simultaneous equation model specified by Cuevas and Graham[17] and Abiad et al.[18] is tested empirically on the survey data using the Two Stage Least Square (TSLS) method. The model consists of two equations: (1) a loan demand equation; and (2) a transaction cost equation.

3.7 Loan demand equation

The loan demand equation is specified with the hypothesis that the demand is determined by various factors, namely:

1) the transaction cost of borrowing
2) interest rate charged
3) financial strength of the borrower
4) borrower's liquidity requirements decided by family size, number of dependents and literacy level

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17 Carlos E. Cuevas & Douglas H. Graham, 'Transaction costs of borrowing and credit rationing in agriculture: A simultaneous equation approach', *Economic and Sociology*, Occasional paper no. 1,471, Department of Agricultural and Rural Sociology, Ohio State University, Ohio, June, 1988.

18 Virginia G. Abiad, Carlos E. Cuevas & Douglas H. Graham, 'Borrower transaction costs and credit rationing in rural financial markets: The Philippines case'.

5) availment of credit from informal sources
6) loan requested through intermediation of NGOs/SHGs.

The loan demand equation is specified as:

$$\text{In LOAN D} = C_0 + C_1 \, I_n TC + C_2 \text{ In INTR} + C_3 \text{ In ASSET} + d_1 (\text{FAMSIZ}) + d_2 \text{ LIT} + d_3 \text{ INTMED} + D_4 \text{ BANK} + D_5 \text{ INFORM}$$

where:

LOAN D	=	Loan amount applied for
TC	=	Borrower transaction costs as percentage of loan amount received
INTR	=	Interest rate charged on loan
ASSET	=	Value of assets owned which explains the financial strength of the borrower
FAMSIZ	=	Number of members in the family
LIT	=	Literacy level of borrower
INTMED	=	Dummy variable for intermediation
INTMED	=	1 if intermediation
INTMED	=	0 if otherwise
BANK	=	Dummy variable for type of bank
Bank	=	1 if RRB
Bank	=	0 if otherwise
INFORM	=	Dummy variable for availability of credit from informal sources
INFORM	=	1 (also borrowed from informal source)
INFORM	=	0 if otherwise

3.8 Transaction costs equation

Transaction costs are hypothesised to be determined by the following factors:

1) size of loan applied for by borrower
2) the interest rate
3) value of assets owned by borrower
4) type of bank
5) the proximity of borrower's residence to the bank
6) quantum of loan expected with intermediation of NGO/SHGs
7) time lag in loan negotiation.

The specification of the transaction costs equation is as follows:

$$InTC = a_0 + a_1 \ln LOAN + a_2 \ln INTR + a_3 \ln ASSET + b_1 BANK + b_2 DIS + b_3 INTMED$$

where:

TC	=	Borrower transaction costs as a percentage of loan amount received
LOAN	=	Loan amount applied for
INTR	=	Interest rate charged on the loan
ASSET	=	Asset value owned by borrowers
BANK	=	Dummy variable for type of bank, Bank = 1 if RRB
Bank	=	0 if otherwise
DIS	=	Distance of bank from residence measured by travel time
INTMED	=	Dummy variable for intermediation
INTMED	=	1 if intermediation
INTMED	=	0 if otherwise

Chapter 4

INSTITUTIONAL CREDIT FOR RURAL POOR COVERAGE, LENDING NORMS AND CONSTRAINTS

4.1 Introduction

Rural banking in India began in 1955 as a consequence of the nationalisation of the State Bank of India, and accelerated further after the nationalisation of major commercial banks. Regional rural banks were established from 1975 with the objective of providing 'social banking' in the rural areas, focusing on micro credit at low cost. Thus, the vigorous intervention of the Government of India encouraged the commercial banks to play a major role in rural development objectives.

The institutional structure of rural banking in India consists of four types of institutions (Figure 4.1).

- Commercial banks (both public and private)
- Regional rural banks (RRBs)
- Co-operative banks
- Land development banks

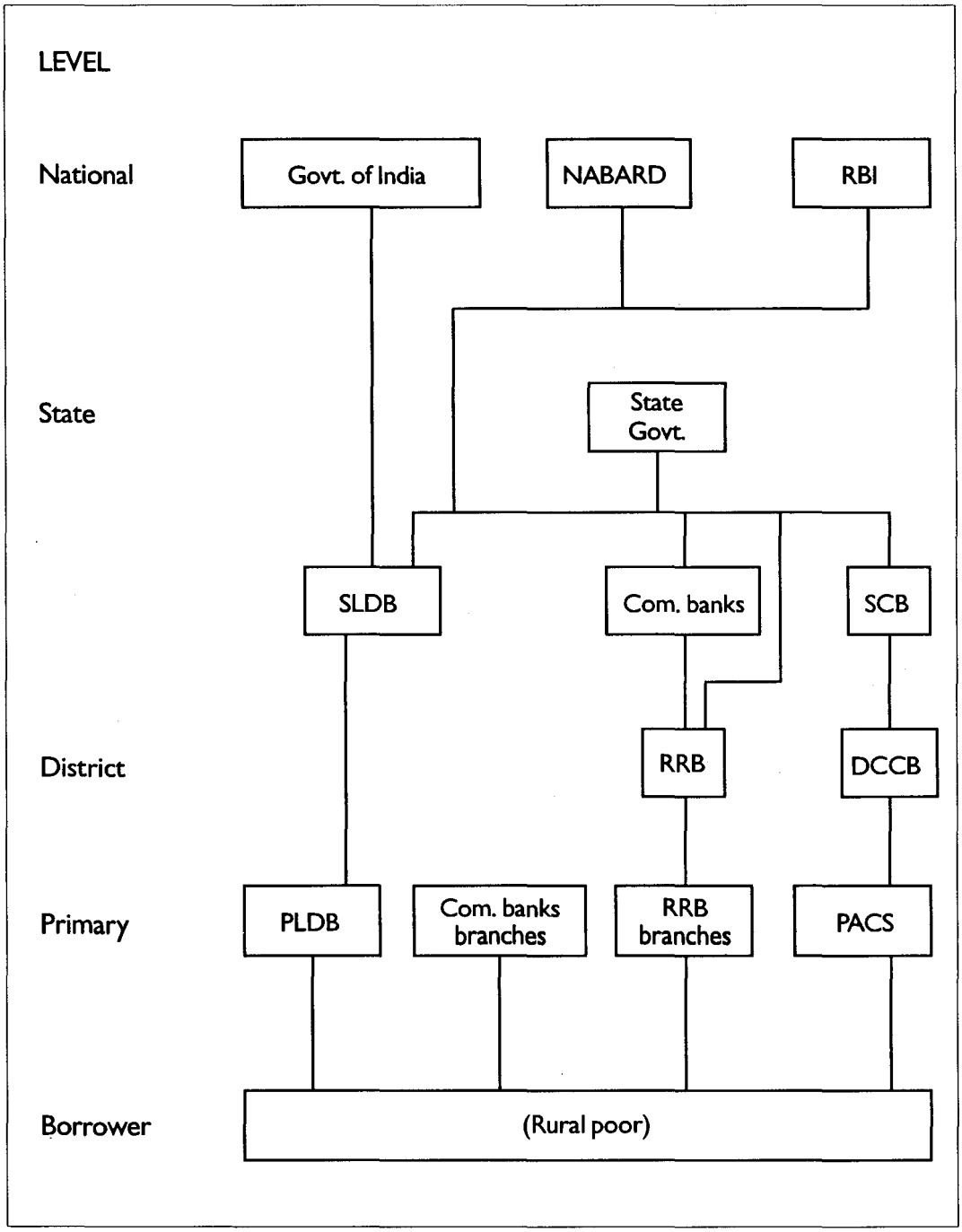
Under the co-operative structure, the short-term loans are provided by co-operative banks, and land development banks extend medium- and long-term loans. RRBs focus exclusively on the small and marginal farmers, agricultural labourers and rural artisans. Commercial banks, in addition to the general banking functions are bound by the guidelines issued by the Reserve Bank of India to lend 40 per cent of the aggregate credit to the priority sector. The credit facilities extended by banks for government-sponsored programs aiming at target groups form a major part of priority sector lending. The major government-sponsored programs envisaging a credit component are detailed below.

4.2 Government-sponsored credit programs

The Integrated Rural Development Programme (IRDP) is the major poverty alleviation program implemented by the Government of India since 1978. Its objective is to enable the identified rural poor to cross the poverty line[19] through providing income generating assets. During the seventh five-year plan period (1985–90), about 18.2 million families were assisted under this program and about Rs 30,000 million were utilised for providing capital subsidy and other infrastructural facilities. During the eighth five-year plan period

19 The poverty line is drawn at an annual income level of Rs 11,000 at a 1991–1992 price level, below which such families are classified under the category of 'families below the poverty line'.

Figure 4.1 Institutional rural credit structure



(1992–97), it is proposed to cover 200 million rural families with financial support of Rs 35,000 million under this program.[20]

Development of Women and Children in Rural Areas (DWCRA) is a sub-plan of IRDP introduced during 1982–83 as a centrally sponsored scheme. Efforts were made under this program to raise income levels of women in rural households, to enable their organised participation in social development towards economic self-reliance. Implementation of this program helped to bring 0.469 million women under the fold of groups with financial support for undertaking income generating activities. The Training of Rural Youth for Self Employment (TRYSEM) is a supporting component of IRDP, and aims at providing technical and entrepreneurial skills to rural youths. About 0.3 million youth annually are being trained under this program. Jawahar Rozgar Yojana (JRY), Massive Agricultural Production Programme (MAPP), etc. are other popular programs implemented for the benefit of the poor.

Some of the salient features of these programs are:

- directed at specific target groups[21]
- reduced collateral requirements
- purpose-specific
- credit at fixed scale of finance
- impose fixed term repayment schedule
- offer subsidy on loan principal
- entail government/banks collaboration
- charge centrally fixed interest rates.

By specifying lending norms based on the above features, the credit flow is directed towards the rural poor whom it would not have reached in the normal course of events.

4.3 Present situation

In order to meet the challenges in rural credit and the increased demand due to the complementary efforts of banks and government in implementing many rural development programs, all financial institutions expanded their geographical coverage, particularly in rural areas. As a result, the number of rural and semi-urban branches of commercial banks had risen from 29,158 to 32,232 during the ten-year period since 1982. The number of RRBs increased from 124 to 196 during the same period, with the number of their branches increasing rapidly from 6,191 to 14,539. The share of commercial banks and RRBs in investment credit increased from 58.6 per cent in 1981–82 to 63.3 per cent in 1989–90. The network of short-term co-operative credit institutions comprises 88,977 primary agricultural

20 Government of India, *Annual Report 1992–93*, Ministry of Rural Development, Department of Rural Development, New Delhi, 1994.

21 The target group may be defined by ownership of assets (principally land), income level, or membership of a particular social group (scheduled castes and tribes).

credit societies, 351 district central co-operative banks with 10,775 branches, and 28 state co-operative banks with 651 branches. In the case of the long-term co-operative credit institutions, there are 20 state land development banks operating through 2,248 primary units.[22]

4.4 Continuing issues

Although the institutional rural credit structure has registered notable achievements, the rapid expansion in credit assistance has led to certain shortcomings in the quality of lending, especially for the poor: for example, underfinancing, shorter loan maturities, lack of tie-up in marketing, and poor supervision. Another constraint, more serious from the viewpoint of long-term sustainability of the lending institutions, has been the rising trend in the overdues which hampered the credit institutions in recycling their resources. Poor access of institutional credit to the rural poor was mainly due to poor recovery performance, inadequate staff strength, high cost of lending, and rigid lending norms which did not meet their emergent needs.

Despite vast expansion of the formal credit system in the country, the dependence of the rural poor on informal sources (especially moneylenders) continues in many forms. Such dependence is pronounced in the case of marginal farmers, landless labourers, petty traders and rural artisans. For various reasons, credit to these sections of the population has not been institutionalised.

4.5 New directions

Keeping this in view, NGOs have already promoted the formation of informal groups of the rural poor, with a view to encouraging thrift to assist in financing their emergent needs and weaning them away from informal sources.[23] The studies of these informal groups during the last few years by NABARD, APRACA and The Foundation for Development Cooperation have demonstrated that self-help groups have the potential to bring together the formal banking structure and the rural poor for mutual benefit.[24, 25, 26]

On 24 July 1991, the Reserve Bank of India (RBI) issued an important circular directive to all Indian commercial banks, encouraging them to deal directly with NGOs and SHGs to serve as financial intermediaries to the rural poor. RBI did not require the legal registration

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22 NABARD, *Annual Report 1992–93*, National Bank for Agricultural and Rural Development, Bombay, 1993.

23 Aloysius Prakash Fernandez, 'Alternate management systems for saving and credit of rural poor', in *The MYRADA Experience*, MYRADA, Bangalore, 1993.

24 NABARD, *Studies on Self Help Groups of the Rural Poor*, National Bank for Agriculture and Rural Development on behalf of APRACA, 1989.

25 S. C. Wadhwa, 'Case study on group pressure and moral/social security as collateral substitutes', Paper presented in the APRACA regional workshop on collateral substitutes, 29 March 1992, Philippines.

26 Foundation for Development Cooperation, *How to Build Self-help Groups for Successful Banking with the Poor: A Rural Model*, rev. edn, Brisbane, 1995.

of SHGs, nor fix their maximum interest margins, provided they were not excessive.[27] NABARD subsequently issued guidelines for a pilot project to link banks with SHGs to enable them to serve as financial/non-financial intermediaries to provide access to credit for the poor.[28]

The Foundation for Development Cooperation encouraged Vysya Bank and MYRADA, its two Indian partners in its regional project on **Banking with the Poor**, to establish a series of such linkages with SHGs established by MYRADA. Based upon that experience of MYRADA and Vysya Bank in Southern India, FDC issued a manual describing the best methods of forming, training, seed funding and linking SHGs with commercial banks.[29] It also provided seed funding through MYRADA to twelve SHGs to test out the methods being employed.

The initial experience of implementing the pilot project by NABARD and major commercial banks in the country is quite encouraging, both in terms of effective utilisation and better repayment. As at the end of March 1994, about 620 self-help groups were linked with banks, and credit assistance of Rs 8.42 million was disbursed directly to groups. For wider coverage of the project, efforts were made to identify non-governmental organisations which were practising the group concept in India. Intensive training programs and various bankers meetings at national, state and district level were arranged by NABARD to popularise the methods and benefits of linking banks with NGOs and SHGs.

On 31 January 1994, the Foundation for Development Cooperation, in conjunction with the Indian Banks' Association and the Reserve Bank of India, convened a national workshop of Indian bankers for the same purpose. It was addressed by the Governor of the Reserve Bank who strongly advocated the establishment of linkages between banks and SHGs as the 'best practice' demonstrated to date for providing access to credit for the rural poor. A national workshop for NGOs was convened by FDC a few days later in cooperation with the Association of Voluntary Agencies for Rural Development (AVARD) and MYRADA for a similar purpose. Both conferences were addressed by the Chairman of NABARD, Mr P. Kotaiah, who also strongly advocated the wider use of NGOs and SHGs as effective intermediaries for the banks to reach the rural poor.

With special reference to the study area (Karnataka and Tamil Nadu), the NGO, MYRADA, is a pioneer in implementing the concept of group activities and playing mainly non-financial roles in forming and maintaining the self-help groups. (Details are given in Appendix 4.) MYRADA is also participating in the Tamil Nadu Women's Development Project, implemented with the assistance of the International Fund for Agricultural

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27 Reserve Bank of India, Circular RPCD, No. Plan. BC. 13/PL-09.22/90/91 dated July 24 1991 addressed to all scheduled commercial banks, Bombay, 1991 (presented in Appendix 2).

28 NABARD, Circular no. NB/DPD/FS/4631/92-A/91-92 dated 26 February 1992 to all scheduled commercial banks indicating the guidelines of the Pilot project on linking banks with self help groups (presented in Appendix 3).

29 FDC, *How to Build Self-help Groups for Successful Banking with the Poor: A Rural Model.*

Development (IFAD). The salient features of this project and its achievements in the Dharmapuri District of Tamil Nadu are presented in Appendix 5. Yuvak Vikas Kendra (YVK), an NGO functioning in Bijapur District of Karnataka State and selected for the study, plays both financial and non-financial roles (details in Appendix 6). The functional roles of these agencies have been dealt in the respective sections dealing with intermediation under the identified models.

