Gordon Donald

# CREDIT FOR SMALL FARMERS IN DEVELOPING COUNTRIES

Westview Special Studies in Social, Political, and Economic Development

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Gordon Donald, *Credit for Small Farmers in Developing Countries*

John S. Gilmore and Mary K. Duff, *Boom Town Growth Management: A Case Study of Rock Springs—Green River, Wyoming*

Donald R. Mickelwait, Mary Ann Riegelman and Charles F. Sweet, *Women in Rural Development: A Survey of the Roles of Women in Ghana, Lesotho, Kenya, Nigeria, Bolivia, Paraguay and Peru*

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Paul Shankman, *Migration and Underdevelopment: The Case of Western Samoa*

The subject of credit for small farmers has not previously been comprehensively analyzed in relation to the needs and conditions of developing countries. The Agency for International Development, seeking information and ideas for policy consideration, organized a Spring Review on small farmer credit, and this volume is a product of that study. It explores many aspects of the matter, including a number of innovative approaches as well as more traditional views.

Gordon Donald, Jr., has been editor of the *Development Digest* since 1968; prior to that he was with the Department of State in both civil and foreign service positions including assignments in Pakistan, Indonesia and Thailand. He holds degrees in Economics from Princeton University and the University of Chicago (Ph.D.).

Gordon Donald

# CREDIT FOR SMALL FARMERS IN DEVELOPING COUNTRIES

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# *Preface*
# *AID's Spring Review: The Genesis of this Book*

This book was conceived as a means of distilling and disseminating the results of the 1972/73 "Spring Review" of AID (the U.S. Agency for International Development), which was devoted to credit programs for small farmers. A Spring Review is an activity undertaken by AID more or less annually and involves both research and policy evaluation. Each Review takes up a subject which is of importance to AID's development programs, and which appears to merit a new look at the facts and the approaches that should be considered in working out policies. The first Spring Review in 1968/69 concerned the "new seeds," the high-yielding varieties of wheat and rice; subsequent subjects of Spring Reviews included land reform, intermediate credit institutions (like development banks), and population programs. The name Spring Review arose from the custom of having a concluding conference in the spring to review the findings of the work that had gone before, and to formulate policy recommendations. In practice this timetable has varied somewhat (in two years there was more than one "Spring Review"), but the name has remained as a convenient way of referring to an activity that escapes conventional labels.

The amount of research has varied in the Spring Reviews of different years. In the smaller Reviews, the emphasis was on an exploration of policy alternatives; in the more ambitious Reviews, there has been a considerable effort to assemble facts and local evaluations of experience in developing countries to support the final policy review. The 1972/73 Spring Review on small farmer credit programs was particularly ambitious in its research planning and correspondingly voluminous in the resulting documentation. Reports and papers were commissioned by AID in accordance with an overall design that combined a world-wide survey of experience with an exploration of analytical and policy considerations. About 60 reports on the specific experiences with farm credit programs in different developing countries were written, as were 20 analytical papers on general and specialized subjects cutting across geographical lines. A number of additional papers on related subjects were added. Altogether the 1972/73 Spring Review generated 20 volumes of papers, with 300 or so pages per volume.

Another feature of the Spring Review method is that it brings together academic specialists with practitioners of various kinds and nationalities, not only in the authorship of the papers but in the discussion of their contents. The sequence of this planned interaction in 1972/73 was as follows: First, the 60 program reports, following a comprehensive common outline specifying the factual coverage and topical evaluations required for each farm credit program, were composed by knowledgeable practitioners in the field. A number of these program reports are very substantial studies. Then the analytical papers, written mostly by U.S. university professors and also by AID personnel, were drafted after their authors had the opportunity of reading the program reports from different regions. Authors of these papers were selected from the leading specialists in their subjects who had had considerable field experience. These analytical papers were then distributed through AID Missions in the field. Next, a series of "workshops" were held, meetings in which a visiting team of AID personnel and analytical paper authors presented topics for discussion with nationals of countries in Asia, Africa and Latin America. At the end of this process, the analytical papers were revised in light of the workshop discussions, and a final conference took place in Washington to review the findings and their implications.

The workshop meetings are of particular interest, for it was here that the ideas worked up by the U.S. team of specialists were exposed to the interplay and discussion of a variety of national and occupational groups. There were six regional meetings: in Costa Rica (Mexico and Central America), Ecuador (South America), the Philippines (East and Southeast Asia), Turkey (West and South Asia), Kenya (East Africa), and the Ivory Coast (West and North Africa). In addition, smaller workshops limited to single country participation were held in South Vietnam, Bangladesh, Ghana and Nigeria. The regional meetings lasted three days each: formal presentations from the platform alternated with discussion sessions, many of which took place in small groups to facilitate communication. In addition, there was a considerable scope for informal interaction at meals and between meetings, and on a trip to visit local projects in each locality. The kinds of people who were thrown together in this way included: the U.S. professors, chiefly agricultural or general economists and a few other social scientists; AID staff from Washington and from regional Missions; a large number of administrators of credit programs in the region; a roughly equal number of regional officials from departments of agriculture or cooperatives, and from central banks; and a small number of local private bankers, university professors, and representatives of groups like the Ford Foundation, local marketing boards, or international cooperative organizations. One representative of FAO (the Food and Agriculture Organization of the United Nations) participated in all these meetings, as did a representative of the Farmers' Home Administration—the U.S. organization for small farmer credit.

The interplay of these various personalities and interest groups was a stimulating experience for participants. There were a number of controversial topics on which strong views were expressed, pro and con. The agenda of the workshops encouraged such controversy, as there was no AID "line" on the subject being propagated and the specialists whose presentations initiated the discussions expressed openly divergent opinions. Language was an occasional

problem: simultaneous translation was used in Latin America and francophone Africa; elsewhere only English was used. With this juxtaposition of people from diverse occupations and cultures, the structuring of the workshops did achieve an exposure of ideas in various settings, and a series of reactions to them. An evolutionary process occurred during and after this exploratory venture.

A distillation of results and a drawing of policy conclusions therefrom was the concluding effort. The final Washington conference was a lively one, attended mainly by AID officials, veterans of the workshop circuit, and representatives of other donor organizations such as the World Bank, the Inter-American Development Bank, and the FAO. Many of the findings of the Spring Review papers and workshops were summarized, and the controversial issues were brought out once again with new voices added. There was no lack of interest in the subject, but agreed conclusions proved to be elusive. It was apparent that the problems encountered by small farmer credit programs have great similarities wherever they are undertaken around the developing world. But there was more diversity than convergence in the nature of the successes that had been found in various countries, and still more divergence in the meanings that could be derived from these results.

The search for AID policy formulations continues within the agency, and a set of guidelines for project officers has been written. The FAO and the World Bank are conducting major studies on the same and related subjects. It would appear that while the development of small farmers is increasingly recognized as an important concern, with or without an emphasis on the role of credit, it presents problems for which solutions are still being sought. This book is to be read with that in mind.

The idea of extracting a book-length manuscript from the Spring Review materials arose from the experiences in the earlier Reviews, which had generated large numbers of papers that tended to be filed and forgotten when the final conferences had ended. Some of the summary documents continued to circulate usefully within AID, but the collections of experiences and thoughts were for the most part unable to reach many of the other practitioners who might have found them of value. This was partly a result of their sheer volume, partly of their heterogeneous nature. AID concluded that a book-sized product from the 1972/73 Spring Review could have a role to play, and contracted with the National Planning Association to have it produced by this author.

I have prepared the book as a unitary presentation, not as a collection of articles from Spring Review papers. Spring Review reports were the major source; in addition, I attended and took notes on all the workshops, and these discussions supplied a significant addition to the published materials. There were also novel suggestions arising in the Spring Review discussions which seemed to merit further elaboration and exploration than they had received up to that point; as a result, the contents of the book go well beyond the initial coverage of the Spring Review in a number of areas.

Texts from some of the Spring Review papers, rewritten and reduced in varying degrees were used to compose certain chapters; such edited materials add up to perhaps one-third of the pages below. Most of the passages which were edited from Spring Review papers appear in Part 2 (Chapters 3-7), entitled "Role of Credit," where alternative views of the original authors are presented on the purposes and problems of credit programs. Specifically, edited materials

constitute nearly all of the following chapters: Chapter 3 (original author—Millard Long), Chapter 4 (Ronald Tinnermeier), Chapter 5 (Chester Baker), Chapter 6 (Cynthia Gilette and Norma Uphoff) and Chapter 7 (Judith Tendler). Edited material also occupies perhaps half the pages of Chapter 9 (Claudio Gonzalez-Vega) and Chapter 14 (Thomas Carroll), and smaller portions of Chapters 8 (Charles Nisbet) and 12 (Dale Adams). At the bottom of the first page of each chapter, introductory statements are provided in order to credit any Spring Review participants who contributed to the chapter in question, and to identify the areas of their contributions. These statements indicate where edited text was used; they also represent my endeavor to recognize major contributions of ideas by Spring Review participants and others, whether in the form of writings (cited in the text) or otherwise. As it is sometimes difficult to trace the origin of ideas, I hope that credit has been properly given where it is due.*

The chapters to which authors of Spring Review papers are noted as major contributors were reviewed by these authors. Comments on the first draft of the text were provided by a committee of major Spring Review participants: Professor Dale Adams of Ohio State University; Dr. Millard Long of the Development Advisory Service, Harvard University; Mr. Dana Dalrymple of the U.S. Department of Agriculture; and Ms. Martha Horsley of AID. I wish to express my gratitude for their contributions, and especially to Dale Adams. None of the reviewers should be held responsible for shortcomings in the text.

The conclusions and value judgments found in this text are not to be identified with official AID positions, nor U.S. government policies, but are chiefly my responsibility and that of the individuals who have contributed. I have considered it my duty to reveal to readers as much as possible of the diversities of opinion, not only among the professional writers on these controversial subjects, but also in the range of reactions in the field as encountered in the Spring Review process. Nevertheless, value judgments were inevitable in the course of presentation, and my conclusions appear in the final chapters of the book. However, I would like to state that the text could not have been produced in its present form without the various kinds of help I have received from a number of Spring Review participants.

A particular acknowledgment of assistance is due to Millard Long for the preparation of most of the statistical data presented in tables below. At the time this text was being written Long was preparing material for the World Bank on small farmer credit, and he and his assistants compiled the data on various

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*The frequent references to Spring Review papers throughout the text are made by a parenthetical notation of the author's name, or in some cases a name followed by a volume number (Roman numeral) and page or article numbers. An alphabetical list of Spring Review authors with identification of their papers in the Spring Review volumes appears in Appendix C at the end of the book so that readers may refer to the originals. The Spring Review volumes have been made available for purchase and may be ordered from AID (see instructions in Appendix B). References to materials not included in the Spring Review volumes are cited in conventional footnotes.

subjects that had accumulated in the Spring Review papers. Officials at the World Bank then added to his tables using materials available to them. This resulted in the most comprehensive assembly of statistical data on small farmer credit programs that has been published to date. Long's material was incorporated in a report entitled: *Bank Policy on Agricultural Credit,* Report no. 436, May 1, 1974. While the text of this report was not prepared for the general public, the World Bank has given permission for the use of its statistical tables in this book. (The tables presented here represent in some cases modifications or corrections of the Bank's tables.) When the Bank's report is cited as the source for tables it can be assumed that the original sources were in large part Spring Review papers, with the World Bank a supplementary source.

Finally, the fundamental role of AID must be recognized, not only in financing the preparation of this book but in making the entire Spring Review possible. An immense amount of work and planning went into this endeavor, both in Washington and in the overseas AID Missions where program papers were written and workshops were held. It is quite impossible to give an accounting of all these contributions, but the special part played by Edward B. Rice must be mentioned. While Spring Reviews are the work of many hands, it is fair to say that Rice left his mark on the small farmer credit Review in his contributions to the conception and detailed design of a structure for the activities that ensued. This intellectual structuring was apparent in the scope and direction of the overall subject matter, the selection and requirements for papers to be written, and the ample but flexible guidance of the workshops. In addition, Rice was an indefatigable organizer and negotiator at the Washington end of the project, and a source of self-assessment and morale among the workshop core group. None of this activity could have come about without the commitment of AID to the Spring Review concept and the purposes which it serves.

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# Part 1
# Introduction

# 1 AID Experience with Farm Credit Programs

As a background to this examination of small farmer credit programs, we shall review briefly the ways in which these programs have been undertaken in AID (the U.S. Agency for International Development), and the evolution of thinking within AID that led to the decision to initiate the Spring Review on the subject and thus to the preparation of this book (see Preface). Support for agricultural credit in developing countries has been one of the important activities of AID and its predecessor agencies, beginning in 1943. As of 1974, AID's financial contributions in this field are no longer the largest among international assistance organizations but they are substantial, and the duration of its efforts and the extent of its attention to small farmers are nearly unique among international aid donors. It may be noted that in this chapter we will look at agricultural credit programs from the standpoint of a development assistance agency, a perspective which will not be found in the succeeding chapters.

*Magnitudes of financial support.* Table 1 gives reported annual values from 39 developing countries in years close to 1970 for credits to agriculture from all types of lending institutions. The values for the loans outstanding at the end of the year total $8.7 billion. The list of countries is incomplete, the coverage of institutions in some countries is incomplete, and institutional credit has been increasing generally: the round figure of $15 billion may be an approximate current value for 1974. If the values for non-institutional loans obtained by farmers were known, the total for agricultural credit (including consumption loans) would be some multiple of that amount. The great bulk of this capital is indigenous to the developing countries concerned; perhaps half a billion dollars a year in loan funds is currently supplied by external sources. Nevertheless, agricultural credit programs are a large and increasing category in international development financing.