Chapter 5
SELECTED BANK BRANCHES A PROFILE MATRIX

5.1 Overview

The location of bank branches, staff patterns, nature and volume of business, pattern of deposit mix, volume of loan outreach, number and size of loans disbursed, credit deposit ratio etc. are some of the factors which influence the transaction costs of bank branches, thus affecting the viability of the banks as a whole. Since the selection of bank branches for the study was based mainly on the maximum number of SHGs financed and their participation in the pilot project implemented by NABARD, it is likely that the above discussed factors might not be uniform for all the selected branches. With a view to having a better understanding of the selected branches, their profiles are discussed in this chapter.

5.2 Regional rural bank

Chitradurga Grameena Bank is the major regional rural bank which is actively involved in financing to SHGs in the study area. As at the end of the year 1992–93, about 22 groups promoted by MYRADA were financed by this bank through Model III. In addition, the bank is actively involved in implementing many poverty alleviation programs sponsored by the Government of India for the rural poor. Since RRBs were established with the specific objective of providing micro credit for priority sectors, the clientele for the bank was the target group.[30] The Chitradurga Grameena Bank branch in H. N. Pura which was selected for the study is located in a rural area. It is characterised by poor transport and communication systems, with the major area under dry land.

The selected branch has been in operation since 1981 and at present serves 17 villages with an overall population of 7,670 rural households. The service area villages are predominantly dependent on agriculture with animal husbandry as a supplementary activity. The major functions of the bank branch are the issue of loans and collection of deposits. Maintaining savings bank accounts is a major banking activity. In addition, the branch is undertaking, with government support, developmental activities like awareness programs, arranging cattle shows, health camps etc. for the benefit of borrowers. The branch is actively participating in financing the rural poor under the Integrated Rural Development Programme (IRDP).

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30 The target groups represent the rural community comprising small and marginal farmers, landless agricultural labourers, rural artisans, petty traders and other neglected people living below the poverty line. Recent policy changes implemented with a view to improving viability, allow RRBs to provide finance for non-target groups also.

The average deposits amount during the reference year was Rs 4.819 million collected from 4,968 depositors with average savings amounts of Rs 970 per account. The total number of borrowers was 510 and 83 per cent of them were small farmers.

The average aggregate loan disbursed was Rs 5.536 million. The pattern of loan disbursement as indicated in Table 5.1 revealed that out of the annual loan disbursement of Rs 1.578 million during 1992–93, about 45 per cent was disbursed as crop loans and 19 per cent as term loans. Financial support provided for the non-farm sector (business) was the major activity under the term loan portfolio, followed by animal husbandry activities. The other loans financed by the bank relate to disbursals against the deposits which accounted for 36 per cent of the total loan amount. A very similar pattern was observed in the case of the number of loan accounts disbursed. The estimated average bank loan per account was Rs 3,094 with a range of Rs 2,000 to Rs 10,000. The branch is managed by two officers, three clerks and one maintenance staff.

Table 5.1 **Pattern of loan disbursement and average loan amount: regional rural bank**

Purpose	No. of loans	Loan amount (Rs in millions)	Average loan amount (Rs)
Agriculture (crop loan)	218 (43)	0.701 (45)	3,216
Term loan			
Dairy animals	23	0.047	2,043
Sheep and goats	12	0.061	5,083
Sericulture	1	0.007	7,000
Non-farm sector (business)	31	0.135	4,355
Self-help groups	5	0.050	10,000
Sub total	72 (14)	0.300 (19)	4,166
Other loans	220 (43)	0.577 (36)	2,623
Total	510	1.578	3,094

Figures within parentheses indicate percentage to total.

5.3 Commercial banks (public)

The Indian Bank branch selected for the study is located in Shoolagiri Village which is situated along the national highway. This branch has a service area of 24 villages, and about 12,670 households are presently covered by the branch. Because of its locational advantage, adequate transport and communication systems make it accessible for many of its service area

villages. The branch has functioned since 1981. The average deposits amount was Rs 16.117 million with average savings of Rs 1,891 per account. The estimated loan outreach was Rs 15.373 million and the number of loans disbursed was 575; 53 per cent of them were for small farmers. The pattern of loan disbursement and average loan amount for the branch during 1992–93 is presented in Table 5.2.

Table 5.2 Pattern of loan disbursement and average loan amount: commercial banks (public)

Purpose	No. of loans	Loan amount (Rs in millions)	Average loan amount (Rs)
Agriculture (crop loan)	169 (29)	1.109 (28)	6,562
Term loan			
Dairy animals	8	0.034	4,263
Sheep and goats	29	0.171	5,896
Sericulture	84	0.692	8,238
Plough bullock	6	0.027	4,500
Horticulture crops	13	0.085	6,538
Land development	53	0.349	6,585
Non-farm sector (business)	38	0.144	3,789
Self-help groups	2	0.040	20,000
Sub total	233 (41)	1.542 (40)	6,618
Other loans	173 (30)	1.249 (32)	7,220
All loans	575 (100)	3.90 (100)	6,783

Figures within parentheses indicate percentage to total.

As can be seen from Table 5.2, out of the total loan disbursements of Rs 3.9 million during the reference year, about 28 per cent of the loans were disbursed for agricultural purposes, and 40 per cent for other term loans under priority sectors. Sericulture activity and the non-farm sector were the major activities financed under term loans. The average loan disbursed by the branch was Rs 6,783 with a range of Rs 3,700 to Rs 20,000. The total staff strength of the branch is seven, comprising two officers, four clerks and one maintenance staff. One field officer attached to a different branch is visiting one day per week to provide technical support for the branch manager in appraising the loan proposals.

5.4 Commercial banks (private)

Vysya Bank Ltd, a leading private sector bank in India, is actively participating in the implementation of the pilot project by NABARD and has been the subject of a case study in **Banking with the Poor.** Its branch at Challakere in Chitradurga District which was selected for the study has financed seven SHGs with a loan amount of Rs 0.63 million. This branch is located in Challakere which is the *taluk* headquarters, and has all transport and communications facilities. The service area villages of this branch were distributed in the range of 10 to 25 kilometres. Twenty villages were covered under the branch, comprising 12,420 households. The extent of savings outreach by the branch was Rs 48.993 million with an average savings amount of Rs 10,230 per account. The average loan amount disbursed was Rs 21.797 million and the total number of loan accounts was 406. The branch has adequate staff strength of three officers, seven clerks and two maintenance staff.

Table 5.3 Pattern of loan disbursement and average loan amount: commercial banks (private)

Purpose	No. of loans	Loan amount (Rs in millions)	Average loan amount (Rs)
Agriculture (crop loan)	69 (17)	0.168 (4)	2,435
Term loans			
Dairy	2	0.010	5,000
Small-scale industries	41	1.366	33,317
Trade and services	86	0.692	8,052
Self-help groups	7	0.063	9,000
Sub total	136 (33)	2.131 (52)	15,669
Other loans	201 (50)	1.761 (44)	8,762
Total	406 (100)	4.060	10,000

Figures within parentheses indicate percentage to total.

As indicated in Table 5.3, about 52 per cent of loans outstanding of Rs 4.06 million were term loans while agricultural crop loans constituted a small share of 4 per cent. Among term loans, maximum disbursement was made for small-scale industries followed by trade and services.

5.5 A comparative view of all selected bank branches

With a view to comparing the profiles of selected branches, certain specific indicators were worked out and presented in Table 5.4. The credit deposit (CD) ratio was relatively more in RRB branches (115 per cent) when compared to commercial banks of both public and private sector. The discussion with the branch officials indicated that the RRB branches were focusing mainly on advances, the major source of funds being NABARD and respective sponsored banks. Similarly, the private sector commercial banks with their emphasis on improving profitability, have a low CD ratio when compared to the public sector bank — a result of increasing their deposit base while keeping rural lending at a low profile.

The estimated deposits per staff member were relatively fewer in RRBs when compared to commercial banks of public and private sectors. On examining the viability of the bank, the RRB branch was found to be incurring losses, whereas commercial banks (public and private sector) were making profits. Here again, the overall analysis indicated that delivering large number of small loans was the major reason for RRBs making losses.

Table 5.4 Profitability of selected bank branches and certain efficiency indicators

Particulars	RRB	Commercial banks	
		Public	Private
Profitability of bank branch			
Income on advances	0.553	1.896	6.475
Commission, brokerage and other expenses	0.037	0.082	0.465
Total income	0.590	1.978	6.940
Expenditure			
Interest paid on deposit	0.283	0.976	3.936
Staff and salary allowances	0.372	0.575	0.666
Other expenses	0.055	0.095	0.189
Total expenditure	0.710	1.646	4.791
Net profit	-0.120	+0.332	+2.149
Efficiency indicators			
C D ratio (%)	115	95	44
Deposit per staff	0.803	1.612	4.083
Advance per staff	0.930	1.537	1.816
Net profit per staff	-0.020	+0.033	+0.182

The number of loan accounts and the size of loan were the two major factors which influence the transaction costs of lending. With a view to having closer review, the frequency distribution of loans according to loan size was attempted, and results are presented in Table 5.5.

Table 5.5 Distribution of loan accounts and average loan amount (by size)

Loan size (Rs)	Loan account (no.)	Loan disbursed (Rs in millions)	Average loan amount (Rs)
Regional rural bank			
Up to 5,000	393	0.914	2,326
5,001 to 10,000	110	0.565	5,136
10,001 to 15,000	4	0.043	10,750
15,001 to 20,000	3	0.056	18,667
20,001 and above	–	–	–
Total	510	1.578	3,094
Commercial bank (public)			
Up to 5,000	353	1.710	4,844
5,001 to 10,000	210	1.929	9,186
10,001 to 15,000	4	0.059	14,250
15,001 to 20,000	4	0.074	18,500
20,001 and above	4	0.130	32,500
Total	575	3.902	6,786
Commercial bank (private)			
Up to 5,000	133	0.460	3,460
5,001 to 10,000	202	1.455	7,203
10,001 to 15,000	20	0.224	11,200
15,001 to 20,000	16	0.294	18,375
20,001 and above	35	1.627	46,486
Total	406	4.060	10,000
All banks total	1,491	9.538	6,397

It is interesting to observe that both RRBs and commercial banks in the public sector focus mainly on micro credit of less than Rs 15,000; this constitutes a high proportion (94–96 per cent) of their outstanding loans. However, the commercial banks in the private sector depart from this commonality by lending more large-sized loans. By comparison, the exposure of

private commercial banks to loans of less than Rs 15,000 is as low as 53 per cent while their bigger loans constitute 47 per cent of their outstanding loans. Again, while the average loan size of commercial banks in both public and private sectors under various loan classes was comparable, the loans of RRBs were found to be low-scale, thus confirming their focus on micro credit.

Chapter 6
TRANSACTION COSTS ESTIMATES

6.1 Overview

Attempts have been made by various financing banks and individual researchers to quantify the transaction costs of banks and their impact on viability. The report of the Agricultural Credit Review Committee[31] was an elaborate exercise to study the transaction costs of various financial institutions, and estimated that the transaction costs work out to 6.0 per cent and 6.99 per cent of agricultural loans disbursed by commercial banks and regional rural banks respectively. Almost all the individual banks have estimated the transaction costs of various functions for the purpose of assessing the viability of their branches. NABARD is undertaking a series of studies for estimating transaction costs as an integral part of a program aiming at strengthening the institutional credit delivery system with special reference to co-operatives and RRBs.

The present study differs from other studies mainly on account of its focus on transaction costs of lending alone. Unlike other studies where transaction costs are estimated for the bank as a whole, the present study attempts to compare the cost of lending for individual accounts, and also to compare the cost of lending when it is delivered through different channels.

The major findings of the study are discussed in the following eight sections.

1) Time allocation schedule of bank personnel for loan delivery (Section 6.2)
2) Transaction costs of lending per account (Section 6.3)
3) Transaction costs of lending per Rs 100 loan (Section 6.4)
4) Borrower transaction costs (Section 6.5)
5) Transaction costs of lending and their impact on bank branch viability (Section 6.6)
6) Estimation of default risk under different models (Section 6.7)
7) Transaction costs of intermediaries (NGOs/SHGs) (Section 6.8)
8) Total transaction costs of rural lending: summary (Section 6.9)

6.2 Time allocation schedule of bank personnel for loan delivery

Cost allocation in proportion to time spent by bank personnel for the identified functions in loan delivery was the method used to quantify the transaction costs of lending by banks.

The analysis was based on preliminary data collected from bank personnel on their time allocation for various functions of loan delivery, with reference to a sample of 108 loan

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31 Reserve Bank of India, *A Review of the Agricultural Credit System in India*, Report of the Agriculture Credit Review Committee, Reserve Bank of India, Bombay, 1992.

accounts. These accounts were proportionately distributed according to loan amount disbursed under the priority sector by different institutions. In order to reduce the number of variables needed for processing the data, bank personnel were classified into two major categories — officers and clerks — keeping the nature of their work and position in view. Individual staff members were then asked to specify the time spent for each of the operations on selected loan accounts.

The percentage of time so derived for individual functions and its horizontal summation were the basis for estimating the time allocation for various functions in loan delivery. With a view to having a comparative analysis among different branches and credit delivery through different channels, care has been taken to select the accounts with an average loan amount of about Rs 5,000.

To avoid any memory bias and get reliable data on time allocation of various operations for selected accounts, the researcher spent considerable time in discussing the loaning operations in detail with bank personnel using cross-checking enquiries. Since all the staff members in the selected branches had worked for more than two years in the same branches, and selected loan accounts were processed and transacted only by them, it was assumed that the time-allocation schedule obtained from them must be reliable.

Model I

The estimated time spent per account for loan delivery by all financing banks when the loan was delivered directly to the borrower under Model I was 4.34 hours. This total estimated time was divided almost equally between clerks and officers (Table 6.1).

Table 6.1 **Time allocation of bank personnel per account: direct lending (Model I)**

Functions	Time (hours) spent		
	Clerks	Officers	All bank personnel
Identification of borrower	–	0.42	0.42
Collection of application document verification	0.52	–	0.52
Pre-sanction visit	–	0.32	0.32
Loan appraisal, sanction and disbursement	0.64	0.42	1.06
Post-sanction visit	–	0.22	0.22
Monitoring, follow-up and recoveries	1.00	0.80	1.80
Total time spent	2.16	2.18	4.34

The functions relating to identification of borrower, loan sanction, appraisal, pre-sanction and post-sanction visits etc. were mainly attended by officers, whereas clerks handled the

work relating to collection of applications, document verification and major desk work for monitoring, follow-up and recoveries. The distribution of time spent among different functions indicates that about 40 per cent of the time was allocated for monitoring and follow-up (which was recurring in nature), and about 28 per cent of time was spent for loan appraisal, sanction and disbursement. The other functions like identification of borrowers, collection of applications, pre- and post-sanction visits required about 30 per cent of the time. Allocation of lesser time for these latter operations was mainly due to their non-recurring nature.

The estimation of time spent by various banks for delivering a single loan indicated that it was relatively more in RRB branches (5 hours) when compared with the commercial banks in both public and private sectors (Table 6.2).

Table 6.2 Time allocation of bank personnel (by bank) per account, Model I

Functions	Time (hours) spent by bank personnel of					
	RRB		Commercial banks			
			Public		Private	
	clk	offi	clk	offi	clk	offi
Identification of borrower	–	0.50	–	0.16	–	0.60
Collection of application document verification	0.55	–	0.50	–	0.50	–
Pre-sanction visit	–	0.37	–	0.17	–	0.40
Loan appraisal, sanction and disbursement	0.95	0.38	0.50	0.50	0.50	0.40
Post-sanction visit	–	0.25	–	0.25	–	0.20
Monitoring, follow-up and recoveries	1.00	1.00	1.00	1.00	1.00	1.00
Time spent	2.50	2.50	2.00	2.08	2.00	2.60
Total time spent	5.00		4.08		4.60	

clk: clerks offi: officers

Though the time taken for monitoring, follow-up and recoveries for all institutions was almost the same, the time taken for identification of borrowers and loan appraisal was relatively more in RRBs when compared to commercial banks. The discussion with bank officials revealed that the clientele for RRBs being the target group members and size of loans being small, bank personnel were required to spend more time in the identification process.

Model II

The estimated time taken by bank personnel for delivering one loan under Model II, where SHGs and NGOs were playing a non-financial role, was 3.58 hours (Table 6.3). A comparison of this situation with the benchmark situation (Model I) indicates that there was a reduction of 18 per cent of time spent when the loan was disbursed under Model II. It is interesting to observe that the reduction in time of officer hours was more (28 per cent) than in clerical hours (7 per cent). The analysis of deviation in time spent for various functions in comparison with Model I indicates that more than 60 per cent of time reduction was observed in identification of borrowers, and about 17–20 per cent in pre-sanction, post-sanction visits and in monitoring, follow-up and recovery operations.

Table 6.3 **Time allocation of bank personnel per account, Model II**

Functions	Time (hours) spent		
	Clerks	Officers	All bank personnel
Identification of borrower	–	0.16 (-62)	0.16 (-62)
Collection of application document verification	0.50 (-4)	–	0.50 (-4)
Pre-sanction visit	–	0.25 (-22)	0.25 (-22)
Loan appraisal, sanction and disbursement	0.50 (-22)	0.50 (+19)	1.00 (-6)
Post-sanction visit	–	0.17 (-23)	0.17 (-23)
Monitoring, follow-up and recoveries	1.00 (0)	0.50 (-38)	1.50 (-17)
Total time spent	2.00 (-7)	1.58 (-28)	3.58 (-18)

Figures within parentheses indicate the percentage of deviation from the benchmark situation (Model I).

The increase in time (approximately 19 per cent) spent by officers for appraisal, sanction and disbursement of loan was mainly due to the time spent for coordinating with government officials for effective implementation of women's development programs. The above analysis clearly indicates that the intermediation of NGOs and SHGs has taken care of the major tasks of the banks, particularly identification, follow-up and recovery functions.

Model III

When the loan was disbursed to the SHGs, keeping the NGO as non-financial intermediary (Table 6.4), the estimated time spent by bankers per SHG loan account was 67 hours. The time spent for different operations indicated that it was about 9 hours each for identification of borrowers including the pre-sanction visit, and for collection of the application. About 24 hours were taken for loan appraisal, sanction and disbursement, and the remaining 25 hours were spent on monitoring, follow-up and recoveries. Since these SHG loan accounts were sanctioned and disbursed on a pilot basis, the banks officials had taken more time than would be required normally. Hence, there is scope for further reduction in time spent under different functions as and when the banks expand their lending to more SHGs. Under this model, the loan was sanctioned and disbursed to SHGs through which all the group members were able to avail the benefit of the bank loan. The primary data collected from SHGs revealed that 23 members had availed loans from the bank source in the corpus fund.

Table 6.4 **Time allocation of bank personnel per account, Model III**

Functions	Time (hours) spent		
	Clerks	Officers	All bank personnel
Identification of borrower	–	0.24 (-41)	0.24 (-41)
Collection of application document verification	0.43 (-21)	–	0.43 (-21)
Pre-sanction visit	–	0.16 (-50)	0.16 (-50)
Loan appraisal, sanction and disbursement	0.77 (+20)	0.27 (-36)	1.04 (-2)
Post-sanction visit	–	0.15 (-32)	0.15 (-32)
Monitoring, follow-up and recoveries	0.60 (-40)	0.30 (-63)	0.90 (-50)
Total time spent	1.78 (-18)	1.12 (-49)	2.90 (-33)

Figures within parentheses indicate the percentage deviation from benchmark situation (Model I).

Hence, the total time spent for loan transaction at the bank level was reduced to a 'per account' basis. This was necessary in order to have a meaningful comparison with the benchmark situation. The estimated time spent by bankers per account was 2.90 hours

which was about 33 per cent less than the benchmark situation. Further, about 49 per cent of officer time was reduced when the loan was disbursed under Model III. Reduction in the usage of time for all the identified functions again confirmed that financing to SHGs considerably reduces the usage of time by bank personnel for micro lending. The reduction in time taken for appraisal, sanction and disbursement of loan was only minimal on account of clerks spending more hours with the group members to ascertain the details of their activities. However, a comparison of time taken for various lending operations among different institutions in Model III did not show much variation.

Model IV

Financing to the NGOs under this model has just been attempted and the sample situation was the only experience available for analysis (Table 6.5). The total time spent by bank personnel for delivering a loan to the NGO was 80 hours. Twenty-four members had availed a loan from an NGO through an SHG. Hence, for the purpose of comparative analysis with the benchmark situation, the time spent was estimated at a 'per account' basis at borrower level.

Table 6.5 Time allocation of bank personnel per account, Model IV

Functions	Time (hours) spent		
	Clerks	Officers	All bank personnel
Identification of borrower	–	0.32 (-24)	0.32 (-24)
Collection of application document verification	0.58 (+12)	–	0.58 (+12)
Pre-sanction visit	–	0.24 (-25)	0.24 (-25)
Loan appraisal, sanction and disbursement	0.93 (+45)	0.39 (-7)	1.32 (+25)
Post-sanction visit	–	0.24 (+9)	0.24 (+9)
Monitoring, follow-up and recoveries	0.82 (-18)	0.39 (-51)	1.21 (-33)
Total time spent	2.33 (+8)	1.58 (-28)	3.91 (-10)

Figures within parentheses indicate the percentage deviation from benchmark situation (Model I).

The estimated time spent per account for delivering loan was 3.99 hours which registered a reduction of 10 per cent from the benchmark situation. However, it is felt that there is scope

for further reduction (in time spent for delivering the loans) once the loaning procedures are standardised. Here again, more than 20 per cent reduction in time usage was observed in identification of borrowers, pre-sanction visits and monitoring, follow-up and recoveries. It is surprising that there was an increase in usage of bank personnel time for loan appraisal, sanction and disbursement. This is most likely due to the fact that this was the first time the bank had made finance available to an NGO. As a result, they have spent more time in loan appraisal sanction for want of specific guidelines from their head office.'

Lending under government-sponsored programs

The flow of micro lending for the rural poor is always encouraged through the implementation of government-sponsored programs. The main difference between these loans and direct lending (Model I) as far as the bank is concerned was the coordination with government officials required for scheme implementation.

Table 6.6 Time allocation of bank personnel per account through government-sponsored programs

Functions	Time (hours) spent		
	Clerks	Officers	All bank personnel
Identification of borrower	–	0.71 (-69)	0.71 (-69)
Collection of application document verification	0.33 (-37)	–	0.33 (-37)
Pre-sanction visit	–	0.42 (+31)	0.42 (+31)
Loan appraisal, sanction and disbursement	0.76 (+19)	0.37 (-12)	1.13 (+7)
Post-sanction visit	–	0.28 (+28)	0.28 (+28)
Monitoring, follow-up and recoveries	1.08 (+8)	1.05 (+31)	2.13 (+18)
Total time spent	2.17 (0)	2.83 (+30)	5.00 (+15)

Figures within parentheses indicate the percentage deviation from benchmark situation (Model I).

Though the banking procedure for sanction and disbursement of loan to government-sponsored programs did not vary from other direct lendings, the past experience of poor recovery and involvement of government officials necessitated the banks to spend

more time in identification of borrowers. Since the regular meetings are organised at the village level before selecting the beneficiaries under government-sponsored programs, the time taken by the bank personnel for pre-sanction visits was more than other direct lending (as indicated in Table 6.6).

The total time spent for delivering one loan account under a government-sponsored program was estimated at 5 hours which was 15 per cent more than the identified benchmark situation (Model I). The increase in officer hours was 30 per cent. The time spent by bank personnel had increased in all the functions except for collection of application and document verification which is done by government departments which sponsor the application to banks. The time spent by various financial institutions in loan delivery under a government-sponsored program did not show any significant variation.

The discussions relating to time allocation for various functions of the lending process in different institutions, and its comparison among different models demonstrate in a quantified way that there is significant reduction in time spent for loaning with the intermediation of NGOs/SHGs. Of these, Model III is found to be more efficient in time allocation, as the critical functions in loaning are performed by intermediaries. Further, Model IV can also emerge as an efficient conduit, if the policy intervention relating to procedural aspects of financing NGOs is strengthened.

6.3 Transaction costs of lending per account

The details on a compensation package provided by the bank to various staff positions was collected from bank statements. An estimate of expenditure per hour was then worked out keeping 150 hours as average monthly working hours per staff member. The estimated salary and other allowances per hour ranged between Rs 47 and Rs 57 for officers/managers, and Rs 18 and Rs 21 for clerks (Table 6.7). The variation in staff salary and allowances among different institutions was due to differences in wage policies and salary structures of sample bank personnel, depending upon length of service.

The transaction costs per loan account were worked out by multiplying the number of hours used by bank personnel for lending operations with the salary and allowances per hour. The other expenditure incurred by the banks relating to rent, electricity, stationery expenses, depreciation etc. were apportioned based on its proportion to salary expenses. The proportion of other expenditure to salary expenses was used to estimate the transaction costs of other expenses for loan delivery. The estimated transaction cost per account was Rs 195 of which 83 per cent of expenditure goes to salary expenses leaving the remaining for other expenditure (Table 6.8).

The comparative analysis of estimated transaction costs per loan account among different institutions revealed that it was relatively more in RRBs (Rs 207) when compared to commercial banks of public and private sectors (Rs 181 and Rs 187 respectively). Increased number of hours of time spent and the consequent increase in transaction costs for loan delivery by RRBs was the result of servicing a greater number of smaller accounts compared to commercial banks.

Table 6.7 Bank staff salary and compensation table

Particulars	Manager	Officers	Clerks
Regional rural bank			
Monthly salary and allowances (Rs)	7,956	7,512	3,042
Average monthly working hours (hours)	150	150	150
Salaries and allowances per hour (Rs)	53	50	20
Commercial bank (public)			
Monthly salary and allowances (Rs)	8,562	8,514	2,757
Average monthly working hours (hours)	150	150	150
Salaries and allowances per hour (Rs)	57	57	18
Commercial bank (private)			
Monthly salary and allowances (Rs)Average	8,515	6,986	3,120
monthly working hours (hours)	150	150	150
Salaries and allowances per hour (Rs)	57	47	21

Table 6.8 Transaction costs of lending per account for all banks, Model I

Particulars	All banks
Time spent for loan delivery (hours)	
Clerks	2.16
Officers	2.18
Total	4.34
Salary and allowances per hour (Rs)	
Clerks	20
Officers	54
Proportion of other expenses to salary expenses	0.2102
Transaction cost per account (Rs)	
Salary expenses	161
Other expenses	34
Total	195

With a view to comparing the transaction costs of loan delivery through the identified channels with the benchmark situation (Model I), the transaction costs for each channel were worked out and presented in Table 6.9 (detailed calculations are given in Appendices 7–9).

Table 6.9 Transaction costs of lending per account for different channels

Particulars	Transaction cost (Rs)	% of deviation from benchmark (Model I)
Model I (Benchmark situation)	195	–
Model II	147	-25
Model III	116	-41
Model IV	154	-21
Model I (government-sponsored programs)	237	+22

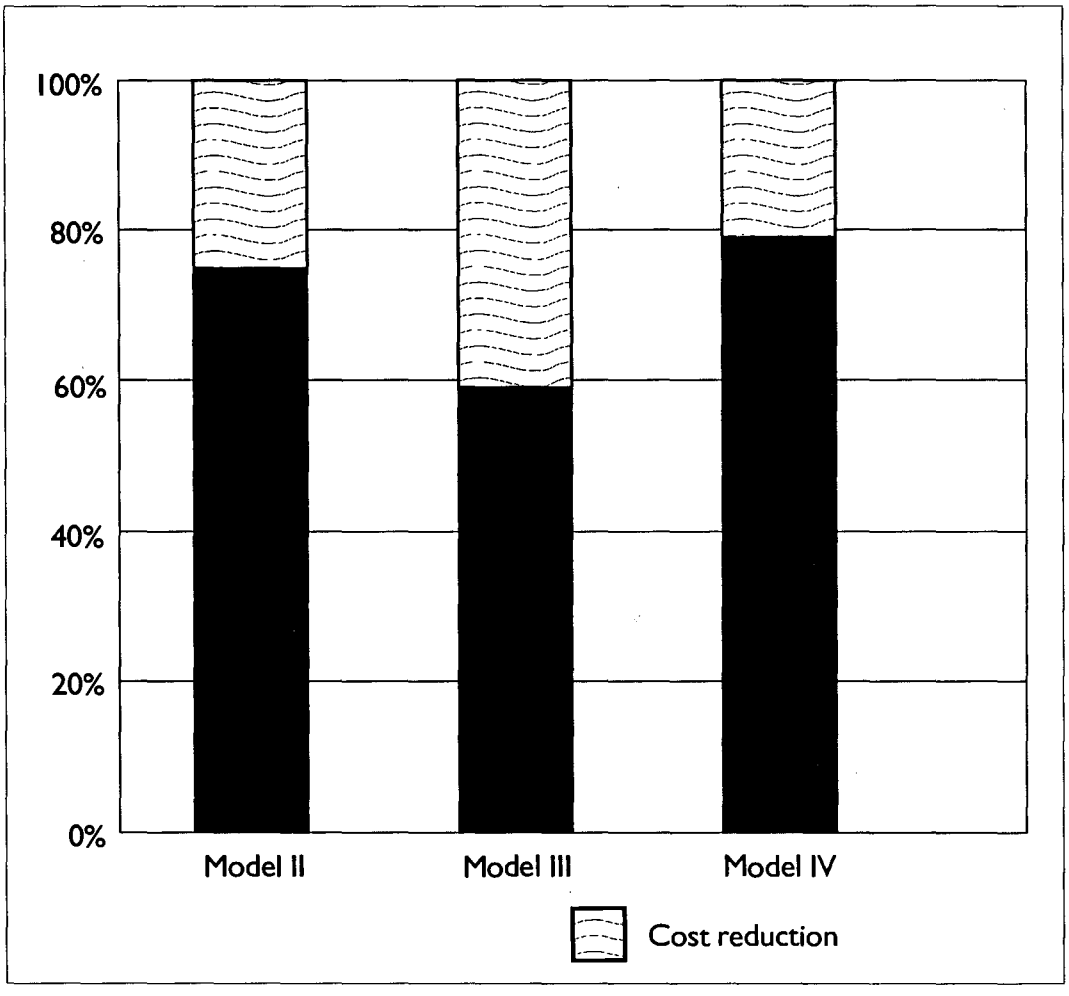
The transaction costs were relatively lower in Model III, registering a reduction of 41 per cent over Model I (Figure 6.1). When the loan was disbursed through Model II, where both NGOs and SHGs play non-financial roles, the estimated transaction costs reduced by 25 per cent, and the reduction was 21 per cent when the loan was delivered directly to the NGO. The above discussion clearly indicates that the reduction in transaction costs was greater in Model III. The smaller reduction in transaction costs of lending per account under Model II was due to the fact that loans were directly disbursed to individual borrowers. As discussed elsewhere, inadequate experience and lack of standardised procedures for lending to NGOs was a major cause for the decreased reduction rate in Model IV. However, there exists scope for further reduction in the proportion of transaction costs of lending through this model with increase in the size of loans, in addition to the standardisation of procedures.

Implementation of government-sponsored programs was one of the major sources of credit to rural poor. Transaction costs of loan disbursement under such programs differ significantly from direct lending (Model I) as a result of the coordinated efforts of government officials in identification of borrowers and loan processing. The element of subsidy has further complicated the credit delivery via this channel. The estimated transaction costs of loan disbursement under government-sponsored programs was Rs 237 per account, which is 22 per cent more than the benchmark situation. The increase in transaction costs was mainly due to the increased time spent by bank personnel in attending a plethora of *Grama sabha* meetings.

6.4 Transaction costs of lending per Rs 100 loan

The quantum of loan is one of the basic determinants of the transaction costs of lending. For the purpose of comparative analysis, the accounts with the average loan ranging between Rs 5,000 and Rs 5,400 were selected under different models. This is a convenient loan size

Figure 6.1 Reduction in transaction costs of lending through intermediation



for selection because it marks a point where the size-distributions of loans under Model I and the other models overlap. This loan size is at the lower end of the range of loans under Model I, and at the upper end of the range for the other models. The estimated transaction costs per Rs 100 loan was Rs 3.68 in Model I where the regional rural banks had incurred more costs than commercial banks (Table 6.10).