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The principal contributor to this chapter was Edward B. Rice, formerly of AID (now with the World Bank), whose evaluation of the history of AID programs in agricultural credit was included as Volume XVIII of the Spring Review papers. This study was the basis for most of the material which follows.

Table 1: Annual Values for All Agricultural Credit from Public and Private Banks and Cooperatives
(US $ million)

| Africa | Loans outstanding[a] | New loans[b] | Dollars per capita of rural population[c] | Year of observation |
|---|---|---|---|---|
| Ethiopia | 18 | 6 | 1 | 1970 |
| Ghana | 19 | 6 | 4 | 1971 |
| Kenya | 131 | | 12 | 1970 |
| Morocco | 130 | 65 | 13 | 1971 |
| Tunisia | 53 | 15 | 20 | 1970/71 |
| Uganda (Cooperatives only) | | 3 | | 1971 |
| **Asia** | | | | |
| Afghanistan | 2 | 1 | 1 | 1971 |
| Bangladesh | 130 | 15 | 11 | 1972/73 |
| India | 2,400 | 1,380 | 5* | 1971 |
| Indonesia (BRI only)[d] | 72 | | 1* | 1971 |
| Iran | 159 | 127 | 9 | 1970 |
| Jordan (ACC only)[e] | 17 | 2 | 17 | 1971 |
| Korea (NACF only)[f] | 236 | 206 | 12 | 1971 |
| Malaysia | 200 | | 55 | 1971 |
| Pakistan (West) | | 33 | 20* | 1967/68 |
| Philippines | 523 | 443 | 26 | 1971 |
| Sri Lanka | 30 | 9 | 4 | 1970 |
| Taiwan | 409 | 225 | 74 | 1971 |
| Thailand | 73 | 42 | 3 | 1970 |
| Turkey | 414 | | 20 | 1967 |
| Vietnam | | 32 | 2* | 1971 |
| **Latin America** | | | | |
| Argentina | 555 | | 111 | 1968 |
| Bolivia | 15 | 5 | 8 | 1971 |
| Brazil | | 1,500 | 40* | 1969 |
| Chile | | 264 | 106* | 1969 |
| Colombia | 416 | 319 | 52 | 1970 |
| Costa Rica | 110 | | 126 | 1968 |
| Dominican Republic | 57 | | 24 | 1968 |
| Ecuador | | 48 | 13* | 1968 |
| El Salvador | | 78 | 36* | 1970 |
| Guatemala | 52 | | 18 | 1968 |
| Honduras | | 59 | 35* | 1971 |
| Mexico | 1,671 | | 84 | 1971 |
| Nicaragua | 100 | | 100 | 1970/71 |
| Panama | 23 | | 31 | 1967 |
| Paraguay | 33 | | 22 | 1968 |
| Peru | 160 | | 25 | 1967 |
| Uruguay | 18 | | 36 | 1967 |
| Venezuela | 448 | | 179 | 1968 |

Source: Bank Policy on Agricultural Credit, World Bank, 1974, Annex Table 1. The reported values from some countries are incomplete, as it was not possible to find figures for all institutions.

[a]Loans outstanding represent the end-of-the-fiscal-year portfolio of the lending institutions. As few credit agencies write off bad debts, this figure is inflated by defaulted loans.

[b]New loans represent the amount of lending by institutions in the fiscal year under consideration (not the change in outstanding balances at the year's end). A low ratio of new loans to outstanding debt indicates that the institution either has a high proportion of medium-term loans or that its portfolio contains a substantial amount of defaulted debt; the latter is probably more important.

[c]Per capita value of loans outstanding, except where asterisks appear.
*Per capita value of new loans extended during the year.

[d]BRI - Bank Rakyat Indonesia

[e]ACC - Agricultural Credit Corporation

[f]NACF - National Agricultural Cooperative Federation

The largest contributor of external funds to agricultural credit programs is the World Bank, and its interest in this field has been growing rapidly. In the 1950s and early 1960s rather little went into this activity, but from 1964 to 1968 its expenditures for such programs averaged about $25 million a year. In 1968-73 the average rose to $350 million a year, and the current (1974) level is approximately $400 million. Some $300 million of this total goes into loan funds for farmers, with the remainder going to technical assistance and administrative costs. Next in order of magnitude is the Inter-American Development Bank (IDB), serving Latin America. From 1961 to 1972 its spending in this field has averaged about $50 million a year, and it has been fairly stable since the IDB began its operations in 1960 with a greater initial emphasis on agriculture than that in the World Bank. Like AID, and unlike the World Bank, the IDB has given considerable emphasis to smaller farmers in the credit programs it supports. The Asian Development Bank, founded in 1966, devoted 13 percent of its loan funds in 1968-72 and nearly half its technical assistance to agriculture, but the portion of this going to credit projects is difficult to identify. The agricultural lending total averaged a little under $20 million a year in 1967-71, rising to $33 million in 1972. The African Development Bank, started in 1966 with much more limited funds than the other regional banks, had devoted 15 percent of its loan commitments through 1972 to agriculture, averaging some $2 million a year over 1967-72. In both the Asian and African banks, however, it appears that most of their agricultural funds have gone to non-credit projects. Mention may be made of the Food and Agriculture Organization of the United Nations (FAO), which has no lending capital but has been active in technical assistance to agricultural credit and related programs.

In comparison with the multinational banks AID's financial contributions occupy an intermediate position, though they are well above the sums originating in other national programs. More than $700 million in AID funds have gone into farm credit programs since 1950: during the 1950s capital assistance to these programs was below $20 million a year, but in the 1960s it went up sharply and remained above $40 million annually, reaching a peak of $90 mil-

lion in 1969; in the 1970s it has been in the $30-50 million range. These figures for capital assistance are less inclusive than the expenditure values given for the multinational banks, as they omit technical assistance and other categories. Some of AID's assistance was in the form of grants, unlike these banks which only supply loans. Approximately 60 percent of AID's capital assistance, however, has consisted of local currency counterpart funds generated by PL-480 and other import programs.

The abrupt increase in capital assistance in 1961 is associated with the start of the Alliance for Progress; 62 percent of the total capital assistance from AID over the years was directed to Latin America. Lesser but substantial amounts went to East Asia, and to the Near East (mostly Turkey, along with a technical assistance concentration in Iran). Africa has received rather little, and South Asia almost none of these funds.

*Some trends in AID programs.* One of the features of AID's agricultural credit programs has been the extent of their attention to small farmers. Of the 42 AID country programs, 35 may be said to have a "small farmer bias." This description applies to programs in Taiwan and South Korea where all the farms are small, so that no special small-farmer emphasis was required; but the figure also includes 16 of the 18 programs in Latin America where wide disparities in farm size are usual. This "small farmer bias" does not extend to the very poorest farmers or to landless farm workers, but refers to "viable" small producers—a term to be discussed in the next chapter. By contrast, none of the World Bank's farm credit projects had any sort of small farmer bias prior to 1971, and no more than two percent of its total expenditures to date could be said to have gone into programs with this characteristic.

AID's approach to small farmer credit has been to precede the advancement of capital funds for lending with technical assistance activities which were intended as preparatory, and which then continued along with the loan funds as a supplemental form of assistance. Here again a difference from the World Bank's *modus operandi* is found, one which stems from the degree of emphasis on small farmers and also from AID's practices in the deployment of staff. Generally speaking, it is the small farmers who are considered to be most in need of technical assistance in order to make the best use of credit facilities when these are made available. Further, AID's evolution through its predecessor agencies was one in which technical assistance played an important role from the start, notably in President Truman's "Point Four" program beginning in 1949. AID has typically maintained relatively large resident staffs in its missions in developing countries, in contrast to the World Bank's practice of maintaining a much larger staff resident in Washington which it sends to the field on regular, short-term inspection visits. This latter practice is consistent with the Bank's view of its role as primarily a financial agency, with technical assistance as an ancillary activity. While there has been some convergence of practices in this repect, as the Bank has recently increased its overseas staff somewhat while AID has been cutting its down, the difference in approach remains and has had consequences in the agricultural credit field to be noted below.

Around 1955 AID initiated a number of technical assistance programs related to agricultural credit, following a few earlier projects in Paraguay, the Philippines, Iran and Panama. Most of the new programs appeared in Asia and Latin America. In the 1960s, these programs were increased in Latin America, and also

initiated in Africa as more of its countries achieved independence. The technical advisers were mainly specialists in agricultural technology and in cooperative organization along with individuals having experience in farm credit. The promotion of cooperatives as a vehicle for credit was frequent, especially in the 1950s. Technical advisers, whether hired directly by AID or on contract from their agencies, came largely from: the Farmer's Home Administration (FHA) or its predecessor, the Farm Security Administration (FSA), and the Extension Service (ES), both in the U.S. Department of Agriculture; and from several non-governmental organizations in the cooperative field—the Cooperative League of the U.S.A. (CLUSA), the Agricultural Cooperative Development International (ACDI), and the Credit Union National Association (CUNA).

The practices of these agencies in their work in the U.S. was strongly influential in shaping their programs for AID in the field. The FHA/FSA was a special program for the poor farmers in the U.S., initiated in the 1930s, which had always given close attention to the problems of individual farmers and had extended low-interest government loans to them with considerable supervision over the uses to which the money was put. The ES, on the other hand, specialized in supplying technical information to all kinds of farmers, leaving them to seek credit from commercial banks. The cooperative organizations were, of course, engaged in promoting their kinds of activities which, in the U.S. as in Europe, have been private rather than governmental; some of the U.S. cooperatives have become business-like multimillion dollar operations—unlike any in developing countries. These differing experiences, and the ideologies associated with them, colored the kinds of advice that technicians from these organizations offered to the governments of countries where they were sent to work in AID programs. A slightly different ideological strand was added when AID loan funds began to be supplied in greater volume, in that the people who administered these funds took a somewhat more bankerly approach to loan projects than to technical assistance —though not as "hard" as that associated with the World Bank.

In simplified form, one may say that the FHA/FSA represents a paternalistic approach to poor farmers, implying not only supervisory methods but a notion that interest rates ought to be low. The ES represents the view that farmers can take care of themselves, and that what is most important is advanced technology, which in the extreme could imply the kinds of mechanized farming with elaborate chemical inputs that are found on many big U.S. farms. The cooperative practitioners represent a particular kind of institution building, one in which the patient establishment of institutions conforming to certain forms may—in the extreme—be seen as more important than the short-run results measured in farm production or financial viability. These three strands in the AID presence are described here in caricature: in practice, the technicians were all confronted by conditions very different from those familiar to them in the U.S., and depending on the individuals concerned they modified their views in varying degrees and learned from experience. Some stayed in particular countries or regions for years, and became not only knowledgable but highly committed to the people they were working with. Others remained for shorter periods, either returning to the U.S. or moving from one country to another on tours of two years or so. Some retained to the end the missionary zeal for their specialty which had led them overseas to begin with; others became disillusioned; still others developed new ideas and new commitments; and so on.

AID Missions overseas combined these various specialists in teams, and while many were given considerable autonomy in their projects, or achieved it by force of personality, there was some degree of blending of ideas and a responsiveness to Mission direction and to directives from Washington. Mission directors and their areas of interest changed from time to time, as did the instructions from Washington under various budgetary compulsions and shifts of interest. Emphasis on technical assistance tended to decline through the 1960s; the stress on capital assistance has waxed and waned, along with shifts in "hard" and "soft" approaches in various situations. It would be impossible to do justice in a short statement to all the intricacies, and the ideological rationales, that have been involved in this evolution of AID's development assistance. Suffice it to say that it was complex, that it involved many serious efforts at problem solving, and that by and large it was more decentralized and open to innovative thinking than that in most government agencies or banks.

In the farm credit field, this relatively open decentralized policy has been accompanied by a weakness in the "backstopping" of overseas programs in Washington. In 1952 a position was established for an "Agricultural Credit and Cooperative Adviser," with one assistant and a few occasional-staff members. The first adviser retired and was replaced by his experienced assistant in 1960; in 1961, however, the credit adviser's position was abolished and the adviser went over to the Latin American Bureau; he left AID in 1965. Thus there was no center for supervision or expertise in farm credit programs after 1961 (though this individual's advice was often requested informally until 1965); and even in the 1950s the volume of reports from the field was greater than could be handled by those whose job it was. Thus there was rather little opportunity for the lessons from experience to be accumulated systematically or applied in policy guidance, except insofar as individual technicians with shifting assignments could accumulate their own stores of knowledge for use in their jobs.

This situation may be contrasted with that in the World Bank, where continuity of individuals on their jobs has been much greater, and where a larger Washington staff has been in continual consultation with one another on policy and implementation questions. Bank policies have been more carefully coordinated and subject to clearances, and thus more consistent and also more rigid than those in AID. The Bank has only very recently become interested in small farmers or in unorthodox projects for their benefit, and its staff is rather removed from the "feel" of the field experience that has characterized AID technicians.

*AID's evaluation of its experience.* Prior to the major evaluation effort in the 1972/73 Spring Review, a series of earlier "workshops" were held in which AID technicians in a region and their counterpart officers from developing countries met to discuss common problems. In East Asia such meetings were held in 1956, 1958, 1960, 1965 and 1968, with a larger conference in 1970. Similar meetings were held in Latin America in 1957, 1962 and 1966. In the Near East one seminar with more limited attendance occurred in 1964, but there were no such meetings in Africa; AID credit programs in these two regions were less extensive. Communication of experiences from one region to another, however, was not attempted in this form nor, as we have seen, was it an effective routine in the Washington setting.