The intermediation of NGOs/SHGs had reduced the transaction costs of lending of a Rs 100 loan by 23–40 per cent among different models. Again, the cost effectiveness was more pronounced in Model III.

With a view to establishing a relationship between loan amount and transaction costs, frequency analysis has been attempted using the data collected from 20 sample accounts in different loan sizes (above Rs 5,000) to estimate the transaction costs of lending per

Rs 100 loan under different loan sizes (Table 6.11). Since the loan documentation procedures and the other formalities for sanctioning and disbursing rural credit up to Rs 25,000 are fairly standardised under Model I, the time spent by bank personnel may depend upon the size of loan, activity financed, and seasonality of operations, resulting in variation within a given frequency class.

Table 6.10 Transaction costs of lending per Rs 100 loan

Particulars	Transaction cost (Rs)
Model I	
Regional rural bank	4.05
Commercial bank (public)	3.35
Commercial bank (private)	3.46
All banks	3.68
Model II	
Commercial bank (public)	2.72
Model III	
Regional rural bank	2.45
Commercial bank (public)	1.91
Commercial bank (private)	2.09
All banks	2.19
Model IV	2.85
Commercial bank (public)	

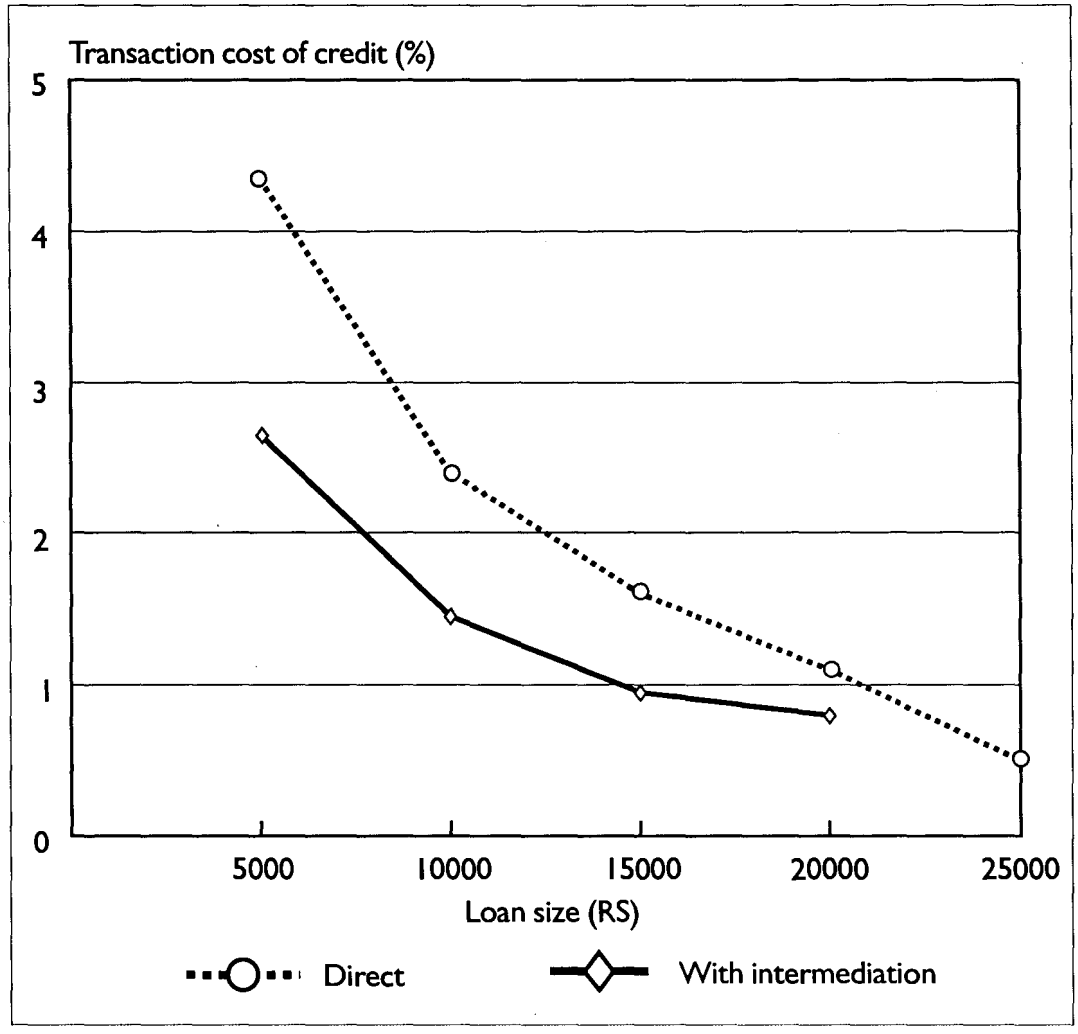
Table 6.11 Transaction costs per Rs 100 loan for different loan sizes

Loan size	Transaction cost (Rs)	
	Direct lending (Model I)	With intermediation of NGOs/SHGs *
Up to 5,000	4.35	2.61
5,001 to 10,000	2.41	1.44
10,001 to 15,000	1.59	0.93
15,001 to 20,000	1.06	0.72
20,001 and above	0.44	–

* Separate analysis for different models was not attempted due to inadequate sample size in individual frequency groups.

The process of intermediation by NGOs/SHGs has a significant impact on marginal transaction costs of lending a Rs 100 loan, thus accelerating the rate of cost reduction (Table 6.11). This can be explained by the fact that loans to SHGs aim at augmenting their

Figure 6.2 Transaction costs by loan size



corpus, while leaving the decision of loaning aspects like size of loan, its purpose, and other terms and conditions to the group members, thus resulting in transference of lending costs to NGOs/SHGs. The cost curve shifts downwards by the intermediation of NGOs/SHGs, due to reduction in transaction costs (Figure 6.2). The downward slope of the curve itself is influenced by the volume of loan transactions, cost decreasing as loan size increases.

6.5 Borrower transaction costs

The rural financial market in the Indian context envisages two major transaction cost components at borrower level, namely (1) actual cash outlay; and (2) opportunity cost of time spent in applying for, securing and repaying the loan. The borrower has to visit the bank several times for negotiating the loan, especially in proving his creditworthiness and

satisfying the documentation procedures. These visits involve cash expenditure for travel and incidental expenses during the visits. In addition, the borrower has to obtain certificates from village officials confirming the ownership of assets (if any) and must also execute an agreement on stamp paper. Other expenses in documentation include the expenditure for obtaining a 'no objection' certificate from other banks in the village, and a photo required by the bank for proper identification of the borrower. The longer the time taken by the bank to evaluate and process a loan, the greater the transaction costs for the borrower due to longer hours of time spent in the bank premises, more frequent trips to the bank, greater expenses for travel, and other incidental expenditure.

Table 6.12 Transaction cost of borrower per loan account, Model I (Rs)

Particulars	RRB	Commercial bank		All banks
		Public	Private	
Cash expenditure				
No. of visits to banks	8 to 9	10 to 11	9 to 10	9 to 10
Travel expenses	17	31	52	39
Incidental expenses during visit to bank	42	82	52	49
Documentations				
Photo	15	20	20	18
Stamp paper	10	10	10	10
Village official certificate	25	25	30	27
Obtaining NOC	22	30	25	26
Total	131	198	189	169
Opportunity cost of time spent				
No. of days spent in bank premises and during travel	3 to 4	4 to 5	4 to 5	4 to 5
Opportunity cost per hour	22	25	26	24
Total opportunity cost	84	105	125	103
Total transaction costs	215	303	314	272

The primary data collected from 150 sample borrowers were used to quantify the transaction costs of borrowers when the loan was delivered under different models. The estimated transaction costs of borrowers per loan account were Rs 272 in Model I, of which 62 per cent involved cash expenditure and the remaining 38 per cent the opportunity cost of time spent by them for securing and repaying the loan (Table 6.12). For the purposes of negotiating the loan with branch officials, proving creditworthiness, and satisfying the required documentation procedure, the sample borrowers visited the branch 9–10 times. The

expenditure in connection with the visits to bank branches involved travelling expenses and incidental expenses, which together work out to Rs 88. Expenditure to satisfy the documentation procedure was Rs 81 per loan account. The opportunity cost per loan account for the time spent in the bank premises and during the visits was Rs 103.

A comparison of borrower transaction costs among different institutions revealed that they are relatively more in commercial banks of both private and public sector when compared to RRBs. The RRB was located in rural areas closer to borrower villages. As a result, the time spent in travel to the bank was considerably reduced. However, the expenditure on documentation was the same among different institutions.

A comparative analysis of borrower transaction costs among different models keeping Model I as the benchmark revealed that there was more than 85 per cent reduction in the transaction costs of the borrower when the loan was delivered through Models III and IV (Table 6.13). The reduction in transaction costs in Model II was up to 57 per cent. The low cost reduction in Model II when compared to Models III and IV was mainly due to the loans being disbursed to the individual members as in Model I; hence, the borrowers had to satisfy the normal lending procedures.

The significant reduction in borrower transaction costs in Models III and IV was the result of nil expenditure on documentation procedures and because borrowers made fewer visits to the bank, consequently spending less time in the bank premises. The process of pilot project implementation by NABARD assumed that the individual members were not expected to visit the bank as groups were directly dealing with the bank. However, in practice the group members visited the banks on a rotation basis for depositing the collection and withdrawing the loan amounts on behalf of the members. Such visits were made at their own cost and these costs were included in this analysis.

The above discussion clearly indicates that the intermediation of NGOs/SHGs significantly reduces transaction costs at borrower level as well. Among the different models identified, Models III and IV appear more likely to be efficient in cost reduction compared to Model II.

The financial transaction costs of lending at borrower level (interest rate) was uniform in Models I and II since the loan was sanctioned and disbursed directly to the borrower, and the interest rate was fixed by the monetary authorities. The flexibility in fixing interest rates based on the purpose and level of income generation of the financial activity (as envisaged in the SHG concept) provided scope for charging varied interest rates ranging from 6 to 24 per cent at borrower level. There is an argument that the higher interest charged by SHGs may nullify the cost benefit derived through intermediation as compared to direct lending.

Two viewpoints need to be analysed here. Firstly, the borrowers who had availed loans from SHGs did not have any access to institutional credit; had they opted to access informal sources for this loan in the absence of an SHG, they would have paid a 60–120 per cent interest rate. Hence, borrowers were very willing to pay more interest than that charged by banks since this was lower than informal rates. Secondly, the incremental interest charges paid by them in excess of the bank rate will be added to the corpus of the group, the benefits of which are eventually equally shared by all the members. Thus, though the borrowers had

paid an average interest rate of 18 per cent to the SHG, the effective rate would be much lower. The interest rate of the SHG was also used as one tool for regulating credit demand at borrower level. Since the rates were fixed by members based on a consensus view, fixing a higher than bank interest rate at the SHG level should be regarded as necessary for the sustainability of the group, and for the accumulation of group reserves in which all members have a stake.

Table 6.13 Transaction costs of borrower per loan account: comparative analysis (Rs)

Particulars	All banks		
	Model II	Model III	Model IV
Cash expenditure			
No. of visits to banks	3 to 4	1 to 2	1 to 2
Travel expenses	11	5	3
Incidental expenses during visit to bank	18	14	8
Documentations			
Photo	20	–	–
Stamp paper	10	–	–
Village official certificate	15	–	–
Obtaining NOC	15	–	–
Total	89	19	11
Opportunity cost of time spent			
No. of days spent in bank premises and during travel	1 to 2	1	1
Opportunity cost per hour	15	24	25
Total opportunity cost	27	21	25
Total transaction costs	116	40	36
	(-57)	(-85)	(-87)

Figures within parentheses indicate the percentage reduction when compared to Model I.

6.6 Transaction costs of lending and their impact on bank branch viability

Deposit collection, advances, banking operations and other development activities are the major functions performed by the bank branches (Figures 6.3, 6.4, 6.5). For estimating the cost of various functions undertaken by bank personnel, a time allocation schedule was used to derive the proportion of time spent by them for various identified functions; the results are presented in Table 6.14 (details of calculations are in Appendix 10).

Table 6.14 Time allocation schedule for different functions at bank branch level

Bank	Total working hours	Time (hours) spent			
		Loan advance	Deposit collection	Banking operations	Development activity
Regional rural bank	10,800 (100)	4,790 (44)	1,830 (17)	2,980 (28)	1,200 (11)
Commercial bank (public)	16,560 (100)	4,860 (29)	4,140 (25)	6,165 (37)	1,395 (9)
Commercial bank (private)	21,600 (100)	5,760 (27)	5,400 (25)	8,550 (40)	1,890 (8)

Figures within parentheses indicate percentage to total.

The above table clearly differentiates the functional prioritisation among different institutions. RRBs focus mainly on loan advances and other developmental activities (which account for about 55 per cent of staff time), whereas commercial banks of both public and private sector concentrate more on banking and deposit collection through allocating 62–65 per cent of staff time for these functions.

The cost of mobilising deposits and the cost of lending were worked out by apportioning salary and other expenses in proportion to time spent for respective functions. The results are presented in Tables 6.15 and 6.16.

Table 6.15 Cost of mobilising deposit (Rs in millions)

Particulars	RRBs	Commercial banks	
		Public	Private
Proportion of time spent for mobilising deposit (%)	17	25	25
Expenditure on salary	0.372	0.575	0.666
Other expenditure	0.055	0.095	0.189
Proportion of expenditure for mobilising deposit			
Salary	0.063	0.144	0.167
Other expenditure	0.009	0.024	0.047
Total	0.072	0.168	0.214
Average deposit outstanding (term deposit)	3.536	12.276	32.017
Cost of mobilising Rs 100 deposit (in Rs)	2.03	1.37	0.67

Figure 6.3 Time allocation for different functions at bank branch level: regional rural banks

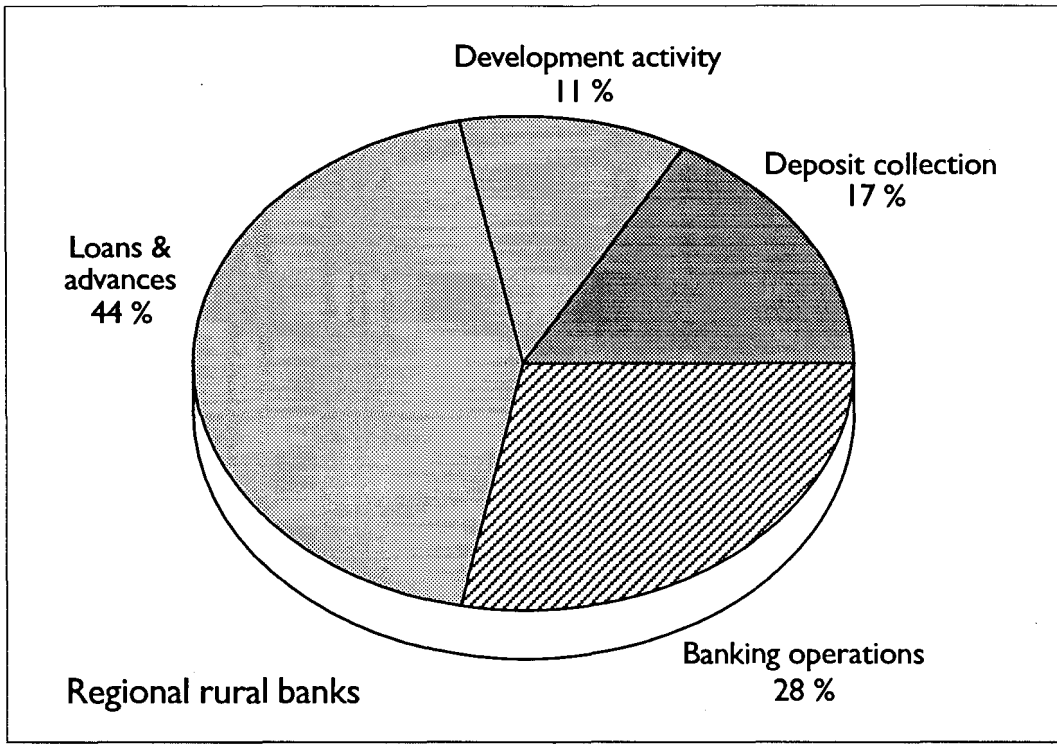
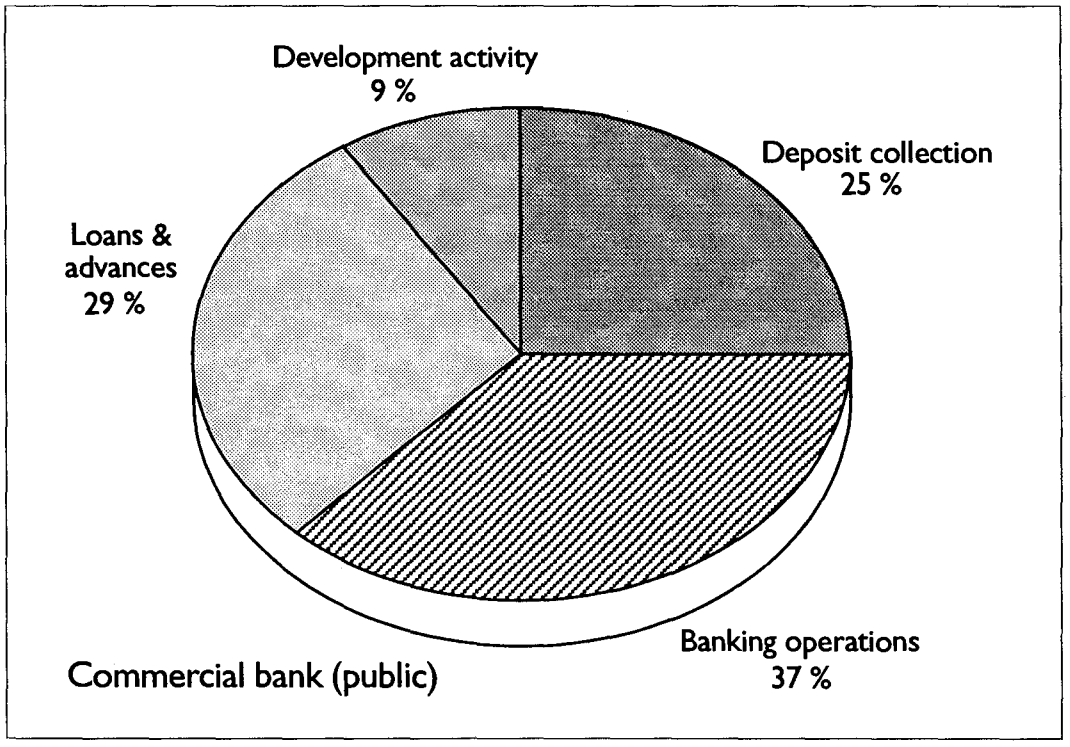