A 1964 AID contract with Ohio State University resulted in field research on agricultural credit in Brazil, Colombia, Ecuador and Peru, culminating in a report

in 1968. This contract was then renewed, and produced a series of reports focused on agricultural capital formation and technical innovation in selected countries. Within AID a few general reports on farm credit problems have appeared: by Dale Adams in 1970; Edgar Owens (on cooperatives) in 1971; Jiryis Oweis in 1972. Finally, the official evaluation study by E. B. Rice (on which this chapter is based) was prepared in 1972; it included reviews of all the individual AID country programs.

Commenting on the earlier workshops, Rice states: "The field technicians were not obliged, and failed, to ask the full range of questions concerning credit . . . , including the basic question of what the role of credit should be." Even the actively consulting East Asian group did not try to question the underlying assumptions of their work. Rice notes that some of these questions were raised in the 1968 Ohio State report, and in a 1967 seminar held by SEADAG (a consultive organization supported by AID), but that there appeared to be an inadequate feedback mechanism for bringing such considerations into AID policy formulation. "Many of the small farmer development strategies...incorporated in sector loans and other rural development programs would probably not stand up against a detailed scrutiny reflecting the general concerns of Ohio State." Rice gives an example or two, adding that AID is not alone in this respect among international finance agencies.

As implied by these observations, a feeling was developing within AID that small farmer credit programs were not performing well, and were not accomplishing the results that had been anticipated when they were undertaken. These programs had, in many cases, experienced high rates of default in the repayment of loans, along with operating losses from other causes. In addition to these financial weaknesses, the economic justification of the programs in terms of increased farm production was not usually demonstrated; and too many of the cooperatives promoted in AID programs have died or have proved disappointing in their activities. AID-supported credit programs for medium and large farmers, however, seemed to have done better in terms of financial viability and an image of success than those for small farmers.

Such results had, of course, been reflected in reports from the field, but these turned up one by one in Washington and tended to be seen there as individual observations on unfolding events rather than sweeping verdicts. In any case, the weakness in centralized backstopping, previously noted, meant that field reports often had to be filed away with inadequate attention to the implications they might have suggested. Another element in the situation is that AID technicians in the field tend to believe in the value of what they are doing, in whatever specialty, and to write reports that reflect this belief. For example, if small farmers are observed to be heavily delinquent in repaying loans, this might be interpreted as resulting from: farmers' inability to pay following a poor harvest, and therefore temporary; improper use of loan funds by farmers (by those who believed in loan supervision), for which the cure was more supervision; inadequate technical knowledge (by technology enthusiasts), calling for a strengthening of the extension service; or inadequate cooperative organization (by cooperative promoters), requiring patience and further organizational efforts. Many technicians were not so narrow in their views, but the causes for delinquency in repayment are in fact complex and difficult to ascertain, so that a conscientious report describing a number of possible causes would not necessarily lead Washington to-

ward any clear notion of what ought to be done. And since the effort to help small farmers via credit programs was generally felt to be a worthy cause, the tendency was to keep on with more of the same, tightening a screw here or adding a bolt there.

There were, however, some negative currents of disillusion. The enthusiasm for cooperatives in the 1950s had been declining in the following decade, though not to the point of abandoning all such promotion. The FHA/FSA model of supervised credit had waxed and waned: of the 42 country programs examined by Rice, 22 had featured loan supervision (17 in Latin America, none in East Asia), but only 11 of these had survived in recognizable form in AID's portfolio by 1972. The main reason was that supervision is costly, and where AID and national governments wanted a production impact at the national rather than project level the method is impractical. In addition, some of the AID-financed reports and views originating outside the agency had begun to question, or at least circumscribe, the role of agricultural credit itself. For example, a conditionally negative outlook on credit had been implied in the discussions at the 1967 SEADAG seminar. Many of its participants concluded that the lack of institutional credit was not a bottleneck to the increase in farm production in Southeast Asia at that time, and would not become one unless there were technological innovations available that would require additional capital. Yet such a conclusion, even had it been more widely accepted in AID, raises other questions and would have been an incomplete guide to policy.

In impressionistic fashion, this describes some of the self-questioning in AID that led to the Spring Review and the effort to examine in more detail than before the issues involved in small farmer credit. AID had devoted sizable sums of money and many man-years of work by assorted specialists to the propagation of these programs to benefit small farmers. It is remarkable how many agricultural banks in developing countries had received U.S. aid in substantial volume, and in some cases even owed their existence to U.S. seed capital and U.S. advisers. The results were often disappointing, but it was not clear why. It was not obvious that the effort should be abandoned, nor what should be done in place of what had been tried. The problems of rural development were, and are, receiving increasing priority in AID, as in the wider development community.

The unsatisfactory results in the credit field could perhaps be attributed to the absence of well established methods for achieving rural development generally. This view suggests that credit programs, like other modernizing institutions, could not be expected to produce reliable results until basic developmental doctrines are evolved and applied. Some in AID thought that the 1972/73 Spring Review should be addressed to all the problems of rural development simultaneously, on the theory that everything is interconnected. The prevailing view, however, was that an examination of small farmer credit programs in a wide context would be a more fruitful attempt, less liable to lead to inconclusive theoretical arguments based on diverse assumptions and more likely to produce operational recommendations. The wider purposes and setting of credit programs would not be neglected; but it could be assumed that small farmer credit was one "handle" on rural development, though not the only one, and that it would often prove to be a useful focus for other activities. Thus, the Spring Review was set in motion.

# 2 *Why Small Farmer Credit?*

This chapter will attempt to give broad-brush answers to some fundamental questions: Why should priority attention be given to small farmers in developing countries? What do we mean by "small" farmers? Why should credit be considered an important element in small farmer development? What general objectives could small farmer credit programs be expected to accomplish? The chapter includes a survey of the experience in Sri Lanka which illustrates many of the basic issues. These general questions will necessarily come up again and again throughout the text in one way or another. The answers supplied here are preliminary, intended to establish an orientation rather than to summarize the kind of conclusions which will appear in the final section.

*Why Small Farmers?*

In considering why it is necessary to give particular attention to the small farmers of developing countries, we will begin with the reasons for an increased priority for agriculture in general and go on to the basis for a special concern with the small producers. Neither agriculture nor the small farmer have been rated very high in the operational thinking of most development theorists and practitioners until fairly recently. Rather, the small farmer has been seen as the main representative of the backwardness which developing countries were rejecting in their efforts to emulate the "advanced" industrial countries. The economic achievements in Europe or North America have been widely regarded as synonymous with development, and industry as the key to progress.

The dominant development strategy adopted by newly independent countries in the 1950s, and by Latin Americans, emphasized industrial import substitution. This policy has had negative results for agriculture: the nation's attention and resources tended to be concentrated on urban activities, to the neglect

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Principal Spring Review contributors to this chapter were Godfrey Gunatilleke and associates of the Marga Institute, Colombo, in their report on Sri Lanka.

of farming. Prices and costs in industry tended to be high and rising, while farm prices and output lagged behind for a variety of reasons. Reinforcing these adverse impacts on agriculture was a tendency in many countries toward inflation of the domestic price level along with long delayed and sometimes inadequate currency devaluation. The frequently overvalued currencies depressed farm prices insofar as these were determined in international markets, while favoring the continued import of goods that benefitted chiefly the urban sectors. In various ways the domestic terms of trade were depressed for the agricultural sector, which became less attractive for private investment; and it was also a stepchild where state-administered investments were concerned.

Weaknesses in the prevalent industrial import substitution policies came to be recognized increasingly in the late 1960s and early 1970s. It has become apparent that the lagging development of agriculture is a much more important constraint on national growth than had been realized, whether growth is defined as the general welfare of the population or even in narrow terms of industrial achievement. Agricultural contributions to exports, to domestic food and raw materials supply, and to the purchasing power of a national market for industry are being given increasing priority; and the harmful effects for agriculture of the usual import substitution methods are more widely appreciated. Habits of thought are not being turned around as rapidly as might be desired, but the evolution of a higher priority for agriculture is underway and need not be argued here at greater length.

*Employment.* Problems of unemployment have been rising with increased population growth. The advances in medical science have reduced the death rates in most developing countries today to levels well below those in Western countries at comparable levels of development, while birth rates remain sufficiently high to bring about rapid rates of population increase. Consequently the need for increases in productive employment to keep pace with population growth is much greater in today's developing countries than it was in European countries at an earlier period, and the option of emigration to sparsely populated areas is no longer available. In countries where new land settlement is increasingly limited but where population is growing ever faster, the increases in unemployment in the cities and in rural underemployment are already a serious problem; in most countries they are due to get worse if present trends continue. The timing of the decreasing death rates, in conjunction with the time lag between births and the entry of larger numbers of young people into the labor force, was such that the impact of unemployment has been emerging in a number of countries with unprecedented force in the 1960s and early 1970s. The increasing workforce entrants of the late 1970s and 1980s have already been born.

At the same time that the need for an expansion in productive employment is accelerating, the capital requirements for creating new industrial jobs have been rising—again in contrast with Europe and the United States in the 19th century when capital/worker ratios were much lower. Here, too, the advances in science are much of the cause, but prevalent methods of industrialization have also contributed. Capital-intensive industry developed to meet Western conditions has been emulated in developing countries; labor-intensive adaptations in technology and product mix are not stimulated in the kinds of local markets created by import substitution policies. This has several implications for development priorities.

First, it seems clear that a continuation of past policies in many countries is unlikely to generate productive employment at a rate comparable to the rate of increase in the labor force; new strategies are needed. Second, it is apparent that in countries where the urban population is a small or even a substantial minority of the total, the possibilities for additional urban employment under the most optimistic growth projections are often inadequate to meet the national employment need, even allowing for increases in low-productivity urban service activities requiring minimal investments. A large proportion of the people will continue to live in rural areas in any circumstances, and to find such productive activities as they can. Thus a necessary and important ingredient in any development strategy will be the search for new productive possibilities in the countryside, with agriculture and related activities as the most probable engine of rural economic growth. Third, small farmers are almost everywhere the largest number of agricultural producers, as well as being the majority of the underemployed, i.e., of those employed with low productivity per man-year. Their proportion of national farm output may be less than their proportion in numbers—that is, larger farms usually produce more per man-year than the small farms. But the smaller farms tend to produce more per hectare than the large farms: this is not true everywhere nor in all kinds of farming, but it is true often enough, and for reasons which are of general applicability, that it deserves a place in overall strategic considerations.

The implications of the foregoing are as follows. Given that a relatively high priority should be accorded to increasing agricultural production and employment in future development strategies, a focus on small farmers is: (1) inevitable in some degree, since they are the largest body of producers and have most of the underemployed labor resources to be mobilized; and (2) more productive where land is becoming the scarce resource and labor more plentiful, since they are more likely than large farmers to get high yields per hectare. This last point is reinforced by the consideration that higher average yields have been found on the smaller farms in India and elsewhere despite the lesser use of capital and chemical inputs on these farms than on the larger ones. It is possible, though far from assured, that if efforts to achieve increases of agricultural output are concentrated on small rather than larger farmers, there might be a relative saving in the use of scarce capital and industrial inputs in obtaining given increments in production, due to the greater labor intensity with which they are applied.

However, there are drawbacks to this concentration on small farmers. They are typically using the more traditional methods of cultivation, and are often slower than large farmers to adopt new and more productive technologies, both because of their lesser access to financing and because of a greater risk aversion. As a practical matter, governments have looked to their larger farmers first when they wanted quick increases in agricultural output, since it has been usual that a larger short-run response can be expected from them when innovations or shifts to different crops are involved. So one cannot say without qualification that the smallholder sector is the most promising area for improvements in efficiency or in production levels—indeed there is a short-run probability in the opposite direction. What can be said is that a comprehesive, more enduring effort to raise the level of agricural output and productivity, and to mobilize underemployed rural resources generally, will require far greater attention to small farmers than has been usual in the past. The labor intensity of small-holder farming will more

effectively diffuse the productive employment and incomes, and the potential for higher yields and for economies in uses of scarce inputs should not be neglected. And since small farmers usually represent the largest and least "developed" part of the agricultural sector, their production is the area of greatest potential for improvement in the long run.

*Economic dualism and income distribution.* Another set of reasons for increased attention to a nation's small farmers derives from the dualist quality of development under most import substitution policies. The creation fo a small sector of modern industry, limited in size by its markets and sufficiently monopolistic to allow relatively high profits and relatively high wages to those workers who can organize strongly enough to make demands, tends to permit this group —plus associated officials, owners of real estate, employees of financial institutions, etc.—to obtain relatively high living standards. These are typically far above those of the mass of small farmers, and of the urban service workers who are attracted in from rural areas. We may speak of an elite "modern" sector, and a more backward "traditional " sector. The former group varies in composition by country; in some the large landowners may be prominent members of it (irrespective of the modernity of their farming methods), but not in others; in some the industrial workers may be no better off than street peddlers, but quite well paid in others. Whatever the social composition of the modern high-income sector in particular cases, small farmers are likely to constitute the great majority of those who remain outside of it.