Table 6.16 Cost of lending (Rs in millions)

Particulars	RRBs	Commercial banks	
		Public	Private
Proportion of time spent for lending (%)	44	29	27
Expenditure on salary	0.372	0.575	0.666
Other expenditure	0.055	0.095	0.189
Proportion of expenditure for lending			
Salary	0.164	0.167	0.180
Other expenditure	0.024	0.028	0.051
Total	0.188	0.195	0.231
Average loans outstanding (term loan)	5.536	15.373	21.797
Cost of lending per Rs 100 loan outstanding (in Rs)	3.39	1.26	1.06

Figure 6.4 Time allocation for different functions at bank branch level: commercial banks (public)



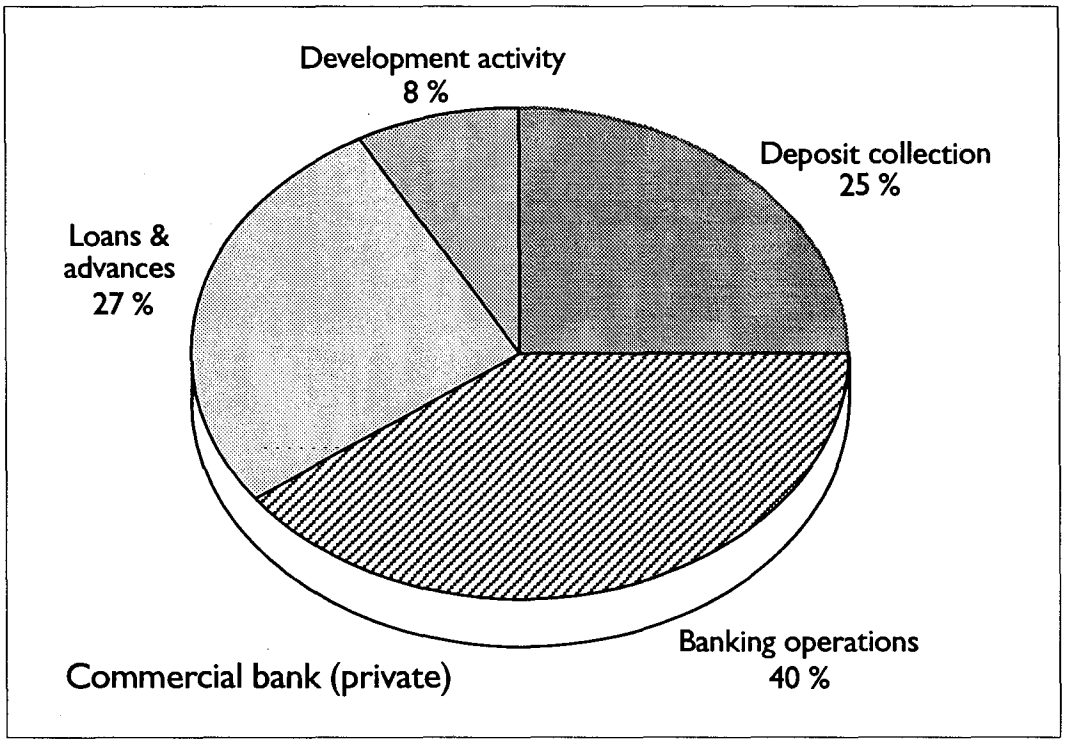
The cost of mobilising Rs 100 deposit was more in RRBs (Rs 2.03) than the commercial banks of both public and private sector (Rs 1.37 and Rs 0.67 respectively). The cost of deposits varies among different institutions, mainly due to variation in the volume of deposit collected. The cost of lending was also more in RRBs than commercial banks due to a smaller volume of business.

The cost of funds at bank branch level was worked out by estimating the interest paid on Rs 100 deposit outstanding. Results are presented in Table 6.17.

Table 6.17 Cost of funds (Rs in millions)

Particulars	RRBs	Commercial banks	
		Public	Private
Interest paid on deposit	0.283	0.967	3.444
Average deposit outstanding	4.819	16.117	48.993
Cost of funds (%)	5.87	5.99	7.03

Figure 6.5 Time allocation for different functions at bank branch level: commercial banks (private)



The estimated cost of funds was almost the same for RRBs and commercial banks (public) whereas it was relatively more in private sector commercial banks. Though interest rates for deposits were fixed by monetary authorities, the age of deposits decided the overall interest value for deposits collected. Since commercial banks in the private sector pay higher interest as a result of having a larger proportion of deposits with a longer maturity period, their cost of funds was more than other institutions.

The transaction costs of lending at the bank branch (which constitutes cost of funds), cost of mobilising deposit and cost of lending work out to 11.29 per cent for RRBs, and 8.62 and 8.76 per cent for commercial banks of public and private sectors respectively (Table 6.18).

Table 6.18 Viability of lending through intermediation (in percentages)

Particulars	RRBs	Commercial banks	
		Public	Private
Cost of funds	5.87	5.99	7.03
Cost of mobilising deposit	2.03	1.37	0.67
Cost of lending	3.39	1.26	1.06
Total	11.29	8.62	8.76
Average interest earned	9.97	11.61	11.02
Net profit/loss	-1.32	2.99	2.26
Breakeven volume of loan outstanding (Rs in millions)	10.488	11.922	21.428
Impact of intermediation			
Transaction costs reduction (%)	1.6	1.44	1.37
Net profit/loss	0.28	4.43	3.63
Breakeven volume of loan outstanding (Rs in millions)	7.543	9.49	15.951

As discussed earlier, the higher cost for RRBs of deposit mobilisation and servicing smaller loans contributed to higher transaction cost compared to commercial banks.

The analysis of viability of lending in the selected bank branches through computing net margins indicates that RRBs incur a loss of 1.32 per cent whereas commercial banks of both public and private sector earned positive income of 2.99 per cent and 2.26 per cent respectively. An attempt to estimate the breakeven volume of loan business without intermediation of NGOs and SHGs indicates that the RRB branches have to increase their volume of loan business from the existing level of Rs 5.536 million to Rs 10.488 million to make it viable.

In other words, the RRB branches have to increase the volume of transactions by an additional 89 per cent. The commercial banks of both public and private sector have already been earning profit, hence their breakeven level at the existing level of loan business was 78 per cent and 98 per cent in public and private sectors respectively. The intermediation of NGOs and SHGs significantly contributes to reducing the transaction costs of lending, which in turn influences the financial margin of the bank branch as a whole. Assuming the entire loan is disbursed through intermediaries, *ceteris paribus*, the viability of lending by the

RRB could have improved and the branch would have earned more income after wiping out the losses.

In the case of commercial banks, they would have registered increased net margins. The estimated breakeven volume of loan transactions after intermediation of NGOs and SHGs works out to Rs 7.543 million in the case of RRBs, which has reduced their breakeven level without intermediation to the extent of 53 per cent. Similarly, intermediation contributed to reduction of their breakeven level to 16 per cent and 25 per cent for commercial banks of public and private sectors respectively. Thus, the intermediation of NGOs and SHGs significantly contributes to improving the viability of bank branches through efficiency and effectiveness in the use of bank personnel.[32]

6.7 Estimation of default risk under different models

Poor recovery due to non-payment of dues is an area of major concern to the institutional credit delivery system. In recent years, recovery performance of all banking institutions was adversely affected by the implementation of the Agricultural Rural Debt Relief Scheme in 1990. Under the scheme the Government of India extended relief to the borrowers of public sector banks and RRBs by way of write-offs in certain categories of overdues. While average recovery performance of RRBs during the last three years was in the range of 30–40 per cent, it was 45–65 per cent in commercial banks.[33] The borrowers' expectation of further such relief programs by government is seriously affecting the recovery performance of institutional credit.

This situation adds a new dimension in the estimation of transaction costs of lending, creating a need to quantify the risk cost involved due to an increase in the default rate. Efforts have already been made to quantify the risk cost in order to gain a realistic assessment of the total lending cost of rural credit. The report of the Agricultural Credit Review Committee[34] visualised risk cost as the actual write-offs or provision made for bad and doubtful debts. The claims paid by the Deposit Insurance and Credit Guarantee Corporation (DICGC) were used for approximating bad debts. Since the present study focuses mainly on the estimation of transaction costs of lending of individual accounts delivered through different channels, the extent of default has been identified as a criterion for estimating the default risk. The loss of principal and uncollected interest, the administration costs incurred in handling the loans in default, and the opportunity costs of funds deployed as a consequence of default are all summarised as default risk.[35]

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32 The basis of these breakeven calculations is elaborated in Appendix 11.

33 NABARD, *Annual Report 1992–93*, National Bank for Agriculture and Rural Development, Bombay, 1993.

34 Reserve Bank of India, 'A Review of the Agricultural Credit Systems in India', Report of the Agricultural Credit Review Committee, Reserve Bank of India, Bombay, 1989.

35 Carlos E. Cuevas, 'Transactions costs of financial intermediation in developing countries', *Economics and Sociology*, Occasional paper no. 1,469, Department of Agricultural Economics and Rural Sociology, Ohio State University, Columbus, Ohio, October, 1988.

A critical analysis of repayment performance of sample borrowers receiving credit through direct lending (Model I) indicated that the average repayment rate was 34.65 per cent for all the banks. While it was low in RRBs (29.35 per cent) and the commercial banks in the public sector (33.15 per cent), it was relatively high for commercial banks in the private sector (56.45 per cent) (Table 6.19)

Table 6.19 Repayment performance of sample borrowers who received credit under different models * (in percentages)

	Model I	Model II	Model III	Model IV
RRBs	29.35	_	98.15	–
Commercial bank (public)	33.15	81.32	100.00	97.16
Commercial bank (private)	56.45	–	100.00	–
All banks	34.65	–	97.16	–

* Percentage of recovery to demand

The intermediation of NGOs/SHGs was very influential in achieving a better recovery performance, achieving more than 80 per cent for all the identified channels. The repayment performance was almost 100 per cent in the case of Models III and IV, whereas it was only 81 per cent in Model II. Comparatively lower repayment performance in Model II was due to lack of group pressure as a result of sanction of loan being made to individual accounts even though NGOs/SHGs were playing a non-financial intermediary role.

With a view to estimating the impact of risk involved for transaction costs due to increase in the default rate, the risk premium was worked out using the primary data collected from sample borrowers. The estimated default risks in Model I (benchmark) was 21.53 per cent and it was relatively more in the regional rural bank than the commercial banks (Table 6.20). The recovery performance of private sector commercial banks was better than the public sector bank; hence, the default risk was less in the former than the latter. The default risk of all the three models where there was intermediation of NGOs/SHGs was very small or negligible. The joint liability, group pressure in SHG's collective decisions, realistic assessment of credit requirements, and the proper advisory role played by NGOs motivating the borrowers for prompt repayment have all resulted in total elimination of the risk cost. The total lending cost including default risk was worked out at the rate of 25.21 per cent in Model I, and the intermediation of NGOs/SHGs reduced the risk cost by an extent of 70 to 90 per cent. Further experience with larger numbers of groups and borrowers will permit the empirical verification of these sample results over time.

Table 6.20 Estimated default risks and total lending cost of credit flow through different models

Particulars	Default rate * (1)	Loan admin. cost (2)	Cost of fund (3)	Default risk (4)	Total lending ** (5)(2+4)
Model I					
Regional rural bank	17.66	4.05	5.87	23.58	27.63
Commercial bank (public)	16.71	3.35	5.99	21.94	25.29
Commercial bank (private)	10.89	3.46	8.03	13.63	17.09
All banks	16.41	3.68	5.96	21.53	25.21
Model II					
Commercial bank	4.67	2.72	5.99	5.33	8.05
Model III					
Regional rural bank	0.46	2.45	5.87	0.50	2.95
Commercial bank (public)	–	1.91	5.99	–	1.91
Commercial bank (private)	–	2.09	8.03	–	2.09
All banks	0.16	2.19	5.96	0.17	2.36
Model IV					
Commercial bank (public)	0.71	2.85	5.99	0.78	3.63

* Assumed equal to one fourth of the reported past-due ratios

** Computed using formula r = (d/1-d)(1+a+f) where:

r is the default risk
d is the default rate
a is the loan administration cost
f is the cost of fund

6.8 Transaction costs of intermediaries (NGOs/SHGs)

The costs incurred by NGOs/SHGs for their role played in financial or non-financial intermediation need to be included in the transaction costs estimate to have a holistic view. The data source for these calculations was the discussions with the field workers of NGO and SHG representatives. The selected NGOs were playing both financial and non-financial intermediary roles. The functions undertaken by NGOs/SHGs in the models identified are presented in Table 6.21.

The SHGs were formed by NGOs and in maintaining these groups NGOs play three major roles: (1) guidance; (2) training; and (3) financial assistance. With the linking of SHGs to the institutional credit delivery system, the NGO role of financial intermediation assumed secondary importance.

Table 6.21 Role of intermediaries

Model	NGO		SHG	
	Financial role	Non-financial role	Financial role	Non-financial role
Model I	–	–	–	–
Model II	–	Yes	–	Yes
Model III	–	Yes	Yes	–
Model IV	Yes	–	Yes	–

For the purpose of estimating transaction costs of NGOs, the expenditure incurred by them for guidance and training only was considered in the present study. NGOs were implementing many development programs relating to rural health, housing, literacy, etc. and SHG activities form only a part of their total work schedule. Discussions with the field staff of NGOs revealed that about 45 per cent of their time was used for SHG activities leaving the remaining 55 per cent for other programs. On average, each field staff is assumed to maintain 15 SHGs.

The salary and allowances including transport expenses of field staff and supervisory staff of NGOs were apportioned on the above ratio for working out transaction costs of NGOs. Some of the training programs arranged by NGOs for making the group stronger and more viable were:

1) *sangha* members training on group activities (twice a year)
2) monthly training for animators
3) monthly training on account maintenance
4) exposure programs on new economic activities.

The average expenditure for arranging the above training programs at their village worked out to Rs 7,500 per SHG group per year, which includes travel, lunch, tea and other incidental expenses incurred for group members. The average expenses on salary, allowances and transport for NGO field staff and other supervisory staff for maintaining the group, together with the training expenses, amounted to Rs 30,000. The average annual loan disbursed by 15 groups was Rs 1.229 million; hence, the percentage of NGO expenses to loan outstanding was 2.44 per cent.[36] These expenses by NGOs may be reduced in future years when the groups establish themselves and become fully independent and self reliant. NGOs in Model IV undertook the role of financial intermediation; they received the loan

36 The FDC manual, *How to Build Self-help Groups* (p. 12), calculates SHG formation costs (at 1992 levels) for MYRADA at Rs 15,000 in the first year of operation.

from the bank and passed it on to SHGs. The estimated NGO cost for loan negotiation with the bank and delivery to SHGs alongside maintaining groups was 2.72 per cent. However, some further increases in the transaction costs of NGOs (perhaps to as much as 6 per cent) could be anticipated where they undertake credit transactions as their major or sole activity.

Since SHGs are informal groups and voluntary in nature, their administrative expenses are practically negligible. Most of the functions such as visits to the bank, conducting meetings etc. were carried out by members at their own cost. Their major expenditure was the purchase of account books and payment for animators, which worked out to Rs 680. The cost of these items as the percentage of loan outstanding was 1.04 per cent.

6.9 Total transaction costs of rural lending: summary

With a view to examining the cost effectiveness of intermediation by NGOs/SHGs (after including the costs of intermediaries), a summary transaction costs matrix has been attempted, with results presented in Table 6.22. The estimated total transaction costs under different models with intermediation ranged between 14.45 and 15.39 per cent, which are between 16 and 23 per cent more than the benchmark situation. However, if the default risk is taken into account, the costs in these models registered significant reduction. The transaction costs of 33.99 per cent under direct lending reduced by 52 and 57 per cent when it was routed through NGOs and SHGs respectively. Though the cost of intermediation pushes the transaction costs upwards initially, in the long run it will have a positive impact on transaction cost reduction.

Two major aspects relating to policy consideration are emerging from the total transaction costs analysis:

1) The transaction costs of NGOs were 2.72 per cent of loan outstanding provided they play the financial role as part of their overall activity. Hence, the present rate of 3.00 per cent margin fixed by NABARD for bulk lending is adequately covering the costs of such NGOs, although the required margin may increase if NGOs undertake credit as their major or sole activity, as indicated in Section 6.8 above.
2) The present interest rate structure covers the actual transaction costs at branch level. It is only the increasing default rate which pushes the cost upwards, in turn affecting the viability of lending. Hence, future efforts to improve the repayment performance through the intermediation of NGOs/SHGs would be an effective approach to improving the viability of rural lending.

Table 6.22 Total transaction costs of rural lending: summary statement (in percentages)

Particulars	Models			
	I	II	III	IV
Transaction costs of lending at bank branch level				
Financial transactions cost (interest paid on deposits and borrowings)	7.42	7.42	7.42	7.42
Non-financial transaction cost of mobilising deposit	1.36	1.36	1.36	1.36
Cost of lending	3.68	2.72	2.19	2.85
Sub-total	5.04	4.08	3.55	4.21
Total transaction cost (a + b)	12.46	11.50	10.97	11.63
Default risk	21.53	5.33	0.17	0.78
Total transaction costs at bank branch level	33.99	16.83	11.14	12.41
Transaction costs of intermediaries				
Non-governmental organisation	–	2.44	2.44	2.72
Self-help groups	–	1.04	1.04	1.04
Sub-total	–	3.48	3.48	3.76
Total transaction cost (bank + intermediaries)				
Without default risk	12.46	14.98	14.45	15.39
With default risk	33.99	20.31	14.62	16.17

Chapter 7

FACTORS INFLUENCING TRANSACTION COSTS OF RURAL LENDING

7.1 Overview

The financial transaction costs of lending to the rural poor (interest rates) are determined by the Reserve Bank of India, and hence no variation can be seen among different institutions. However, the other transaction costs are contingent upon the number of loan accounts and the size of loans. These transaction costs showed a trend to increase when the number of small loans increased, but a tendency to reduce with an increase in loan size. Location of bank branch, its proximity to the borrower's village, nearness to market centre, etc. were other factors influencing the transaction costs of rural lending.

As discussed elsewhere, the intermediation of NGOs/SHGs helps the bank branches in more ways than one: for example, in identification of borrowers, documentation, supervision, follow-up, recovery, etc. These aspects considerably reduce the transaction costs of lending by banks.

7.2 Analysis of factors

The simultaneous equation model specified in Chapter 3 is used to quantify the influence of various factors on borrower transaction costs in rural credit, keeping loan demand and transaction costs as endogenous variables. The expected and actual relationship of the identified variables and the results of parameters estimated and t-statistic are shown in Tables 7.1 and 7.2 respectively. The a *priori* assumption is of an inverse relationship between transaction costs and interest rate on the one hand and loan demand on the other, since such costs always exhibit a decreasing trend as volume of loan demand increases. The asset value (which is a proxy for financial strength of borrower), family size (which influences the volume of loan demand), literacy level and intermediation of NGOs/SHGs (indicating the level of awareness of borrowers) are some of the major variables which are expected to show a possible relationship with loan demand.

Since the focus of regional rural banks is more towards the rural poor, the commercial banks variable is assumed to have a negative impact on both loan demand and transaction costs. Since the rural poor have easy access to informal credit despite its exploitiveness, it is expected that its availability will have a negative impact on loan demand. Distance from bank as a variable is assumed to establish a positive relationship with transaction costs. The coefficient of determination (R^2) was 0.44 and 0.72 respectively for loan demand and transaction costs equations, which reveals the extent of variation in identified dependent variables explained by independent variables specified in the model.

The transaction costs variable was found to be an important determinant of loan demand, and confirmed the expected relationship between two variables. For the borrower, the

transaction costs add to the outlay and, as discussed earlier, cause them to borrow less as their out-of-pocket expenses and cost of time spent on loan negotiation increase. The value of assets (indicating the capacity of borrowers for absorbing productive investment) was a significant variable in the loan demand equation and expresses a positive relationship.

It is interesting to observe the significant relationship between type of bank and the loan demand variables, which indicates that commercial banks rather than RRBs are found to be more favourable institutions for obtaining larger loans. This relationship was an expected one, since RRBs focus on small loans.

The simultaneous equation model suggests interesting relationships of the variable NGOs/SHGs intermediation with loan demand and transaction costs. The non-significant relationship between NGOs/SHGs intermediation and loan demand explains that such intermediation did not have any influence on the quantum of loan, whereas it plays a significant role in reducing the transaction costs. That the dummy variable of type of bank as an independent variable for transaction costs also shows significant results indicates that financing through commercial banks has a negative impact on transaction cost. This could be due to the large number of small loans handled by RRBs, which consume more time in loan sanction and disbursement. A non-significant relationship of literacy level and loan demand established that literacy did not have any impact on loan demand.

Table 7.1 Factors affecting loan demand and transaction costs

Factors	Expected sign	Actual sign	Remarks
Loan demand			
Transaction costs	-	-	Significant
Interest rate	-	+	
Asset value	+	+	Significant
Family size	+	+	
Literacy level (dummy)	+	-	
NGO/SHG intermediation (dummy)	+	+	
Type of bank (dummy)	-	-	Significant
Informal loan receipt (dummy)	-	-	
Transaction costs			
Loan amount	+	-	
Interest rate	-	+	
Asset value	-	+	
Type of bank (dummy)	-	-	Significant
Distance from bank	+	-	
NGO/SHG intermediation (dummy)	+	-	Significant

The lack of significant relationships between the dependent variables loan demand and transaction cost suggests that borrowers were not influenced by any variation in interest rates. The other independent variables (family size, literacy level, availability of loan from informal sources) also did not have any significant results. An insignificant relationship between distance and transaction costs was a surprising result. However, it may be explained through availability of better transport and communication facilities. As well, the linking role played by NGOs/SHGs nullifies distance as a barrier to approaching the bank for loans.

Table 7.2 Estimated parameters of simultaneous equation model

Right hand variables	Jointly dependent variables			
	Loan demand (In Loan)		Transaction costs (InTc)	
	Estimate	T. value	Estimate	T. value
Loan amount	–	–	-0.2657	-0.7770
Transaction costs	-0.1797	-2.3680*	–	–
Interest rate	0.3868	0.7850	1.6719	1.5270
Asset value	0.3753	7.7380*	0.0528	0.3390
Family size	0.0173	1.1840	–	–
Literacy level	0.0041	-0.0830	–	–
NGO/SHG intermediation	0.0840	0.8120	-1.3040	-12.7230*
Type of bank	-0.1432	-2.2080*	-0.3848	-3.6420*
Distance	–	–	-0.0016	-0.1300
Availment of loan from informal sources	-0.0253	-0.6440	–	–
Intercept	3.7287	0.0035	-2.3344	-0.7030
R^2	0.4422		0.7273	
N	150		150	

* Significant at 1 per cent level.

Chapter 8
CONCLUSIONS

8.1 Overview

The viability of a credit delivery system to the rural poor is critically affected by the increase in transaction costs resulting from servicing a large number of small accounts. With a mounting overdue position, the problem is aggravated further. Financial/non-financial intermediation by voluntary agencies (NGOs/SHGs) is emerging as an alternative, aiming at improving access to credit for the poor and improvement in the viability of bank branches through reduction in the transaction costs of lending.

With a view to institutionalising the intermediation of NGOs/SHGs in the rural financial system, the Reserve Bank of India and NABARD announced an important new initiative to reach the poor by linking banks with SHGs. This initiative was launched by a successful pilot project in South India in which The Foundation for Development Cooperation was an active participant. Efforts made to document the strengths of this intermediation have revealed their positive contribution towards improvement in accessibility of credit to the rural poor, as well as the more effective utilisation, supervision and recovery of bank credit. The group lending results in a reduction in transaction costs at both bank and borrower level. The present study is the first attempt to quantify the impact on transaction costs of intermediation by NGOs/SHGs. The major findings of the study are enumerated below.

8.2 Major findings

1) The intermediation of SHGs virtually eliminated the time spent by bank personnel on identification of borrowers, documentation, follow-up and loan recoveries. As a result, a 40 per cent reduction in transaction costs was possible. This result can be augmented further by greater reliance on bulk lending through SHGs.
2) Similarly, due to intermediation of NGOs/SHGs, group lending has significantly reduced the time spent by individual borrowers at the bank premises, together with the elimination of cumbersome documentation procedures. Hence, transaction costs of borrowers was reduced by up to 85 per cent compared to direct lending.
3) The default risk estimated at the level of 22 per cent in direct lending arose mainly due to non-payment of dues by borrowers. Through joint liability provisions and the collective efforts made by NGOs/SHGs, default risk has declined to negligible levels.
4) The reduction in transaction costs and default risk because of the intermediation of SHGs significantly improved the viability and profitability of bank branches as a whole. The above conclusions imply that the bank personnel time saved due to intermediation can be effectively used for widening the reach of credit to the rural poor. Reduction in transaction costs of banks and borrowers through the intermediation of NGOs/SHGs provides extensive scope for further replication, thus deepening the reach of rural credit.

Here, efforts need to be made to identify strong and effective NGOs/SHGs to take up an intermediation role in the institutional credit delivery system.

Periodical workshops, training programs and exposure programs where the advantages of group lending can be explained and promoted need to be organised in order to sensitise both the official and the non-official community. National and international support for these efforts can yield outcomes of measurable significance for the reduction of poverty in Asia. Further studies quantifying the transaction costs of a range of loan sizes, extended for different purposes in a range of situations, are desirable to enable the policy implications of the experience of linkage lending to be explored thoroughly.

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Appendix 1

PROFILE OF SELECTED SELF-HELP GROUPS

Sl. No.	Name of Group	Year of formation	No. of members	Group nature	Savings (Rs)	Group loan No.	Disbursed amount (Rs)	Bank loan (Rs)	Recovery percentage (%)*
I	Model II Commercial bank (public)								
	1. Rajeswari Mahila Sangha	July 90	27	Women	18,320	211	51,930	27,500	86
	2. Sakthi Mahila Sangha	Aug 90	33	Women	13,826	87	88,275	31,205	75
	3. Sumathi Mahila Sangha	July 90	29	Women	17,003	85	91,365	35,767	92
II	Model III Regional rural bank								
	1. Kariyamma Mahila Sangha	June 91	20	Women	17,626	126	96,750	20,000	99
	2. Durgambika Mahila Sangha	May 87	23	Women	12,733	67	34,131	10,000	98
	3. Ranga Mahila Sangha	July 88	14	Women	16,683	54	35,867	10,000	100
	4. Anjaneya Mahila Sangha	May 92	22	Women	17,140	84	30,715	10,000	96
	5. Ambedkar Mahila Sangha	June 93	26	Women	18,214	92	39,760	10,000	94
	Commercial bank (public)								
	1. Saraswathi Mahila Sangha	May 93	25	Women	21,316	80	41,236	10,000	100
	2. Manjunadha Mahila Sangha	June 92	22	Women	24,670	95	39,140	15,000	100

* Percentage of recovery to demand

Profile of selected self-help groups (continued)

Sl. No.	Name of Group	Year of formation	No. of members	Group nature	Savings (Rs)	Group loan No.	Disbursed amount (Rs)	Bank loan (Rs)	Recovery percentage (%)*
II	Model III Commercial bank (private)								
	1. Dyamalambika Mahila Sangha	Nov 91	17	Women	11,949	67	40,754	10,000	97
	2. Saradamba Mahila Sangha	Apr 90	16	Women	18,844	140	36,505	20,000	99
	3. Maruthi Seva Sahaya Sangha	May 90	27	Women	14,891	115	63,507	20,000	94
	4. Kollapuradamma Lakshmi devi Swa Sahaya Sangha	May 91	27	Women	15,431	86	43,410	10,000	94
	5. Venkateshwara Swa Sahaya Sangha	July 91	15	Women	9,678	115	39,750	150,000	93
	6. Sri Maruthi Guligara Swa Sahaya Sangha	May 90	30	Men	19,136	94	49,334	20,000	93
	7. Manjunatha Swamy Swa Sahaya Sangha	Nov 91	22	Women	15,434	80	31,240	20,000	100
III	Model IV Commercial bank (public)								
	1. Jamunal Self-help group	Mar 85	25	Men	11,391	15	39,500	40,000	99
	2. Ittangal Self-help group	Sept 86	22	Men	35,900	25	143,600	60,000	98

* Percentage of recovery to demand.

Appendix 2

RESERVE BANK OF INDIA
CIRCULAR ON SHG FINANCING

REF. RPCD, No. PLAN.BC. 13 /PL-09.22/90/91

JULY 24, 1991

All Scheduled Commercial Banks (excluding Regional Rural Banks)

Dear Sir,

Improving access of rural poor to banking: Role of intervening agencies/Self Help Groups.

1) Despite the vast expansion of the formal credit system in the country, the dependence of the rural poor on moneylenders continues in many areas especially for meeting emergent requirements. Such dependence is pronounced in the case of marginal farmers, landless labourers, petty traders and rural artisans belonging to socially and economically backward classes and tribes whose propensity to save is limited or too small to be mopped up by the banks. For various reasons, credit to these sections of the population has not in practice been institutionalised. Non-governmental organisations have actively promoted informal groups of the rural poor to encourage thrift with a view to helping them in financing their emergent needs and weaning them away from the moneylenders. The studies on these informal groups over the last few years by NABARD, APRACA and ILO have brought out that Self-Help Savings and Credit Groups have the potential to bring together the formal banking structure and the rural poor for mutual benefit and that their working has been encouraging.

2) The NABARD is accordingly launching a pilot project for the purpose. It would be supporting the pilot project by way of refinance. It will also provide technical support and guidance to the agencies participating in the program. It is proposed to cover about 500 Self Help Groups (SHGs) promoted by Non-governmental Organisations, banks and other agencies under the pilot project. As this is a novel concept to be tried in the country on a pilot basis and needs all possible support, it may be necessary to deviate somewhat from the existing norms applicable to lending by commercial banks.