For a variety of reasons which cannot be discussed further here, the dynamics of prevalent growth processes in many countries have resulted in an increasing concentration of the economic gains from development in relatively few hands, while others are little affected. Indeed, the magnitude of population increases has caused the lower 40 percent of income receivers to experience falling average real incomes in some countries, despite rises in the national average. Too little is known about the facts of life among the poorer strata of most countries to be sure of the statistics: only in the 1970s has the subject become a matter of active interest among development economists and international finance agencies, and there is much to be learned about the facts and the possible remedies. But the interest and the feeling of urgency are growing, and are certain to influence the thinking on development strategy in many quarters. Among others, President MacNamara of the World Bank has been urging that greater emphasis be given to the lower income groups.

In the meantime, the political impacts of dualistic realities have been felt, with or without benefit of statistics, and have been reflected in the concerns of governments in developing countries. Political viability and stability are obviously involved. Not only the political claims of the poor in specific "traditional" areas, but the moral and ideological concept of social "equity" have found expression in various forms. With respect to small farmers, two of the leading forms of expression of this desire for equity have been the initiation of special credit programs for small farmers, and the promotion of cooperatives among them. The efficacy of these activities will be dissected at length below; for the present it will suffice to note that a concern for equity, as distinct from development *per se,* has been an important reason why such programs have come into existence and found the political support that is necessary to obtain government funds. While much of the discussion that follows will be couched in

economists' terms, and will refer to development and economic growth as the assumed objectives of developing countries, it will be well to remember that a concern with equity and its political ramifications will often be the driving force that brings small farmer problems to the attention of governments.

*What Is a Small Farmer?*

Up to this point the term "small farmer" has been used rather loosely. In common parlance, and in government statistics, a small farmer is usually thought of as one whose farm is below a particular size measured in acres or hectares. This presents a number of difficulties for economic analysis. Farm sizes are found on a continuum, and any attempt to draw a line between large and small is necessarily arbitrary; for some purposes a rather large unit would be an appropriate dividing line, for other purposes a smaller unit, and for still others multiple categories. The income obtainable from farms of given sizes varies greatly with the type of land and the type of farming. And in international comparisons these variations will be even greater than within one country, not only because of the differences in soils, climates, and farm practices but because of different ownership patterns and densities of settlement. The owner of five arid acres in the Andes mountains may be a poor subsistence farmer, while an owner of the same sized property in Bangladesh with access to irrigation would be a wealthy man in his village. What is needed is a criterion for size of farmer that relates to his overall resource position in his society.

The formula adopted for the Spring Review on small farmer credit, and presented in a diagram at the start of each workshop, emphasized farmers' total resources and the profitability of their operations without reference to acreage. Its purpose was to define the types of farmer for whom small farmer credit programs were appropriate, and to exclude the others from the discussion that was to follow. No distinction was made between owners and tenants; the unit was the farm operation. The typology was as follows:

*Type 1:* Farmers with large or medium operations and ready access to bank credit.

*Type 2:* Farmers with small-scale but reasonably profitable operations, eligible for bank credit (assuming physical access to banks).

*Type 3:* Farmers with the potential for establishing profitable operations if greater access to technology, inputs and markets at fair prices were possible; but not now eligible for bank credit.

*Type 4:* Farmers who could attain profitability, given access to technology, inputs and markets, but only when provided with special incentives; this implies a need for subsidization for an undefined period.

*Type 5:* Farmers with such poor resources that even with improved access to the factors listed they could not develop a viable farm enterprise capable of supporting a family without a permanent subsidy or substantial off-farm income. This group would include landless laborers and part-time or garden-plot farmers.

It will be noted that all the farmers except type 1 are "small"; type 2 farmers, however, do not need special credit programs. At the other extreme, type 5 farmers could never expect to get by without subsidy even if credit were given to them on highly concessional terms. The credit programs emphasized in the Spring Review were those for farmers of type 3 or type 4. Both are "potentially viable," but the type 4 farmers will need subsidized credit programs while type

3 farmers will not. The word viable was used as a key term in the exposition: types 1 and 2 were considered viable; types 3 and 4 were potentially so; type 5 farmers were, in effect, non-viable; and the implied purpose of credit programs was to produce viability where it did not exist but had a chance of being created.

There was a good deal of workshop discussion bearing on the viability concept, some of it rather confused because the notion of farmer viability was not entirely clear. At the minimum, it would exclude farmers who incur losses and build up debts; as applied to credit programs, it implies cash profits from farming sufficient to enable repayment of loans with interest; and as used in the diagram, viability implies that a farmer is eligible for a bank loan, excluding all those who are not. Clearly these are three very different levels of inclusion and exclusion. As used by the U.S. participants in the workshops, the image of a viable farmer was that of a man standing on his own feet and looking the world in the eye, modernizing his farm practices, improving his living standard—that was the sort of fellow one wanted to create with the right kind of credit programs. The non-U.S. participants did not use the word viability as freely, and some objected privately to its implications. Speaking of the diagram, one of these pointed out that in his country the great majority of people would be defined as "non-viable" farmers (types 3, 4, 5) and a great many had no hope of "viability" (type 5); but the notion of a largely non-viable nation seemed to him absurd. He noted that these people have been getting along as they are for years, and they need no economic assistance for their continued survival.

To some extent these unresolved problems of definition were matters of intercultural misunderstanding, but not entirely. In the dictionary, "viable" has two meanings originating in biology: capable of living, and capable of growth or development. If "capable of living" is translated into the capacity for economic survival, then the viable farmer could be anyone who was not in danger of starvation or bankruptcy and received no economic assistance; this could include the lowliest subsistence farmer. Such an interpretation would make the distinctions in the diagram meaningless and support the objections to it. If "capable of growth or development" is given an economic interpretation, the diagram's use of "potentially viable" does acquire a (redundant) meaning, but it raises questions of how much growth and development are involved and what standards are envisaged. The implication that a potentially viable farmer will become eligible for bank credit in accordance with customary banking practice is an arbitrary view that departs from the original meaning of the word. Many farmers who are unlikely to qualify for bank loans could be considered viable in that they are capable of growth and development to a degree that should be of interest to developing countries. What had crept into the diagram was an administrator's meaning for viability: viable farmers were defined, in effect, as those who can be served by viable credit institutions, i.e., institutions which can survive or grow without economic assistance.

This excursion into semantics is justified by the importance attached to the concept of viability in AID and elsewhere as an expression of the purpose of small farmer credit programs. It is a worthy purpose if adequately defined. We will return to the subject in Chapter 16, where it is argued that farmer viability ought to be treated in a more flexible way. The farmers who survive, and who can develop if given institutional credit, may be found at many economic levels; and new kinds of viable credit institutions to serve them may be developed. The

challenge is to find ways of doing this; it is not necessary to accept banking practices as immutable. For the present we may conclude by noting that a small farmer can be defined as one whose resources are too small to qualify for existing bank credit. He may or may not have the appropriate growth potential as a farmer; but if he does, a way of reaching him sould be found.

*Why Credit?*

If priority attention is given to small farmers with growth potential, what reasons are there for supposing that credit assistance is a pertinent vehicle for their development? We may assume that additional resources are needed by the target group. Financial credit is the most universal and flexible transferable form of economic resource: with cash obtained via credit one can buy anything that is for sale. While goods and services could also be transferred to desired parties by administrative allocation, the transfer can be more easily effected by credit and with much greater freedom of choice and efficiency. The social efficiency involved depends on the ability of the credit receiver to judge his particular needs and act on them, as compared to the capabilities of an allocation mechanism, and also on whether the credit receiver's motives coincide with what is socially desired. For those who believe in the efficacy of market forces and individual rationality to serve social ends, the efficiency of transfer via credit is self-evident. For those who have some doubts about this efficacy, conditional and guided credit is still likely to be more efficient than pure allocation attempts. For those whose doubts are more pervasive, nothing short of a wholly planned economy will do; but it may be questioned whether such methods can succeed very well in most developing countries. In any case the total planned allocation of resources is alien to existing institutions in non-communist countries today, and we will not be dealing with the communist alternatives in this book.

It must be recognized that the normal flows of credit through banks and related institutions have been subject to a number of inhibitions that have worked to exclude most small farmers. Financial resources provide opportunities for productive development, and small farmers have been far more limited in access to these opportunities than other sectors. They have been supplied with credit largely by informal lenders, the inadequacies of which are covered in later chapters. Formal financial institutions are a very powerful force in developmental growth; almost everywhere they have concentrated their favors on trade, industry, and large-scale agriculture. But institutional credit can be redirected by new policies.

Financial resources, however, are only part of the answer. Not only credit but a number of other things are needed for small farmer development, of which the actual availabilities of new technologies, inputs, and favorable product markets are some of the more important. In their absence, credit can be useless. The next chapter will outline in general terms the conditions under which credit can succeed in stimulating small farmer production sufficiently to cover the costs of its provision. Too often, the evidence suggests, these conditions have not been met in small farmer credit programs. However, if one starts with the premise that the solutions to small farmers' production problems must be actively sought, and that a number of ingredients must be applied together, then the failure of one of these to meet with success when other ingredients are lacking is no reason to refrain from using it. The question "why credit?" can be answered in summary

terms by noting that it has no advantages as a means of transferring resources to a relatively neglected target group, that it can lead to productive gains when conditions are right, and that its absence is sometimes a consequential bottleneck to increased production.

*Program Objectives*

The two principal objectives of small farmer credit programs are considered here to be (1) an increase in agricultural production, and (2) an increase in social equity resulting from improvements in the small farmers' incomes. Such income gains may be regarded as the avenue to greater equality in national consumption levels and a more just distribution of economic opportunities. A number of other potential benefits to farmers from credit program activities could be cited: improved nutrition, release of farmers from dependence on extortionate moneylenders, a stronger position in the markets, increased self-respect and hope for the future, improved social status and political influence, modernization of outlook, access to wider educational and occupational opportunities for the farmer's children, etc. We assume that for the most part economic progress is necessary, though not sufficient by itself, for the achievement of these other developmental aims. As between production and equity objectives there are, of course, certain areas of conflict which will be dealt with; both of these goals, however, are considered important.

There are some ways of pursuing the objectives in question that will not be considered here. This is a book about credit for small farmers; its subject is not land reform, nor socialism, nor political change. Some people believe, for example, that in certain countries substantial equity is impossible in rural areas without a redistribution of land from large holdings to small owners (thus turning over all agriculture to small farmers). Here we will be concerned with the use of credit by small operators of farms, whether they are owners or tenants. Other people believe that equity should be achieved under a socialist system which organizes farmers into large collective operations (thus eliminating small farmers). But we are not concerned here with large farm operations, whether they are state-owned, cooperatively owned, or private plantations. There is no need to express value judgments on land tenure questions; it is only necessary to state that the subject for discussion is small farm operators, of whom there are many millions in all parts of the developing world.

When a book is devoted to small farmer problems, this might be seen as implying value judgments in favor of the small farmer's way of life. Many U.S. agricultural policies have been geared to the preservation of the family-sized farm, which some feel is the source of Jeffersonian civic and democratic virtues —a view which others find romantic, and which seems not to be widely shared in the developing world. Such a value judgment is not necessary for taking an interest in small farmer problems. Yet it is conceivable that small farming operations are by their nature inefficient, and that the only hope for increased productivity in agriculture would be a shift toward large-scale organization of activities—however owned. But this is not a necessary or generally accepted conclusion, and small farmers in many parts of the world have proved that they can become efficient producers. Small farmers have low productivity for a number of reasons other than size. Some aspects of farming may include inputs for which a minimum scale of efficiency is pertinent, as for example, a tubewell, or a tractor. But

it is possible to organize joint activities among independent farmers to deal with these items without subjecting the whole farming operation to collective organization. When the small operator can obtain access to technology and favorable markets, and when his situation does not preclude the operation of economic incentives, then he should be able to produce more. We must acknowledge that this book and its conclusions and recommendations do rest on an assumption of faith in the growth potential of small farmers. But there is ample reason to believe that small farmers can increase their yields, and in many circumstances more efficiently in terms of resource inputs than the larger producers.

Credit programs should not be expected by themselves to reshape society into new and more productive or equitable forms; but they can assist agricultural production, and they can help the lower-income producers. They cannot do these things quickly, or with assured results. However, there is reason to believe that they could accomplish a good deal more than they have in most countries in the past, and that there are ways of increasing their impact which deserve a much wider application than they have so far been given.

*The Example of Sri Lanka*

It is much easier to formulate a clear definition of objectives than it is to discern the best ways of attaining them in the complexities of conditions found in particular societies. To illustrate the kinds of questions that arise, we may look briefly at the experience of small farmer programs in Sri Lanka (formerly called Ceylon), using material from the Spring Review report by Gunatilleke *et al.* Among developing countries this is one of medium population (13 million) and a lower-middle per capita income (about $150 a year), but in other ways it is more unusual than typical. It has a long history of official attention to small farmer problems, and to the equity aspects of economic policy—though production goals have not been neglected. It is not cited here as an outstanding success story, nor as an example of failure. Rather, it was selected because its experience exemplifies some of the kinds of problems, and the ambiguities in interpreting results, that are encountered when a government sets out to improve the lot of its small farmers in a whole-hearted way—accepting in large part the very objectives that have just been defined.

An important feature of Sri Lanka's approach to small farmer problems has been its reliance on cooperatives, not only as a vehicle for credit extension but in other ways (also for dealing with non-agricultural groups). Such a reliance was facilitated by colonial history: in the 1920s and 1930s there had been a cooperative movement reaching perhaps 10 percent of the farmers (similar to that in British India); then in World War II, food shortages and distribution problems led the British government to install a colony-wide network of cooperative organizations to handle supplies. As a result there was an unusual cooperative infrastructure functioning at the time of independence in 1947, which has continued through various reorganizations to serve large segments of the population. At all times there have been some cooperatives that functioned poorly or not at all, and others that failed to reach many of the farmers in their areas; but over time the performance of cooperative societies has improved, though not uniformly. These societies and their associated banks and marketing bodies have always given the government a means of access to the majority of its small farmers.