   The following criteria will be broadly adopted by NABARD for selecting SHGs.
   a) The Group should be in existence for at least six months.
   b) The Group should have actively promoted the savings habit.
   c) Groups could be formal (registered) or informal (unregistered).
   d) Membership of the group could be between 10 to 25 persons.

3) The NABARD proposes to have meetings with banks in this regard and further details regarding the pilot project, etc. would be made available by them in these meetings. The banks are advised to actively participate in the pilot project. As NABARD would be providing refinance to the banks, they may charge interest on the finance provided to the Groups at the rates indicated by the National Banks. Further, the groups will be free to

decide on the interest rates to be charged to their members provided the rate of interest is not excessive. The advances given by the banks to the groups will be treated as advances to 'weaker sections' and, therefore, banks will have to bear the guarantee fees payable to the DICGC. The NABARD in consultation with the banks will decide as to the type of loan documents to be obtained from SHGs. While the present norms relating to margin, security as also the scales of finance and unit cost will broadly guide the banks for lending to the SHGs, deviations therefrom can be made by the banks, where deemed necessary.

4) It is clarified that the aforesaid relaxations in interest rates, margin, security norms etc. are only in respect of SHGs to be financed under the pilot project. Hindi version of this circular will follow.

Appendix 3

NABARD circular: Guidelines for the pilot project for linking banks with self-help groups[37]

1) The Reserve Bank of India has issued a circular ref. RPCD. No. Plan.BC.13/PL-09-22/90-91 dated 24 July 1991 to commercial banks advising them to actively participate in the pilot project for linking self-help groups (SHGs) with banks. The RBI, while giving general directions regarding financing of informal groups in the circular, had also advised that the details of the pilot scheme will be evolved by the National Bank in consultation with the banks. Accordingly, after consultations with banks and voluntary agencies (VAs, also called non-governmental organisations or NGOs) the National Bank has finalised the following guidelines.

2) The guidelines have been deliberately kept flexible to enable participating banks and field level bankers to innovate and contribute to building and strengthening the project concept.

Objective

3) The pilot project aims at the following objectives:
   a. to evolve supplementary credit strategies for meeting the credit needs of the poor by combining the flexibility, sensitivity and responsiveness of the informal credit system with the strength of technical and administrative capabilities and financial resources of the formal credit institutions;
   b. to build mutual trust and confidence between the bankers and the rural poor;
   c. to encourage banking activity, both on the thrift as well as credit sides, in a segment of the population that the formal financial institutions usually find difficult to cover.

Background

4) Despite the vast expansion of the formal credit system in India, the dependence of the rural poor on money lenders continues in some areas especially for meeting emergent credit requirements. Such dependence is pronounced in the case of marginal farmers, landless labourers, petty traders and rural artisans belonging to the socially and economically backward classes and the tribal population particularly in the resource-poor areas. For various reasons the credit flow to these sections of the population for meeting their full credit requirements has not come to be institutionalised. Some of the major causes lie in the difficulties in dealing effectively and economically with a large number of small borrowers who require credit frequently and in small quantities, limitations imposed by the legal framework on their operations and also due to the bank's perceptions of the risks and creditworthiness of these borrowers.

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37 Copy of NABARD H.O. circular no. NB/DPD/FS/4631/92–A/91–92 dated 26 February 1992 addressed to all commercial rural banks and regional rural banks.

5) The credit needs of the rural poor are determined in a complex socio-economic milieu, where it is difficult to adopt project lending approach as followed by banks and where the dividing line between credit for 'consumption' and 'productive' purposes is blurred. Under the circumstances, a non-formal agency of credit supply to the poor, in the form of 'Self-Help Groups' of the poor could emerge as a promising partner of the formal agencies. In many instances the poor have demonstrated their potential for self-help to secure greater economic and financial strength and many such self-help groups have come into existence spontaneously or with the active involvement of voluntary agencies or official development agencies. Such SHGs have been formed generally around specific issues confronting the poor or specific production activities and often they have mobilised savings among their members, who would normally not be expected to have any savings, and used such resources to meet the emergent credit needs of the members of the group. The democratic functioning of the successful SHGs, their adroitness in assessing and appraising the credit needs of members, their business-like functioning and efficiency in recycling the funds often with repayment rates nearing 100 per cent, are additional welcome features that the bankers may like to utilise for serving the credit needs of the poor.

6) A recognition by the formal credit structure of the self- management capabilities of the poor through the SHGs and a link-up between the two is expected to result in specific **advantages to both the systems.** Under the linkage project the main advantage to the banks would be externalisation of a part of the work items of the credit cycle — assessment of credit needs, appraisal, disbursal, supervision and repayment, reduction in the formal paperwork involved and a consequent reduction in the transaction costs. Improvement in recoveries and also in the margins would lead to a wider coverage of the target group. A larger mobilisation of small savings would be equally advantageous. For the groups the advantages lie in the access to a larger quantum of resources as compared to their meagre corpus generated through thrift, access to better technology and skill upgradation through different schemes of the banking sector and a general improvement in the nature and scale of operations that would accelerate economic development.

Basic elements of the pilot project

7) The concerned bank, the NGO, if any, in the area and the National Bank together will identify the groups to be covered under the project.

Criteria for selection of SHGs

8) a. The group should have been in active existence for at least a period of six months.
   b. The group should have successfully undertaken savings and credit operations from its own resources.
   c. Democratic working of the group wherein all members feel that 'they have a say' should be evident.
   d. The group is maintaining proper accounts/records.
   e. The banker should be convinced that the group has not come into existence only for the sake of participation in the project and availing benefits thereunder. There

should be a genuine need to help each other and work together among the members.

f. The SHGs members should preferably have homogeneous background and interest.

g. The interest of the NGO or the self-help promoting institution (SHPI) concerned, if any, in the group is evident and the agency is helping the SHG by way of training and other support for skill upgradation and proper functioning.

Project location and selection criterion

9) For the convenience of implementing and monitoring the projects, it would be preferable to launch the projects in clusters of blocks or districts rather than in a scattered manner over the entire territory. Initially, when the projects are being launched with the involvement of SHPIs and existing SHGs this would be facilitated because most SHPIs and SHGs operate in a few selected districts. The Regional Office of the National Bank and the banks may identify NGOs/SHPIs and also the areas based on their experience.

10) Where NGOs/SHPIs and SHGs are already operating and are chosen to be covered under the pilot project the branch in whose service area the SHGs operate would participate in the project.

Size of group

11) The group size should be preferably between 10 and 25 members to enable effective individual participation in the group's deliberations. Existing larger groups could also be considered for linking if the bank is convinced about their democratic and participatory conduct of business and suitability otherwise.

Linkage program

12) The concerned bank may decide on the suitability of including particular branches under the project. Once the SHGs and branches are identified the linkage program can start. The likely linkage could be in the following manner.

13) The banker is expected to provide credit in bulk directly to the group, which may be informal or formal (ie. registered). The group in turn would undertake on-lending to the members. The quantum of credit given to the group should be in proportion to the savings mobilised by the group. The proportion of savings to loan could vary from 1:1 to 1:4 depending on the assessment of the SHG by the bank.

14) In case of SHGs where the local bank branch does not have adequate confidence in lending to them or in case where SHGs for various reasons are not willing to be linked directly with the bank, the bank may finance such SHGs through the VA or the SHPI that has promoted the SHG, if it is willing to borrow from the bank and the bank is also prepared to lend to the VA/SHPI. In such cases bulk financing of VAs could be considered.

15) Where bulk financing to VAs/SHPIs is resorted to, the concerned bank branch should closely observe the working of SHGs by attending their meetings and in other ways so

that the branch may develop the necessary confidence in the SHG and link up with it directly at the end of the bulk financing arrangement with VA.

16) In case some members of SHGs require larger loans than that could be covered under the savings related loaning, the SHG could appraise the requirement and recommend the proposal to the bank for direct lending by the bank to the concerned member. In such cases the SHG should be willing to accept the responsibility for proper credit utilisation and repayment by the member and for monitoring the same. In some cases the SHGs might apply to the bank for creating common service facilities or for certain group activities. The lending in such cases to the individual members of the SHGs or to the SHG for common activities would be subject to the usual terms and conditions of lending adopted by banks and the refinance facilities would also be on usual terms.

17) The policy guidelines spelt out in this circular are applicable only to the situations spelt out at paragraphs 13 and 14 above. The other details regarding the linkage program are discussed in the following paragraphs.

18) **The purposes** for which the group will lend to the members should be left to the common wisdom of the group.

19) **Assessment of credit:** It would be necessary that the group prepares a credit plan for its members and an aggregate of that is submitted to the bank. To ensure flexibility in the lending operations of the group this document would have to be simply giving an indication of the proposed credit requirements.

20) **Rate of interest:** The rate of interest on the bank loan to the SHG would be 12.0% per annum and the National Bank refinance would be at 6.5% per annum where bulk financing of VAs is considered, the VA needs to be compensated for the work done. For this purpose, the bank may, out of its 5% margin available on refinance from the National Bank, share the margin with the VA. The rate of interest to be charged at different levels could be as under.

Banks to VA	8.5% p.a.
VA to SHG	11.5% p.a.
SHG to Members	As decided by SHG

As the RBI has indicated in the earlier referred circular, the SHG would be free to decide on the interest to be charged to its members provided the rate of interest is not excessive. Usually, the SHGs have been observed to charge rates of interest between 24 to 36 per cent. These rates are also purpose dependent.

21) **Repayment period:** Depending on the negotiations with the group the banker may prescribe an appropriate period of repayment for the loan to SHG. In case the banker decides to fix a long repayment period, depending on the rolling over of funds by the SHG, he may like to prescribe collection of interest on the loan at shorter intervals of quarterly or half yearly rests and appropriate instalments for the capital.

22) The SHG would be free to prescribe appropriate repayment period and terms for loans to members as determined by the group.

23) **Security:** The SHGs would not be in a position to offer any collateral security other than the group savings. The RBI, vide their circular referred to earlier, has relaxed the security norms under the pilot projects. The documentation to be submitted by the SHG to the bank for availing the loan may be decided by the banks according to their convenience. Keeping in view the spirit and objectives of the pilot projects the documentation needs may be kept at the minimum and simple. Like in all other matters concerning the pilot project, experience in regard to documentation could be pooled between different banks during the periodic workshops to be organised. . .

Branch managers to have decision making powers

25) One of the key concepts in the SHG–Bank linkage project is the need for flexibility in meeting credit needs of the poor. It is, therefore, necessary that the decision making levels within the banking sector should be as close to the SHG members as possible. Therefore, most of the decisions regarding financing the SHGs should be taken at the level of the branch manager. In cases where the concerned branch managers do not have such powers the banks may have to delegate such powers to the branch managers for the specific purpose of this project.

Training prerequisites

26) An important step in launching the linkage program with a particular bank would be to depute the concerned staff of the branch for an exposure program with the concerned NGO/SHPI and SHGs. In case the concerned staff is transferred midstream, the new incumbent may also be deputed for an exposure program at the earliest opportunity.

27) If the bank manager so desires after an assessment of the SHG functioning, selected office bearers/members of the SHG should be given a short duration training in book-keeping, maintenance of records and financial discipline. Such training can be organised by the concerned bank with the involvement of the NGO/SHPI.

Support from the National Bank

28) The participating banks may like to avail themselves of support from the National Bank on the following aspects.

Refinance support

29) The banks may like to avail themselves of refinance from the National Bank for all lending undertaken through the SHGs under the pilot projects. Other than the usual conditions, refinance will be available on the following terms.

Rates of refinance: 100%
Interest rate on refinance: 6.5% p.a.

30) Banks will be sanctioned a term loan for lending to SHGs or VAs repayable over a period of 3 to 10 years depending upon the requirements of each case. The refinance provided by the National Bank should normally be covered by the banks outstandings with SHGs and VAs at any point in time. It is likely that when short loan maturities are prescribed

by the bank to the SHG there could be a short period of time, between the date of repayment of the previous cycle loan and the sanction and disbursement of a fresh loan to the SHG, when the loan outstanding does not cover the refinance provided by the National Bank. The banks should ensure that, in general, there should be no gap between the earlier loan repayment and fresh sanction to the SHGs found to be working satisfactorily, so that they are assured of the necessary credit . . .

Exposure and awareness programs for Branch Managers

32) The National Bank will help in organising exposure and awareness programs for participating branch managers and field staff as also for senior officers of the banks. Such programs could be organised with the help of NGOs/SHPIs who have undertaken SHG activities on a significant scale.

Workshops

33) In cooperation with the participating banks, the National Bank would be interested in organising periodic workshops at local, regional and national levels of NGO/SHPI and SHG personnel, participating bankers and senior bank executives to share experience from the pilot projects and gain insights for institutionalising the methodology of poor oriented lending through the SHGs.

Documenting experiences

34) The concerned bank staff may be encouraged to document their experience in the pilot linkage projects by way of case by case studies and papers. The National Bank would be happy to circulate selected papers/case studies to other bankers as well as interested parties.

35) The details given in this circular are mainly to serve as general guidelines. The banks are expected to innovate and help in the development of more models of linkages. The National Bank would welcome if depending upon local requirements and situations, the banks develop different strategies for the linkages program. The National Bank's refinance support would be initially available on the lines of the model discussed in this circular. However, the banks may approach the National Bank with alternative proposals/models which could also be considered by us and if found suitable adopted under the Pilot Project . . .

Appendix 4

MYRADA: an active NGO promoting SHGs in southern India

Overview

MYRADA was started in 1968, and its history can be divided into two periods.

1) Tibetan resettlement from 1968 to 1978. During this period 15,000 Tibetan refugees were settled in the State of Karnataka.
2) From then, MYRADA has been wholly involved with programs in the rural area for the poor of rural India. In response to invitations from three state governments, MYRADA is wholly working in the poor districts of Karnataka, Andhra Pradesh and Tamil Nadu.

Mission statement

During 1983–1984 after much reflection and searching, MYRADA evolved a mission statement:

- To foster a process of ongoing change in favour of the rural poor in a way in which this process can be sustained by them through their efforts.
- To build and manage appropriate and innovative local level institutions rooted in values of justice, equity and mutual support, which can ensure their sustainable livelihoods.
- To recreate a self.
- Sustaining habitat based on a balanced perspective of the relationship between natural resources and the legitimate needs of people.
- To influence public policies in favour of the poor and to build supportive institutional linkages between official institutions and people's organisations. To support small NGOs and foster the emergence of new NGOs working in rural areas.
- To promote networking among people's institutions and among NGOs.

Present commitments

As of today MYRADA is working directly with 75,000 families or approximately 850,000 people. MYRADA has a total of 567 full-time staff and over 600 volunteers trained in community health care, animal husbandry, forestry, literacy and other relevant areas. MYRADA looks for and develops the following qualities in its staff: commitment, professionalism, innovativeness and the ability to work in a participatory manner.

MYRADA defines the poor as those who depend on others for their needs. This dependency forces them to mortgage their labour, their priorities, thinking, confidence, lands, and sometimes their bodies. This dependency also forces them to exploit their environment where they have at least a limited freedom; as a result the environment becomes rapidly degraded leading to increasing impoverishment.

MYRADA's strategy, therefore, takes into account the close interaction between poverty and the environment which has been a traditional feature of India's past. Unless the environment

is managed in a sustainable way, a crucial link in the strategy to eradicate poverty on a permanent basis will be missing.

Main fields of activity

There are five critical areas in which MYRADA has achieved a breakthrough, however limited.

(1) Rural credit systems through socially functional groups

As of March 1994 MYRADA has organised 2,208 groups of the rural poor. These groups are small, homogeneous, voluntary, fully participative and non-political. They manage approximately Rs 20 million of which Rs 5 million is their own savings. Each of these groups has raised a common fund from their savings, and this capital has been enhanced by NABARD, CAPART and other donors. This common fund is lent out to the members by the group for urgent consumption needs, small business, cottage industries, animal husbandry, poultry, etc. The overall recovery rate is 98 per cent. To bring these groups to a position where they can manage their affairs, however, has taken time and intensive education. On an average, each day there are 120 meetings being conducted with these groups for non-formal education, group management, business matters, etc. As well, regular training courses (1–2 days) are held for each group.