Agriculture in Sri Lanka is dualistic: about half the cultivated area is planted in perennial tree crops—tea, rubber, coconuts, the country's main exports—mostly owned by medium or large corporations, though there are some smallholders too. The remaining farm lands have been heavily concentrated in rice production, along with auxiliary vegetable products (these are principal products in a few dry areas) plus some tobacco. Small farmer programs have focussed on the rice growers, who are predominantly small owner-operators. Of the 800,780 owners of rice lands in 1969, 96.4 percent had holdings of under 5 acres (2 hectares) and these account for 76 percent of the area; less than one percent, with nine percent of the area, own more than 10 acres. Some 220,000 owners have their land worked by share-cropping tenants; most of these are very small owners with other jobs rather than big landlords. The tenure structure has been quite stable since 1947; and under a 1958 law tenants have a protected status if they cultivate (their crop shares are 75 percent).

Increased production of rice, the nation's staple food, has been a basic aim in small farmer policies; crop diversification into more vegetable growing has also been attempted, with some success. Sri Lanka is dependent on rice imports. As a consequence of balance of payment difficulties, beginning around 1960, the attempts to raise domestic output were stepped up. A wide range of policies has been used to stimulate rice production: package programs involving tied credits for fertilizer (supplied at about half its external cost) and other inputs; the increases in the sown area and in double cropping as a result of increased irrigation; guaranteed stable farm prices (with large subsidies to keep consumer prices low); new rice seeds developed in local research stations; a substantial effort to develop the extension service and improve cultivation practices, and to supervise and elaborate the services to farmers from their cooperatives. Government resources were extensively invested in all these activities.

Over the period from the early 1950s to 1970 the production of rice nearly tripled; yields in bushels per acre per year grew from 19 in 1953 to 44 in 1970; production per unit of employment rose from 58 bushels to 116 in the same period; and in the same years the national crop intensity increased from 1.07 to 1.27. Annual figures for sown area, output, yields, and fertilizer use are shown in the table below. These figures, plus the increases in output of onions, soyabeans, chillies, etc., demonstrate a considerable success in raising physical production, especially in the 1960s. This in turn indicates a general increase in small farmer incomes which cannot be well documented, though it seems to be borne out in a few cost/income surveys for small samples. Another indication of rising farm incomes was the growth of savings deposited in Rural Banks, established in 1964, where deposits increased from Rs. 202,000 in early 1965 to Rs. 17 million by late 1970.

Gunatilleke and associates, in their report, express moderate satisfaction with the progress in production, but they point to a number of persistent problems and inefficiencies in the small farmer programs which need to be overcome. A great many specific criticisms are made of the operation of the cooperatives where they see a need for more skilled and disciplined management, of the coordination of activities of government departments, and particularly of the working of government credit schemes. They attribute the gains in rice production in substantial part to the increased use of modern inputs, notably fertilizer, for which credit was required. Although fertilizer use had been growing at a rate of

Table 2: Sown Area, Production and Yields of Rice; Fertilizer Use; and Population in Sri Lanka, 1952-70

(Index numbers: 1952-54 = 100)

| | Sown area[a] | Production | Yield[a] | Fertilizer | Population |
|---|---|---|---|---|---|
| 1952 | 101 | 106 | 105 | 72 | 97 |
| 1953 | 91 | 80 | 92 | 92 | 100 |
| 1954 | 109 | 114 | 102 | 136 | 103 |
| 1955 | 117 | 131 | 111 | 173 | 105 |
| 1956 | 102 | 99 | 102 | 204 | 109 |
| 1957 | 105 | 115 | 111 | 244 | 112 |
| 1958 | 120 | 134 | 118 | 380 | 115 |
| 1959 | 115 | 133 | 119 | 291 | 118 |
| 1960 | 127 | 158 | 124 | 419 | 121 |
| 1961 | 127 | 158 | 123 | 549 | 125 |
| 1962 | 133 | 176 | 129 | 679 | 128 |
| 1963 | 135 | 180 | 129 | 867 | 130 |
| 1964 | 137 | 185 | 132 | 606 | 134 |
| 1965 | 126 | 133 | 117 | 584 | 137 |
| 1966 | 140 | 167 | 122 | 762 | 140 |
| 1967 | 142 | 201 | 141 | 1214 | 143 |
| 1968 | 151 | 236 | 159 | 1241 | 147 |
| 1969 | 148 | 241 | 172 | 1231 | 150 |
| 1970 | 162 | 284 | 176 | 1297 | 153 |

Source: Ministry of Agriculture, Sri Lanka (from Gunatilleke, p. 141).

[a]The sown area measure counts twice the areas double cropped; yield represents output per crop. Thus, yields in the table increased less than output per acre per year, mentioned in the preceding paragraph, due to increased crop intensities.

12.5 percent annually, it was still only about 33 percent of recommended dosages on a national average by 1970. And government credits were reaching too few of the farmers for optimum results.

There are several ways of estimating how many farmers used government credit, and how many should have: the report concludes that some 35-45 percent of rice farmers were reached in the peak years of credit extension, which may be 50-60 percent of those in need of such credit.

A major reason for failure to reach more farmers was a persistent difficulty experienced in obtaining repayment of loans, and the consequent denial of new loans to individuals or groups responsible for defaults. Periodically policies were reviewed, and credit extension was reorganized in one way or another. During the 1960s, the pressures to increase the use of farm inputs via credit extension mounted, but so did the defaults and the subsequent credit curtailments. Rice production and yields were raised, but at a heavy cost in capital erosion. A brief resume of this experience is the following.

*Period I, 1947-53.* Cooperatives managed by the Land Commissioner; denial of loans to defaulting individuals; annual credits rose from Rs. 4.4 million in 1947/48 to 15.9 million in 1952/53; overall repayment rate was only 59.8 percent, with no improvement in trend.

*Period II, 1953-63.* Department of Food Supply (renamed Agrarian Services in 1957) takes over cooperatives; group responsibility for defaults—new loans were denied to defaulting cooperative societies rather than individuals; annual credits grew from Rs. 11.7 million to a peak of 21.9 million in 1956/57, then fell off to 10.7 million by 1962/63, as more societies became disqualified; overall repayment rate was 95.6 percent, with no trend.

*Period III, 1963-67.* New drive to increase credits; return to individual responsibility for defaults; maximum permissible loan values were increased; sharp increase in annual credit to Rs. 34.6 million in 1963/64, then 27.6, 28.1 and 32.3 million in succeeding years; overall repayment was 56.2 percent, with a sharp drop in 1966/67.

*Period IV, 1967-71.* Major reorganization under New Agricultural Credit Scheme; waiver of old debts; large increase in guaranteed rice price; another sharp increase in annual credit to Rs. 72.7 million (rice loans only) in 1967/68, falling to 55.6, 50.7 and 35.8 million; repayment rates fell from 80 percent in the first year to 50-60 percent in the third and fourth years.

The growing frustration of government efforts to maintain repayment obligations while using the credit vehicle to serve production purposes is evident in these figures. The lax policy of Period I was tightened in Period II, when group responsibility for defaults helped to maintain repayment rates but blocked the extension of new credit. The reforms initiated in periods III and IV moved out the loans initially, but revived the default problem with growing severity after each new start. In 1971 a major study of defaulters was made; another reorganization of cooperative activities occurred; and it was decided that all rice sales from farmers' cooperatives should be channelled through a new government marketing board. This last was done in part to assist the recovery of money due to the government by deductions from the value of rice sales. This move, however, was followed by a further reduction in loans extended, which were Rs. 29.8 million in 1971/72 and 27.0 in 1972/73, with repayments still in the 50-60 percent range.[1] Repayment problems evidently have not been overcome, and cooperative credit still fails to reach most producers.

Looking at the results of the rice program from the equity standpoint, however, there can be no doubt that it has contributed substantially to raising the relative position of the low-income producers. President MacNamara of the World Bank has cited Sri Lanka as one of a very few developing countries where the average real income of the lowest 40 percent of income receivers has been growing faster than the national average.[2] Other factors contributing to this result were low-cost rationed foodstuffs for the urban and rural poor, land reforms on tea and rubber estates, and highly progressive, well-collected personal and corporate income taxes. The income shifts toward the lower strata, and from urban to rural areas, have meant noticeable improvements in rural diets, clothing, and education—Sri Lanka has remarkably high percentages of its population in both primary and secondary school, given its per capita income level. Supporting the policies behind these economic priorities has been a political system in which, unlike many countries today, national parties have moved in and out of office in accordance with regularly held elections, and members of parliament are highly attentive to the interests of their constituents—the great majority of whom are small farmers.

At the same time there are some very unfavorable aspects of the economy of

Sri Lanka which preclude its being cited as a model for others to emulate. Balance of payments troubles have been endemic, and except for a brief recovery in 1967 have been getting progressively worse since 1959; the severe impact of high oil prices in 1974 was only the latest blow. While physical productivity in the export crops has been improving quite well, their world price trends have been adverse; but new export products that could have been introduced were not. Both foreign exchange and budget funds have gone disproportionately to inefficient state enterprises which operate at heavy losses. Industrial growth has been slow, and urban unemployment severe and growing. Local entrepreneurship and foreign investment have been discouraged by taxation and other policies. Manufactured consumer goods have been getting increasingly scarce, inflation has speeded up, and even food supplies have recently been reduced by foreign exchange constraints.

The question that needs to be asked here is whether or not such economic weaknesses were attributable, directly or indirectly, to the high priority accorded to small farmer development in the evolution of policies. The case of Sri Lanka is susceptible to interpretations in either direction. On the one hand, the largest sources of unrewarding absorption of foreign exchange and budgetary resources were the state enterprises in other fields, not the agricultural development programs, even if the latter were wasteful in some degree. The failure to develop new exports resulted from an inward-looking policy that could have been changed without hurting the small farmer program—indeed new agricultural exports could have been promoted. Thus, direct causes of weakness were not necessarily related to the particular priority in question, and without the increased rice production, payments deficits would have been worse.

On the other hand, there may have been indirectly related factors. The attention to poor farmers was associated with ideological tendencies that also included a hostility toward private entrepreneurs, and to foreign investments, and favored government management or ownership of economic activities along with highly progressive direct taxes. These policies were among the causes of weakness, though they were not the only ones; and they do not in all cases lead to the same results—in other countries somewhat similar policies have had a different outcome. In principle, a priority for the development of small farmers may be associated with many different policy and ideological mixtures; yet the kind of association noted here is not unusual in developing countries today, and it has a bearing on the sources of political support that may be available. Reliable political allies will be needed to advance the small farmer's cause, and they may have to be accepted on their own terms; economic policies are not established and enforced in a pure intellectual environment.

However, we do not intend in this book to analyze political environments, or to discuss political tactics in more than an occasional way when they clearly impinge on small farmer credit. Earlier in this chapter it was asserted that new economic strategies giving higher priority to small farmers are needed in many countries; in the relatively pure intellectual exploration which follows, we will pay considerable attention to administrative problems, but not try to suggest the means of mobilizing political support. In the final section, however, there will be a discussion of overall strategies and policy combinations which does lead into questions of more general ideology.

The evolution of Sri Lanka is in process, and its future may be different from its past. This nation's experience with small farmer credit reveals some of the strengths and weaknesses of a strongly espoused and continuing program under-

taken in particular ways. The problems are not unusual; for example, the reluctance of farmers to repay debts to the government is found in many parts of the developing world. Elsewhere, as in Sri Lanka, the effort to improve methods of farming and the effective management of credit, marketing, etc., among large numbers of poor, ill-educated and tradition-minded producers is by its nature a slow-moving, demanding task. But it need not be assumed that such an endeavor must conflict with progress in a nation's overall growth rate. A few countries, of which South Korea and Taiwan are outstanding cases, seem to have been able to give effective attention to their small farmers while maintaining vigorous economic growth rates, and there is much to be learned from their policies. But the full array of ingredients needed for such a positive overall outcome goes far beyond what will be covered below.

*NOTES*

[1]Figures from the 1973 *Annual Report* of the Central Bank of Ceylon, p. 44.

[2]Robert T. MacNamara, "Address to the Board of Governors," Nairobi, Kenya, September 24, 1973, p. 12.

# Part 2
# The Role of Credit

Chapters 3 through 7, comprising Part 2, each originated as a Spring Review analytical paper. The authors of the papers not only emphasize different themes but also express views that differ from one another. These chapters should be read as statements by protagonists of several positions that bear on the role that small farmer credit programs can or should play in rural development. In all other chapters, however, the text should be read as essentially the statements of the author.

# 3 *Conditions for Success of Small Farmer Credit*

In idealized form, the scenario for a public sector program of credit for small farmers goes as follows: the government or central bank loans money to an agricultural bank which in turn relends the funds either directly or through cooperatives to small farmers. The farmers use the funds to purchase productive inputs such as fertilizer, seeds, pesticides, etc., which are combined with family labor to produce more output. The additional output is sold and the proceeds are sufficient to repay the loan and leave the farmer better off. The payments received from the farmers by the agricultural bank are sufficient to regenerate lending capacity, to cover administrative costs and to pay the interest on the government loan. Such a program consumes no resources; the money committed simply constitutes a revolving fund. The loans are repaid and the interest charges are sufficient to cover costs and any defaults.

Yet experience, as shown in the Spring Review country studies, belies the model. There may be no increases in agricultural production following the credit program in many cases. And, because of a high rate of default, the funds pledged by governments to agricultural credit do not regenerate themselves; nor does the interest received cover costs. Somewhere between model and reality something often goes wrong.

For the success of a credit program more than money is needed. There must be a new technology, markets that can supply additional inputs and abosrb additional output, institutions willing to lend to small farmers on terms the farmers consider atrractive, and, perhaps most important, farmers willing to borrow, to invest and to repay loans. If these stringent conditions hold, a program of public credit for small farmers will lead to an increase in the value of output, which is the principal benefit to a national economy that can result from such a program. Whether the credit program is then justified depends first, on whether such benefits will exceed its costs, and second, on whether the costs of alterna-

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This chapter was adapted from a paper by Millard Long of The Development Advisory Service, Harvard University, Cambridge, Massachusetts.



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tive programs for producing comparable results do not indicate that such results could be obtained at lower cost by other means.

*Credit as a Constraint on Production*

Formerly it was believed that a shortage of capital was a constraint on the productivity of small farmers. Today most of the work on agricultural development supports the view propounded by T. W. Schultz[1] that in traditional agriculture capital is not a significant constraint on the output of small farmers. (This refers to the agricultural sector as a whole; individuals may have insufficient capital.) Over time, farmers in traditional settings are thought to have acquired amounts of capital that are consistent with their technology, their holdings of land and capacity for labor (this thesis will be discussed further in the next chapter). Thus in the absence of new techniques the proceeds of public loans will be used primarily to finance non-productive expenditures.

Technical change, however, must be translated into economic opportunity if it is to lead to increase in output. The new techniques or crops must be sufficiently profitable to overcome the small farmers' conservatism about risky new ventures. Profitability depends upon both the availability of inputs and the farmer's access to adequate markets for sale of the additional output. A credit-financed expansion in the demand for inputs not matched by additional supplies will only produce a rise in prices, not an expansion in output. Further, any fall in the price of the product in response to additional output will lower the profitability of innovation to the farmer. In many markets, for example, new grain varieties with high physical productivity sell at a discount, partly because they are not considered by consumers to be as tasty as traditional grain, partly because the absence of adequate infrastructure makes marketing additional output difficult or costly. The adverse impact of markets on adoption of new practices is mentioned in a number of country studies—Ecuador (Guzman), Ghana (Goodwin and Selley), India (Hendrix), and Malaysia (Wai and Hoover). In the end, it is the economic and not the technical potential which determines profitability, and that in turn depends upon the adequacy of input and product markets.

In addition to profitability as an objective criterion, there is a more subjective dimension involving the small farmers' interpretations of the conditions they face. Penny[2] examines the failures of many government credit programs for small farmers to expand production. He cites several reasons, but his major point is that the attitudes of peasants in traditional agriculture militate against their using credit for productive investment, a view he backs with evidence from North Sumatra. Indeed, "they (peasants) also feel that debt is something to be avoided, but if the government wants to provide cheap credit they are usually willing to take the handout " (p. 44). However, he argues, they have the potential to finance productive investment, and will do so once their objective becomes increased production.

Reports from Africa and Latin America point to similar conditions. Roberts, in his Spring Review study of Zambia (Volume IV, article 12) states: "Certain conclusions can be drawn from the evidence given above. Firstly, the constraints to innovation itself are not of the type that would be overcome by providing the cultivators with funds, for shortage of money is not an immediate constraint. Clearly what is needed here is an educative process, with regard both to the po-

tential commercial nature of farming and to the profitability of innovation." From Latin America, Nisbet[3] in analyzing the credit program in Chile, and Miller[4] and Tinnermeier[5] in separate reports on the Peruvian scheme, conclude that the availability of credit has not been a major constraint on output.

In order that a credit program may lead to greater output, there must be a desire on the part of farmers to invest more capital. Such a desire in a group of small farmers results from the realization that there are profitable investments which they cannot undertake with their present holdings of capital. Such opportunities for investment usually arise out of a change in agricultural technology or the possibilities of a new product. Some new technologies, to be sure, require no additional capital: Lowdermilk (Vol. XIV, article 2) shows that the availability of credit was not important for the adoption of new wheat seed in Pakistan because the new seed cost little more than the old. However, for best results the new seeds must be combined with other inputs including fertilizer and water and the package of inputs together did require more capital. In general, to take full advantage of most new agriculture technologies will require at least working capital if not more permanent investment.

*Sources of credit.* In most developing countries informal private lending is a far more important source of funds for farmers than credit from public institutions. In only a few countries does public credit exceed 20 percent of outstanding agricultural loans. In addition, household savings, even among small farmers, is probably the most important source of financing for new investment. Thus, many small farmers have been able to take advantage of new practices without access to public institutional credit.

The adoption of new technologies by farmers of different size using different sources of financing has been most extensively studied in India and Pakistan. Malone[6] found in his study of the Intensive Agricultural Development Program (IAPD) in India that the new technologies had been adopted by as many small farmers as large ones, and with the same levels of success. Overall, however, there was a much lower participation rate of the smaller farmers in the IAPD program. Hendrix (Vol. X, article 6, part 1) concludes that in India availability of credit was not a constraint on small farmers raising new varieties of wheat. For all inputs except tubewell water, Gotsch[7] reports similar findings for Pakistan—small farmers as well as large are using the new inputs regardless of credit conditions. Lowdermilk, however, in his study of the Pakistan Punjab (Vol. XIV, article 2) presents evidence that private financing is inadequate. Seventy-five percent of farmers reported funds insufficient to use the desired amount of fertilizer, with the percentage as high as 81 percent among the smallest farmers. It would appear that in both India and Pakistan an appreciable number of small farmers without access to institutional credit have adopted new technologies, though perhaps at a less rapid pace than larger farmers; but it is not clear to what extent the lack of credit was an obstacle to other small farmers.

Researchers working on Latin America report cases where the access to credit clearly does affect agricultural practices. Rask's study[8] of a sample of farms in Southern Brazil, for example, shows that the larger farms used significantly more credit and more modern inputs per hectare. (In another paper on the same program, however, Rask and Sorenson[9] concluded that while the relevant credit scheme did increase output its benefits did not cover the program's social costs.) Colyer and Jimenez[10] examined use of supervised credit by farmers in Colom-

bia: they attempted to match a sample of farmers in and outside an institutional credit program. Those involved in the program, they found, used more fertilizer, pesticides, etc., than those who were not. We may conclude that if small farmers have access to public credit it will almost certainly speed their acceptance of new, more capital-intensive production techniques. Without credit, some farmers will not adopt the more costly procedures; others will adopt the new techniques but only more slowly.

*Institutional Problems*

Given that lack of credit can be a constraint on small farmer output, it should be recognized that a good many of the existing public credit institutions lend rather little of their funds to small farmers. Such institutions are under various pressures which cause them to lend disproportionately to larger farmers. Among these pressures are those to keep administrative costs down, to avoid default, and to use credit to increase production. It is certainly true that administrative costs become a larger percentage of loan value as the average size of loans falls, especially when loan supervision is undertaken. In addition, there is widespread belief among credit agencies that the larger farmers are less likely to default, (which may be questionable), and are also more likely to adopt new technology. Furthermore, given the widely prevalent upper limits on interest rates, credit agencies frequently cannot cover the unit costs of their loans to the smaller farmers. Because an inability to cover costs and a high default rate are considered the hallmarks of a poorly administered credit program, credit managers tend to keep their loans to small farmers to a minimum in order to meet the criteria by which they are judged. Sometimes only larger farmers can provide the land titles that may be required as collateral. And larger farmers, because they are much better connected with loan officers, can often exert the personal or political pressure needed to corral available public funds which are too limited to reach all would-be borrowers.

The interest charged on public sector credit is usually well below the rates charged by commercial lenders in the private informal sector, though above the rates charged by friends and relatives in most societies. Aside from the interest rates, other terms offered by public sector agencies tend to be less attractive to small farmers than those offered by the private lenders. Timeliness, absence of red tape, duration of loans, flexibility in repayment, and absence of collateral requirements are often cited as advantages of private loans. Country papers indicate that in some public programs farmers must bribe officials to get loans. Nisbet[11] in a survey of attitudes among farmers in Colombia found that, despite the higher interest rates, more preferred to borrow from the moneylenders than from the banks: their complaints were that institutional programs involved too much red tape, were too slow, too rigid as regards repayment, etc. In a detailed study of the "true" cost to the farmer of official credit in East Pakistan, Shahjahan[12] concluded that a combination of application fees, travel and entertainment costs, and loss of working days in getting loans made public credit as expensive as private borrowing. Nehman reached the same conclusion in his 1971 study in southern Brazil.[13]

While some public credit programs are very popular with farmers, the evidence indicates that many are not. In order to insure that small farmers get the credit, and on reasonable terms, it may not be sufficient to start a new credit or-

ganization with a mandate to lend to small farmers; in a number of countries it may require more fundamental changes in the operations of the credit bureaucracy to prevent the funds from being absorbed by a few powerful men in the community. This, in turn, may be next to impossible in some countries without changes in the rural power structure.

*Small Farmers' Use of Funds*

Even when there is an opportunity to invest, some of the funds borrowed from institutions will be used by small farmers for non-productive purposes. Supervision of loan uses, and the provision to farmers of vouchers for obtaining inputs rather than cash payments, can reduce the use of borrowed funds for consumption. But, even with supervision farmers still have considerable flexibility in the use of money, and vouchers may be sold for cash to other farmers. Only the existence of an attractive opportunity to use additional capital profitably in production will substantially lessen, though it cannot eliminate, the tendency to use borrowed funds for consumption. Productivity change has both a price and an income effect on consumption. Increases in productivity make present consumption more "expensive" in terms of foregone future consumption; at the same time the higher incomes also encourage farmers to consume more now. The choice for the individual farmer depends upon his resolution of these conflicting forces.

The decision to repay loans is both a moral and an economic decision. Many of the country reports state that farmers do not consider the repayment of public loans a compelling moral obligation. In such a situation, the rate of repayment will be low unless there are significant economic sanctions against default. However, in many developing countries the sanctions against default by small farmers are not well enforced. Frequently the only real sanction is that a farmer cannot get new loans unless he repays outstanding debts, and this may be inadequate if he cannot expect to get more in the next season than the amount he already owes. Country reports indicate that repayment percentages often fall as credit programs mature—i.e., stop expanding their loans.

To summarize the conditions necessary for success in a small farmer credit program that have been mentioned so far: *if* a new technology or crop is available with adequate marketing potential, and lack of capital is in fact a constraint on its adoption, *if* the farmers' motivations direct them to borrow for productive purposes and repay loans, and *if* the credit institution can be structured to serve small rather than large farmers, then favorable results are possible.

*Costs and Benefits*

The preceding has dealt with the conditions required for an agricultural credit program for small farmers to increase the value of agricultural production. Yet even such an increase is not sufficient to call a credit program a success. Credit programs are costly; and in a successful program the value of the benefits must exceed the costs. Among the costs are administrative costs, supervisory costs, alternative opportunity costs on the funds invested, default, and other social costs. The benefits are mainly the increases in production attributable to the program. Unfortunately, the recording of costs differs so much from program to program that reliable comparisons are almost impossible. Recording of benefit data is even more inadequate.

To say a few words about the various categories in benefit/cost accounting: default is a cost to the credit institution, but for the economy as a whole it is a transfer payment in the sense that default does not consume a nation's real resources, but moves them from one party to another. It is therefore treated as a "financial" cost but not a "social" cost. Administrative and supervisory costs do consume resources; they are both financial and social costs. On the benefit side, the income from interest on loans is a financial benefit to the lending agency but not a social benefit as it does not add to the society's resources. Increases in farm production are social benefits as they add to national resources, and they are also financial benefits to the farmers but not to the lending agency.

Some public credit institutions operate on borrowed funds for which they are required to pay interest; others do not have to pay interest. In either case, there is a real opportunity cost of using public funds for such credit rather than in other programs. This opportunity cost is not adequately measured by the low interest rates most governments charge the credit institutions. There is a substantial literature with various estimates of the opportunity costs of capital in developing countries; suffice it to say that those estimates are almost always in excess of 10 percent in real terms (i.e., net of inflation), and they greatly exceed the 2 to 4 percent which credit institutions usually pay their governments for funds. The interest paid to governments is a financial but not a social cost; the opportunity cost is a social but not a financial cost. In analyzing the economic projects, both financial and social accounting of the benefits and costs are necessary; it is the balance on the social accounts which should be the ultimate guide to government policy. (See further discussion in the chapter on Subsidies.)

The magnitudes of these various costs in existing small farmer programs are considered in some detail in the tables and discussion of subsequent chapters. Here we will consider only the kind of general problem they present to economic planners by illustration with representative values in round figures that are more or less conservative. Financial and social costs are listed separately; in both lists they are presented as percentages of the amounts loaned annually by a credit agency.

| | Financial Costs to Credit Agency | Social Costs |
|---|---|---|
| Administrative costs | 5-10% | 5-10% |
| Costs of capital: | | |
| Public capital, concessional rate | 2-4% | |
| Opportunity cost | | 10-15% |
| Default rates | 5-10% plus | |
| Annual rate of inflation | 5% | |
| | 17-29% plus | 15-25% |

Financial costs to the credit agency must be covered by its income from lending, i.e., the interest rates charged on loans, if it is to operate without subsidy. Very few such institutions charge more than 12 percent a year, and for most it is less. These rates may be sufficient to cover administrative and capital costs in an efficient credit agency, but they are generally too low to maintain the value of

its capital if the effects of inflation and default are considered. (Neither of these are treated as current lending costs in the usual accounting practices.) The upper 10 percent figure given for default is less than can be found in quite a few credit programs; and inflation can, in some countries, run well above the representative 5 percent value. In practice, public subsidies for the lending operation are not uncommon, and still more subsidy would usually be needed for capital maintenance.