(2) Development of women and children

MYRADA has 530 groups of women which operate on the same pattern as the credit management groups described above. The Tamil Nadu Government Corporation for Development of Women has entered into an agreement with MYRADA to collaborate in a major project in Dharmapuri District covering 10,400 poor women. MYRADA's role is to organise them into groups, provide training to the members and to the animators and staff, support income-generating choices of the members, and liaise with the banks. The project is funded by IFAD through the Government of India. In addition, MYRADA works with 21,000 children, providing or upgrading health and educational services, promoting social and cultural development opportunities, and supporting infrastructure development to the government Integrated Child Development Program.

(3) Resettlement of released bonded labourers and displaced persons

MYRADA has resettled in the following categories:

- Tibetans: 15,000 in Karnataka who are today self-reliant communities.
- Sri Lankan repatriates: 1,200 in settlement near Kodaikanal, Tamil Nadu. The project was handed over to the people and the government in 1988.
- Released bonded labourers: 10,000 in various project areas in Karnataka, Andhra Pradesh and Tamil Nadu.
- Displaced families: Recognising MYRADA's experience in this area, the Government of Karnataka approached it to prepare an Action Plan as well as guidelines for future policy to resettle 20,000 families to be displaced by the Upper Krishna Project. As a result, not only has an action plan been approved by the State Cabinet but a new bill was passed which is now awaiting the President's approval: the bill enshrines a new policy which takes into account principles of justice, equity and environment conservation.

(4) Forestry

MYRADA has developed the following patterns of forestry management:

- Kisan Nurseries
- Insurance forestry on marginal lands
- Community forestry on common lands
- Natural regeneration of trees and grasses on plots protected by communities
- Homestead plantation
- Planting of fodder trees and grasses on field bunds.

From July 1992, MYRADA will place a mobile training team in Uttara Kannada to work in each village with the people, with forest officials, as well as with non-government organisations/voluntary agencies where they exist, to plan and implement a participative forestry program. In addition, MYRADA is also coordinating and providing support to 22 voluntary agencies involved in forestry in Andhra Pradesh. Associated with this thrust is a large biogas and smokeless, fuel-efficient *chula* program and the use of sun-cured hand-pressed bricks for construction of houses, etc.

(5) Participative Integrated Development of Watersheds (PIDOW)

The major breakthrough in this field has been in terms of people's participation in environment resource management. The watershed committee in Gulbarga has evolved systems to maintain forestry and fodder plots, grazing lands, agricultural fields, surface water systems (weirs, gully plugs etc.). The project covers 16 watersheds and is developing into replicable patterns appropriate for regenerating the resources of an undulating area.

To facilitate all the above activities, MYRADA is engaged in a major in-house training effort that is constantly upgrading capacities and skills of people and staff to ensure that development efforts are continuously adapting themselves to the changing environment and needs. On an average, 158 training programs are conducted every month for people in credit groups, for volunteers in relevant skills, and for staff. As well, on an average, three training programs are conducted every month for government staff, other voluntary agencies, and staff of institutions related to development.

(6) Collaboration with the government

One of the significant features of MYRADA's programs is collaboration with government departments dealing with specific programs and objectives. The objective is to share some of the 'software' learnings that emerge in the project area where these joint projects are operational with other projects having similar objectives, and thereby influence policy changes.

MYRADA has the following collaborations with the government.

1) Upper Krishna Project where MYRADA prepared an Action Plan for R&R in 1986–87 which was one of the first comprehensive action plans prepared for the rehabilitation of project-affected families. Later, MYRADA was asked to provide training in community organisation for the Relief and Rehabilitation staff and to monitor the R&R programs.
2) PIDOW Gulbarga (Participative Integrated Development of Watersheds) where

MYRADA works with the DLDB. In the next phase, the PIDOW Gulbarga experiment and the experience derived from it will be shared with other DLDB projects, both through MYRADA staff and other NGOs who will be exposed to the strategies and people's institutions that evolved.

3) Tamil Nadu Corporation for Development of Women: A major project covering 18,000 poor women in Dharmapuri District where the government provides both staff and finance.
4) Andhra Pradesh Forestry Programs where MYRADA is supporting 24 *volags*. The project is now moving towards an integrated approach with the focus on training in participatory micro planning and management in watersheds.
5) The Devadasi program where MYRADA has deputed one of its staff to the government; she has been made Project Officer. A small MYRADA team supports the program.
6) Uttara Kannada Forestry Project with the Forest Department where MYRADA supports and motivates participatory methodologies and the role of people's institutions in planning management and monitoring of village forestry and sharing of benefits.
7) Biogas program in collaboration of DNES (Department of Non-conventional Energy Sources) in 17 districts of Karnataka. MYRADA constructs Deenabandhu and Janatha models, trains masons, sets up masons societies and converts the Bhagyalakshmi plants.
8) Credit management groups, where NABARD (National Bank for Agriculture and Rural Development) has provided capital to match the savings of the self-help groups and also ongoing support.
9) Drinking water and sanitation — Karnataka: MYRADA's role is to train the government staff and people in participatory planning for drinking water and sanitation systems, and to support the growth of people's institutions to maintain them.
10) Housing is an important component of all MYRADA projects; 6,800 houses have been constructed since 1982. Governments of the State and Centre have provided significant funds.

Appendix 5

Tamil Nadu Corporation for Development of Women Project, Dharmapuri Unit[38]

Overview

Tamil Nadu Women's Development Project with the assistance from the International Fund for Agricultural Development, Rome (IFAD) has been implemented in Dharmapuri District since 1989. So far, 12 blocks in the district have been covered to reach 12,500 rural women, and 9,401 women beneficiaries have already been assisted.

Eligibility for assistance in the project

1) Rural women aged between 18 and 55 years who are below the poverty line.
2) Non-governmental organisations take the responsibility of organising these rural women into groups and conduct the groups with an animator.
3) These groups convene group meetings once a week or twice a month and begin thrift collection ranging from Rs 5 to Rs 10 depending on the individual capacity of members. At present there are 768 groups in the district enrolling 19,742 women whose savings are close to Rs 56 *lakhs*. This group saving is also being used to provide small consumption loans at reasonable rates of interest to the needy members, which has completely stopped them from approaching local moneylenders charging exorbitant rates of interest.
4) Each group will have 15 to 30 members to make the group homogeneous.
5) The credit assistance to group members is being made available by Indian Bank branches irrespective of service area approach.
6) Loans are being provided for agroforestry, horticulture, sericulture, animal husbandry, *khadi* and village industries and agricultural engineering.
7) Subsidies at 25 per cent for small farmers, 33-1/3 per cent for marginal farmers and agricultural labourers, and 50 per cent for scheduled castes/tribes are being provided by the project; this subsidy in the form of a fixed deposit is kept and released as an 'incentive/bonus' at the end of 3 years or after closure of the loan.

Land development, deepening of wells, laying of pipelines, and construction of steining walls are being assisted under 'on-farm development' works by the Department of Agriculture Engineering by way of direct loan and subsidy.

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38 Model II where both NGO and SHG play a non-financial intermediary role is based on the experience of this project.

Technical assistance by way of supply of inputs, training, marketing, etc. is arranged by line departments — Department of Agriculture, Department of Horticulture, Department of Sericulture, Department of Animal Husbandry, Department of Khadi and Village Industries, etc. — to the beneficiaries assisted by the project.

Achievements made under IFAD-assisted Tamil Nadu Women's Development Project, Dharmapuri District (by year)

Activity	1989–90		1990–91		1991–92		1992–93	
	Phy	Finan	Phy	Finan	Phy	Finan	Phy	Finan
Agriculture	–	–	372	1.085	240	1.625	455	3.563
Sericulture	81	0.405	381	2.965	450	3.764	468	3.829
Horticulture	18	0.112	191	1.143	241	1.650	269	2.200
Animal husbandry	201	1.345	622	3.362	1,023	4.898	873	5.183
Khadi & village industries	67	0.274	380	1.288	470	1.889	592	4.022
Agricultural engineering	173	0.620	520	1.993	520	3.706	546	3.713
Oil seeds	–	–	75	0.488	81	0.565	–	–
Others	–	–	92	0.322	–	–	–	–
	540	2.756	2,633	12.646	3,025	18.097	3,203	22.510

Physical: in numbers
Financial: Rs in millions

Appendix 6

Yuvak Vikas Kendra: an NGO playing a financial intermediary role

The Yuvak Vikas Kendra (YVK) is a registered NGO functioning in Bijapur District of Karnataka State since 1984. At present YVK is working in 40 villages, 14 Lambani settlements, and 10 Kuruba hamlets. Major activities being undertaken by YVK are:

- drought relief program
- community organisation
- women and children development program
- non-formal education program
- income generation and employment oriented program
- agricultural development training to farmers
- organising self-help groups and providing financial support.

YVK is implementing many of the programs listed above through SHGs. The SHGs are working with specific objectives such as:

- thrift than credit
- democratic functioning
- cooperation among members
- maintenance of records/accounts
- holding the responsibility of repayment.

Currently, there are six SHG groups formed by YVK which have been working for more than a year. The NGO had availed a loan of Rs 0.15 million from Canara Bank, Bijapur and disbursed it to SHGs with the service charge of 3 per cent. The groups formed by YVK were mainly activity based. The group members availed loans for various income generating activities. The loan amount, purpose, and term of repayment were decided by the SHG. However, the NGO has to repay the loan to the bank at fixed monthly instalments within a three-year period. The interest rate charged by bank to NGO was 9.5 per cent and the NGO passes on the loan to the SHG at the rate of 12.5 per cent keeping 3 per cent as service charge. Since the bank branch did not have the experience of financing to informal groups, the loan was directly disbursed to the NGO.

Appendix 7

Transaction costs of bank per loan account (by bank), Model I

Particulars	RRB	Commercial banks	
		(public)	(private)
Time spent for loan delivery (hours)			
Clerks	2.50	2.00	2.00
Officers	2.50	2.08	2.00
Total	5.00	4.08	4.00
Salary and allowance per hour (Rs)			
Clerks	20	18	21
Officials	52	57	52
Proportion of other expenses to salary expenses	0.1474	0.1677	0.2837
Average loan amount (Rs)	5,100	5,400	5,400
Transaction cost per account (Rs)			
Salary expenses	180	156	146
Other expenses	27	26	41
Total	207	181	187
Transaction cost per Rs 100 loan (Rs)	4.05	3.35	3.46

Appendix 8

Transaction costs of bank per loan account (by bank), Model III

Particulars	RRB	Commercial banks	
		(public)	(private)
Time spent for loan delivery (hours)			
Clerks	2.00	1.67	1.70
Officers	1.33	1.00	1.00
Total	3.33	2.67	2.70
Salary and allowance per hour (Rs)			
Clerks	20	18	21
Officials	52	57	52
Proportion of other expenses to salary expenses	0.1474	0.1677	0.2837
Average loan amount (Rs)	5,100	5,400	5,400
Transaction cost per account (Rs)			
Salary expenses	109	88	88
Other expenses	16	15	25
Total	125	103	113
Transaction cost per Rs 100 loan (Rs)	2.45	1.91	2.09

Appendix 9

Transaction costs of bank per loan account (all banks)

Particulars	Model II	Model III	Model IV
Time spent for loan delivery (hours)			
Clerks	2.00	1.78	2.33
Officers	1.58	1.12	1.58
Total	3.58	2.90	3.91
Salary and allowance per hour (Rs)			
Clerks	18	20	18
Officials	57	54	57
Proportion of other expenses to salary expenses	0.1677	0.2102	0.1677
Average loan amount (Rs)	5,400	5,300	5,400
Transaction cost per account (Rs)			
Salary expenses	126	96	132
Other expenses	21	20	22
Total	147	116	154
Transaction cost per Rs 100 loan (Rs)	2.72	2.19	2.85

Appendix 10

Time allocation for different operations at a bank branch (in hours/year)

Bank personnel (no.)	Total working hours	Time spent for			
		Loan advance	Deposit collection	Banking	Development activities
Regional rural bank					
Manager (one)	1,800 (100)	750 (42)	630 (35)	270 (15)	150 (8)
Field officer (one)	1,800 (100)	1,440 (80)	200 (11)	50 (3)	110 (6)
Officers	–	–	–	–	–
Clerks/maintenance staff (four)	7,200 (100)	2,600 (36)	1,000 (14)	2,660 (37)	940 (13)
Total working hours	10,800 (100)	4,790 (44)	1,830 (17)	2,980 (28)	1,200 (11)
Commercial bank (public)					
Manager (one)	1,800 (100)	540 (30)	900 (50)	180 (10)	180 (10)
Field officer (one)	360* (100)	270 (75)	45 (13)	– –	45 (12)
Officers (two)	3,600 (100)	900 (25)	450 (13)	1,800 (50)	450 (12)
Clerks/maintenance staff (four)	10,800 (100)	3,150 (30)	2,745 (25)	4,185 (39)	720 (6)
Total working hours	16,560 (100)	4,860 (29)	4,140 (25)	6,165 (37)	1,395 (9)

Figures within parentheses indicate percentage to total working hours.

* The field officer in the selected commercial bank (public) branch is looking after five branches. Hence, proportionate time spent in the selected branch is considered.

Time allocation for different operation sat a bank branch (in hours/year) (cont'd)

Bank personnel (no.)	Total working hours	Time spent for			
		Loan advance	Deposit collection	Banking	Development activities
Commercial bank (private)					
Manager (one)	1,800	360	720	180	540
	(100)	(20)	(40)	(10)	(30)
Officers (two)	3,600	540	1,260	1,620	180
	(100)	(15)	(35)	(45)	(15)
Clerks/maintenance staff (nine)	16,200	4,860	3,420	6,750	1,170
	(100)	(30)	(21)	(42)	(7)
Total working hours	21,600	5,760	5,400	8,550	1,890
	(100)	(27)	(25)	(40)	(8)

Figures within parentheses indicate percentage to total working hours.

Appendix 11

Estimation of breakeven volume of business

$$\text{Breakeven value} = \frac{\text{Transaction costs}}{\text{Financial margin}} \times 100$$

	RRB	Commercial banks	
		Public	Private
I Transaction costs, staff salary and other expenses (million) (Table 6.16)	0.43	0.67	0.855
II Financial margin (Table 6.18)			
Interest earned	9.97	11.61	11.02
Cost of funds	5.87	5.99	7.03
Margin	4.10	5.62	3.99
III Breakeven value	$\frac{0.43}{4.10} \times 100$	$\frac{0.67}{5.62} \times 100$	$\frac{0.855}{3.99} \times 100$
Rs millions	10.488	11.922	21.428
IV Existing volume of business (million) Sections 5.2, 5.3, 5.4	5.536	15.373	21.797
V To be viable without intermediation*	189%	78%	98%
Expected volume of loan business $\frac{\text{III}}{\text{IV}} \times 100$			
VI With intermediation of NGO/SHG	$\frac{0.43}{5.70} \times 100$	$\frac{0.67}{7.06} \times 100$	$\frac{0.855}{5.36} \times 100$
Financial margin in denominator indicates cost reduction in Rs million	7.543	9.49	15.951
Breakeven percentage $\frac{\text{VI}}{\text{IV}} \times 100$	$\frac{7.543}{5.536} \times 100$	$\frac{9.49}{15.373} \times 100$	$\frac{15.951}{21.428} \times 100$
	136%	62%	74%

* RRBs have to increase their business by 89% (Column V less 100%) whereas commercial banks break even at the 78% and 98% of existing loan business.

An official of MYRADA, a non-government organisation in South India, records the weekly savings of the members of a women's self-help group in Mudugooli village.

For commercial banks in developing countries, the transaction costs of lending are a crucial issue in making credit available to the rural poor. Normal methods of loan approval, administration and collection are simply uneconomic in relation to the very small loans which the poor require to finance their economic activities.

Recent decades, however, have seen increasing evidence that, using non-government organisations and self-help groups as a channel for low-cost delivery, commercial sources *can* supply credit to the poor on a sustainable basis. Such innovative banking programs are being implemented by commercial banks in the South Indian states of Karnataka and Tamil Nadu — under the guidance of the National Bank for Agriculture and Rural Development and actively encouraged by the Reserve Bank of India.

This study aims to quantify the cost savings banks can achieve through such methods of lending to the poor. Results indicate savings in transaction costs of between 21 and 41 per cent, lower costs for borrowers, and significantly improved loan recovery rates.

These results have significant implications for the commercial viability of micro-lending as well as for poverty alleviation. They will be important to commercial banks and NGOs with credit programs, as well as to governments and international development organisations.