If some amount of public subsidy is to be envisaged in this kind of credit operation (and assuming that defaults can be held to at least moderate levels—the subsidizing of large habitual defaults being generally undesirable), the next question is: when will such subsidies be justified? The answer involves social accounting. The relatively conservative social cost values shown above indicate that social benefits ought to be at least 20 percent a year. These benefits are increases in the net value of production over its cost to farmers (measured as a percentage of amounts loaned, not of prior production). When a credit program results in technical innovation, its social benefits include the productive increases from imitative innovations by farmers outside the program, and these should be included along with the production gains of borrowers in the program. The information available is generally inadequate; few credit programs attempt to put a value on the gains in production resulting from the credit they extend. One may guess that many existing programs do not yield a return of the magnitude of 20 percent a year. But in those situations where the conditions of success listed in this chapter are met, the value of increased production could greatly exceed these social costs.

Where the conditions of success for a credit program for small farmers are not met, other programs—such as subsidies to the inputs, price supports for the output, more extension work, or even credits to the marketing system rather than the small farmer—may be capable of raising the welfare of small farmers at lower cost without a credit program; these methods could be regarded as alternatives to credit. It is also possible to combine such programs with small farmer credit, of course. The costs of each possible policy package should be added up and carefully compared with the expected benefits to reach appropriate policy decisions.

Benefit/cost calculations from quantifiable data are not the only pertinent considerations, however. There often are unmeasured social "costs" associated with public credit programs—undesirable results of a program which are not reflected in the accounts of the lending agency or the government nor in the production figures. For example, in developed countries modern agriculture has been marked by a continual deepening of capital on the farm; but it is not clear that capital deepening will—or should be—a continual process in countries with large pools of unemployed labor. Pakistan is a case in which cheap credit for mechanization led to an excessive introduction of tractors and a corresponding displacement of farm labor. Alternatively, government credit may be used to purchase land, exacerbating a land tenure problem. Colyer and Jimenez[14] cite evidence from Colombia that those receiving public loans had in three years increased their land holdings by 40 percent, despite a ban on borrowing to buy land. Speaking of the CADU credit program in Ethiopia, Holmberg (Vol. VII, article 1) writes, "The exact magnitude of the tenant displacements in any benefit/cost calculation for CADU as a whole would have to reduce the benefits

generated by the project." However, it should also be noted that there are non-measured social benefits from a program that could partly offset or exceed the kind of social costs just mentioned—depending in part on one's method of evaluation. These would be found, for example, where a program actually brought increases in rural employment, reduced peasant indebtedness to moneylenders, or improved the status and opportunities open to small farmers.

*Conclusions*

(1) Additional loans to small farmers will not in themselves lead to greater production. For a credit program to be successful in increasing output, there must be an opportunity for small farmers to utilize additional capital profitably, which requires an improvement in technology backed by markets that can supply the necessary inputs and absorb the output. The country studies appear to indicate that credit programs have had little impact on output in agriculture with a stagnant technology, and have had only limited success in countries with inadequate markets.

(2) Many small farmers without access to public credit have shifted to more productive agricultural technologies, financing the required expenditures from savings, sale of non-productive assets and borrowing from private sources. But the preponderance of evidence suggests that a shortage of capital is a constraint on the adoption of new techniques by small farmers as a group when profitable new techniques are available. In areas where the other conditions for success are met, an expansion in the supply of funds does lead to an increase in production by small farmers.

(3) Public sector credit programs, however, have often failed to produce a significant expansion in the availability of credit to small farmers. Public funds for the purpose are usually limited. Part of the inflow of public sector credit into agriculture may be offset by an outflow of private credit; and much public credit goes to the larger farmers—even in programs intended to help the little man. Loans to the small farmers are more costly and more difficult to administer and supervise, and often have higher default rates, yet public institutions are not permitted to levy interest charges high enough to cover such costs. Larger farmers can exert more political pressure at the local level to obtain credits. And loans to small farmers are in part used for current consumption.

For these various reasons the requirements for success in a small farmer credit program are very difficult to meet, and it seems likely that they have not been met in a good many of the public credit programs that are now in existence. In later chapters we shall be examining ways in which the methods of lending to small farmers can be improved. In the next few chapters, however, we will be exploring several other ways of looking at the role of credit—not necessarily inconsistent with the above, but varying in their emphasis.

*NOTES*

[1]Theodore W. Schultz, *Transforming Traditional Agriculture* (New Haven: Yale University Press, 1964).

[2]D. H. Penny, "Farm Credit Policy in the Early Stages of Agricultural Development," *Australian Journal of Agricultural Economics* 12, no. 1 (June 1968): 32-45.

[3]Charles T. Nisbet, "Supervised Credit Programs for Small Farmers in Chile," *Inter-American Economic Affairs,* 21, no. 2(Autumn 1967): 37-54.

[4]F. Miller, "Supervised Credit and Agricultural Development: A Peruvian Example," *Inter-American Economic Affairs* 23, no. 4(Spring 1970): 13-22.

[5]Ronald L. Tinnermeier, "Supervised Credit and the Small Farmer," unpublished paper presented at the Seminar on Small Farmer Development Strategies, Ohio State University, September 13-15, 1971.

[6]C. Malone, "Improving Opportunities for Low-Income Farm-Occupied People: Some Indian Experiences," unpublished paper, The Agricultural Development Council and Ohio State University, September 1971.

[7]C. Gotsch, "Technical Change and the Distribution of Income in Rural Areas," *American Journal of Agricultural Economics* 54(May 1972): 326-341.

[8]Norman Rask, "The Impact of Selective Credit and Price Policies on the Use of New Inputs," *Development Digest,* 9, no. 2 (April 1971) 49-54.

[9]Norman Rask and Donald M. Sorenson, "Credit as a Means of Increasing Agricultural Productivity: A Brazilian Experience," unpublished paper, Department of Agricultural Economics and Rural Sociology, Columbus, Ohio.

[10]Dale Colyer and Guillermo Jimenez, "Supervised Credit as a Tool in Agricultural Development," Research Note, *American Journal of Agricultural Economics* 53, no. 4 (November 1971): 639-642.

[11]Charles Nisbet, "Moneylending in Rural Areas of Latin America," *American Journal of Economics and Sociology* 30, no. 1(January 1971): 72-84.

[12]Mirza Shahjahan, *Agricultural Finance in East Pakistan* (Dacca, Banglaesh: Asiatic Press, 1968).

[13]Gerald I. Nehman, "Small Farmer Credit Use in a Depressed Community of Sao Paulo, Brazil," Ph.D. dissertation, Department of Agricultural Economics and Rural Sociology, Ohio State University, 1973.

[14]Colyer and Jimenez, "Supervised Credit as a Tool in Agricultural Development," op. cit.

# 4 *Technology, Profit, and Agricultural Credit*

Small farmer credit programs have been coming under attack for two important reasons: many of these programs have relatively high rates of delinquency in the repayment of loans; and there is little evidence that the credit has had any positive impact on small farm productivity or income. While the causes for this poor showing are many and complex, there is one that can be regarded as fundamental: increase in productivity normally requires some kind of technological improvement. The thesis of this chapter is that output has been limited and many small farmers have not been able to repay loans because they have not had the means of productively using credit when it is available, due to the frequent absence of technological improvements that are: (1) profitable to the small farmer under the conditions he faces; (2) free of risks that he finds unacceptable; and (3) made available to him with information supplied by extension agents combined with adequate supplies of required inputs.

*Does Profitable Technology Exist?*

A given technology implies a given set of inputs or factors of production. "Traditional technology" in farming means the particular way the inputs of land, labor, seed, hand implements, oxen, organic fertilizer, and water have been combined and used in a particular area over a considerable period of time. "New technology" is a new set of inputs or factors of production which are different from a traditional set—that is, at least one factor has been added, dropped, or changed in some way. Innovation, or the adoption of a new technology, does not imply that the new practices are necessarily the result of a recent scientific discovery; as used here, the word "new" means only that the practices in question have not previously been used by the farmers in a given area. Some innovations are minor; others may involve a considerable increase in cost and skill requirements.

To be profitable, the increase in the value of the output resulting from adop-

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This chapter, extracted from a paper by Ronald Tinnermeier of the Department of Economics, Colorado State University, Fort Collins, Colorado, stresses the key role of technological innovations that are actually profitable to the small farmer.

tion of a new technology must be more than the increase in the input costs. It has been widely held that large doses of credit are needed to facilitate rapid technological change in agriculture, but this presupposes that such profitable investment alternatives do, in fact, exist for the farmer. What evidence is there to support this assumption?

*Traditional technology.* Controversy still exists as to whether or not small farmers are doing a good job of allocating their traditional resources, given the technological possibilities and the factor-cost and product-price relationships which they face; but it is now widely accepted by agricultural economists that most farm operators in less-developed countries operate in a rational economic manner.[1] This implies that they cannot significantly increase their farm production either by reallocating the resources at their disposal or by adding more of the traditional inputs. A number of studies confirm this conclusion: for example, Eckert[2] concluded that Pakistani farmers had achieved economic optimum levels of nitrogen use for native wheat varieties, so that little opportunity existed for additional investment utilizing the existing technology. Studies in Brazil also showed it was not profitable to fertilize many existing crops (Meyer *et al.*) This is indicative of the very low production functions that exist for traditional practices. Under some circumstances changes in land tenure patterns, leasing arrangements, or the availability of new land for settlement may bring about increases in production and income while still using traditional inputs. However, it would appear that such possibilities are limited in most areas, at least in the short run.

Unfortunately, the available data concerning the profitability of expanding the use of traditional inputs are confined to a limited number of particular situations. The data which do exist tend to support Schultz's original thesis that it is unprofitable to further expand the use of traditional inputs. Perhaps the expansion of land area does hold promise for some parts of Latin America and Africa, but input constraints rapidly set in where traditional inputs are used, especially for labor. Furthermore, it is not at all clear that such expansion will increase a small farmer's net income commensurate with the added risk involved in borrowing capital to finance such expansion. In addition, large-scale land expansion projects are normally very expensive relative to the income generated using traditional technology, especially as compared with the development of other sectors of the economy or with other investments in agriculture (introducing new technology).

Although not at all conclusive, the evidence does imply that few profitable investment opportunities are available for small farmers when applying existing technology. The additional returns from the investments do not cover the additional costs. This conclusion, then, forces one to turn to the introduction of new technology in order to increase incomes in the small farm sector. It should be noted that if a small farmer credit program induces a farmer to take out a loan but gives him no way to add to his income to pay back principal and interest, then the program has only succeeded in getting a poor man into debt—a questionable achievement from either his view or that of the program's sponsors.

*New technology.* To assume without examination that new technology is available for the small farmer, and that it is profitable to him, is the biggest error the proponents of agricultural credit have made. In most of the Spring Review papers, it appears that virtually no technical assistance has been provided with

the credit. Now, if technical assistance is not provided with credit, this either assumes that such assistance is available through an agency other than the credit institution, that new technology is already known and accepted at the farm level, or that it is not needed because profitable traditional technology exists. The third assumption has already been discussed. The first two assumptions no doubt result from the growing availability and use of the so-called modern inputs. The recent development of the high yielding rice and wheat varieties has perhaps lulled many development specialists into complacence. Very often, however, new technology has not been locally adapted or tested under conditions similar to those faced by the farmer. Or, if shown to be physically better under local conditions, such technology still may be unprofitable.

On the positive side, Spring Review studies in Africa (Roberts) show new innovations to be profitable for farmers in parts of Zambia and Rhodesia. New and profitable technologies were successfully introduced with credit in Mexico (Diaz-Cisnero), Ethiopia (Homberg; Cohen), and Colombia (Schwinden *et al.*; Whitaker). Sacay concluded that the new rice varieties were profitable in the Philippines during the regular rice growing season. On the other hand, for a different province Smith states that "in the lower price ranges which prevail, the new technology is less profitable, per crop, than the lower yielding traditional methodology, for the typical yields cited." Sacay also found lower yields during the dry season for the high yielding varieties, as compared with the yields of the traditional varieties. Similar experiences can be drawn from many of the other country papers and in other studies. In other words, new technologies that have been discovered in experimental research may or may not be profitable to the small farmer for a variety of reasons. Unfortunately, very little or no testing of the profitability of recommended practices by lending agencies takes place at the farm level.

It is interesting to note that much of the output-increasing technology which has been introduced to date has been for single crops—rice, wheat, and corn. Technicians have become seed and fertilizer salesmen, and the results have often been dramatic. Nevertheless, one should not assume that new technology only means high yielding varieties and fertilization. Nor should it be assumed that similar dramatic breakthroughs will come in the future. Successful small farmer development programs, including credit programs, may have to rely on more modest technological advancements. These improvements must be profitable to the farmer, and demonstrably so on his own plots. If the farmer sees only the possibility of a meager added return for what may be a major added cost or risk, considerable resistance to adoption will be likely. Too often, research is designed to provide new knowledge for the medium and large-sized farms. Also, experiment stations are located on the best land, with good water availability, a far cry from the conditions under which many small farmers operate. The final test of a research recommendation is its economic performance for the farmer on his own land.

Thus, there is sufficient evidence from the credit studies in the Spring Review and elsewhere to suggest that profitable technology is not always available to the farmer when credit is extended. If our objective is small farmer development, then research must be oriented to produce those output-increasing or cost-saving technologies appropriate for small farms.

*Small farmer technologies.* New technology is seldom completely neutral in

its effect: some groups of farmers receive more benefits than others. Most of the products of modern research are best suited to the conditions on large farms. This may result from unconscious biases in the kinds of research attempted, which may not coincide with the best interest of countries where small farms predominate. Should new kinds of technologies be developed which are especially designed to assist the small farmer?

A review of small farmer studies does suggest a number of researchable subjects appropriate for solving the production problems and constraints peculiar to small farm operations in developing countries. Some possibilities include: (1) new water management techniques for storing and using water, including the economics of small-scale irrigation projects; (2) water-nutrient interactions for crops presently or potentially grown on small farms, such as horticultural crops or fruits and nuts, especially under less than ideal rainfall or irrigation conditions; (3) new output-increasing techniques for the more traditional crops such as cassava, potatoes, and legumes, and for livestock activities; (4) information on the sensitivity of yields to land preparation and timing; (5) feeding rations utilizing the increased output from the traditional crops; (6) seeds with high yields but with less variation in yields under different climatic conditions; (7) new animal-powered farm implements; (8) mechanical tillers and other small power implements, as needed; (9) low-cost and effective on-farm storage and drying facilities; (10) new techniques of multiple- and inter-cropping, to increase incomes and reduce risk; (11) techniques for improving managerial skills.

These research topics specifically relate to the needs of small farmers, and are presently poorly researched. The major international research institutes, as well as some national research stations in developing countries, are now beginning to shift a portion of their research funds to activities that could better meet the needs of small farmers. For example, over the past few years, the International Rice Research Institute has carried out research on the effects of successively planting different crops on the same plot (multiple cropping), as well as planting more than one crop in the same field at the same time (intercropping). Interestingly, it was found that in the tropics total production increased when crops were intercropped. Intercropping also significantly affected weed and insect populations. As is widely known, small farmers around the world practice intercropping, perhaps with reason, so that monocrop recommendations may not be as useful to them as is often assumed. Far more attention to the production gains that can be attained by multi-crop combinations should provide high research pay-offs for both scientists and small farmers. Further, most developing countries are facing serious unemployment problems in the rural as well as urban areas. Providing research results for small farmers which allow them to increase their farm incomes concurrently with providing more employment can help alleviate this problem. Employment in Africa, for example, would be increased by a greater use of animal power, and by paying more attention to small-scale, rather than large-scale, irrigation projects.

*Technology and Delinquency*

Although the evidence is inconclusive, there does appear to be a direct relationship between loan repayment and the availability of new and profitable technology. Relatively few of the credit projects covered in the Spring Review reported loan repayment rates above 90 percent and, in most cases, these pro-

jects successfully provided profitable technology to the farmer. One of these was the Puebla project in Mexico, which significantly improved corn yields under rainfall conditions, primarily through higher planting rates and by changing the amount and timing of fertilizer application. Incomes for participants doubled or tripled as a result of this program (Diaz-Cisnero). In another case of high loan repayment the CADU project in Ethiopia successfully introduced new wheat varieties with fertilization, roughly doubling cash incomes (Holmberg). The Comilla project in Bangladesh centered around the dissemination of high yielding rice seed, fertilizer, and small irrigation pumps. Again, high rates of repayment were experienced; however, extending the program to a much wider area has caused some repayment problems (Solaiman *et al.*). The INCORA program in Colombia and the ACAR program in Brazil are additional examples of programs with relatively low rates of delinquency associated with profitable technology (Schwinden *et al.*; Meyer *et al.*). In most cases, however, new technology has not accompanied the credit for small farmers in any systematic way—judging from the Spring Review papers. Furthermore, almost none of these programs were reported to have low delinquency rates without providing new, output-increasing technology along with the credit. (The Ivory Coast supplies a notable exception; see BNDA report.)

Thus, it may be argued that new technology is an essential condition for a successful repayment record. One would hasten to note, however, that new technology is not a sufficient condition for success. For some programs the technology was available but price, land tenure, or marketing policies were inadequate to make its continued adoption profitable. The Nicaraguan program significantly increased corn yields, resulting in a 50 percent drop in price at harvest which caused repayment problems (Rene-Ramirez). This is not a unique experience. The Indonesian BIMAS program (Rieffel) experienced considerable success initially, but, as the program expanded, the single technological package was less and less appropriate for the new areas. The credit, fertilizer, and other inputs often were not available when needed, and the technical assistance effort no longer reached many of the farmers in the program.

*Risk and Adoption*

Even if profitable new technology is provided with credit, this may still not be sufficient for its rapid adoption. If considerably more risk is associated with the new as compared with the old, then small farmers may be unwilling to assume such a risk. Researchers are recognizing more and more that risk is a significant factor in small farmer decision making. Even the most illiterate farmers place probabilities on the outcomes of their farming decisions. Since they cannot accept conditions which might jeopardize their family's survival, their economic decisions attempt to reduce risk and to increase security. The added risks associated with new technologies can significantly affect the extent to which they are adopted.

*Yield variability* is probably the most serious risk faced by small farmers. The new technologies consistently show greater yield variation than do the traditional methods. Under adverse weather conditions new high yielding grain varieties sometimes yield less than traditional varieties, while under ideal conditions the yields may be several times more. Suppose a farmer must choose between (traditional) seed A, with a probable average yield of 100 and a possible range of 80-

120, and seed B with an average of 125 and a range of 50-200. For a small farmer to whom yields of 75 would represent the minimum for his family's need the choice would have to be A, while a larger farmer might select B. There is an obvious need to develop plant varieties which show less yield variability, even at the expense of some reduction in average yields. Malya[3] found that Indian farmers in districts with uncertain rainfall kept a higher precentage of their crop area under drought-resistant crops with lower yields than did farmers in areas with less uncertain rainfall. Output variations can also result from applying technologies which are inappropriate for certain local soils. Farmers must also consider the uncertainties of floods, insects, diseases, damage by animals, etc., all of which might adversely affect the yield obtained in any given year. Crop insurance programs hold some promise for spreading the weather risks faced by farmers and might contribute to the adoption of new practices. But such programs are costly and difficult to administer, and they are not in practice available to small farmers in developing countries.

*Price variability* for his inputs or products is also of concern to the farmer. Product prices typically fluctuate widely from year to year, yet the farmer must predict specific values for each before the crop season. Inputs may be steadier in price, but these too can vary. Governmental price guarantees may help, but these policies are also subject to change—even during a crop year. Price stabilization policies directly affect the probabilities of the profitability of new technology, and are especially needed for those who have a high risk aversion—and that would include almost all the small farmers. The more successful credit programs have been supported by price policies which reduced the input and product price variability to the farmer.

*Variable supply of inputs* is another problem area for small farmers. A decrease in the total supply of fertilizer, chemicals, implements, and other inputs will be felt first by the small farmer, due to his limited economic and political clout. Thus, he must weight the risks of delayed inputs of fertilizer, for example, or of shortages that could nullify the gains which should be obtainable from a more costly technology. Many small farmers have limited rights to water in an irrigation system, an additional input risk.

*The supply of services* can also be highly variable. If the profitability of a new technological package depends on receiving technical guidance through the production period, will such help in fact be available? The improper application of fertilizer or chemicals can significantly reduce crop yields. Livestock activities might be especially vulnerable to a delay in technical advice. Marketing services may also be uncertain and reduce profits. For example, can a dairy farmer always rely on the established milk pickup system?

In sum, it should be obvious that the adoption of new technology and its profitability are significantly affected by the associated risks. Small farmers are frequently regarded as ignorant, stupid, or too "traditional" when they reject the innovations proposed to them, but from their own standpoint they may be quite rational in their responses. The dominant failure in much developmental work related to technological innovations has been the lack of understanding of the relationship between the expected variances of the old and new techniques with the level of living of the intended clientele.

*Credit with Extension?*

The majority of the Spring Review credit programs did not try to incorporate any kind of extension or educational service in their lending activities. In the context of this discussion, extension is any educational program directly tied to disseminating new technology. An "effective" extension program would be one which significantly increased the adoption of a new technology as compared with the level of adoption which would take place in its absence.

It can be argued that extension must be very much a part of a program which expects to tie credit to new technology in an effective manner for the small farmer. This approach could be criticized as too costly; but it should be noted that the most successful credit programs—those with low delinquency, increased farmer productivity and income levels—did precisely that. The Puebla, Comilla, CADU, INCORA, and ACAR projects all managed to integrate new technology, extension, and credit. Tying of credit to improved techniques is also advocated by Sanderatne[4] and Brown.[5]

Extension as used here is not a generalized farmer educational program. It is the mechanism by which a particular new technology is developed, modified, carried, and translated to farmers in coordination with the provision of credit, when needed. It is the technical assistance arm of the credit program. It was mentioned above that technical recommendations must be modified from area to area to meet local conditions. Who could better perform this modification than the person who is explaining and demonstrating new innovations directly to the farmers? In addition, some arrangement is required by means of which at least a small number of progressive and intelligent farmers may participate actively in the research experimentation. Such an arrangement would help ensure that the experimentation takes place under conditions similar to those faced by small farmers, and the results would then be more likely to meet their needs. Each effort reinforces the other.

Including technical assistance as part of a credit program implies the need for considerable trained personnel. Sufficient trained manpower to provide reliable assistance is usually not available to small farmer credit programs, as reported by many of the country paper authors. Employees are often poorly trained in the technical areas of crop and livestock production, even in the so-called supervised agricultural credit programs. In essence, the credit agent has very little to "extend" to the farmer, and this is unfortunately true of many full-time extension agents as well. Any source of new information must be considered trustworthy by the farmer, and this judgment will be based largely on his past experience. Obviously, an extension agent or credit technician with little technical advice to offer is not going to develop very much farmer trust. If developing countries are unable to finance the necessary training, then the international lending agencies would be well advised to set aside a portion of the agricultural credit loan itself for such technical training.

Thus, there is much to be gained by providing technical assistance along with credit. Just providing new technical inputs and credit is not as effective in speeding adoption as providing inputs, credit and assistance together. How the technical services should be organized, and whether they should be combined with credit in a single agency, will be discussed in a later chapter.

*Policy Implications*

This chapter has focused on a limited but important aspect of agricultural credit for small farmers. If the arguments presented herein are correct: (1) that a necessary condition for extending credit is for output-increasing technology to exist and be profitable, but that few programs have met this condition; (2) that the risk associated with new technology is critical for the small farmer, and must be reduced; and (3) that technical assistance must accompany the technology to speed its adoption, then a number of policy implications follow.

1. Further expansion or support of credit programs is not to be recommended until new, output-increasing and profitable technology is available to, and understood by, the potential borrowers. Extending credit in the absence of this technology will lead to meager or even negative results from the standpoint of both the borrower and the lender.

2. Credit becomes important only after adoption of new technology begins. But if credit is not readily available once new technology becomes available, small farmers will be less likely to share the benefits resulting from its use.

3. More emphasis must be placed on training a pool of technicians to ensure that new technology, once available, accompanies credit in a form which the small farmer can understand and use.

4. Adequate price incentives and markets must exist for a new technology to be profitable. Output-increasing technology, a market, and a reasonable and stable price must all exist at the same time if adoption is to take place; it is useless to argue which should come first.

5. A portion of existing and new research resources must be shifted to focus directly on solving small farmer production and marketing problems, so that new technologies appropriate for small farmers will become available. Technology is not neutral among types of farmers. Lending and technical agencies, national as well as international, must be more sensitive to the income-distributive effects of changes in technology on the various rural groups, especially in countries with more inequitable land tenure.

6. If risk is as important for the small farmer as suggested, then: (a) new technologies must be developed which are more dependable under variable weather conditions; (b) ways must be found of assuring the farmer that failure will not result in a major penalty to him; and (c) the extension and technical assistance effort should also focus on finding ways of reducing the risks as seen by the farmer.

*NOTES*

[1]See T. W. Schultz, *Transforming Traditional Agriculture*, op. cit.

[2]Jerry Eckert, "The Economics of Fertilizing Dwarf Wheats in Pakistan's Punjab," mimeographed paper, the Ford Foundation, Lahore, Pakistan, 1971.

[3]M. M. Malya and R. Rajagopalan, "Nature of Risk Associated with Rainfall and its Effect on Farming—A Case Study of Kurnool District, Andhra Pradesh," *Indian Journal of Agricultural Economics* 19, no. 1(January-March 1964): 76-81.

[4]Nimal Sanderatne, "Agricultural Credit: Ceylon's Experience," *South Asian Review* 3, no. 3 (April 1970): 215-225.

[5]Dorris D. Brown, *Agricultural Development in India's Districts* (Cambridge, Mass.: Harvard University Press, 1971).

# 5 Financial Management and the Small Farmer

*Financial Behavior of the Small Farmer*

Financial management interacts with other economic behavior, and this interaction is especially significant for the small farmer. He must solve problems of cash flow and risk management without large flows of cash; he may be only marginally oriented to the market. The cash flow problems arise from seasonal deficits and surpluses inherent in the biological characteristics of farming. In addition to these predicted deficits, he must consider unpredicted failures in growing conditions, disease, markets, health, and other risks. Despite a low volume of cash flow he must find a basis in reserves with which to meet both the predicted deficits and the unpredicted adversities, and he must find the reserves in his own small organization.

Requirements of the household cannot be ignored in the organization of the small farm. To the degree that the small farmer is a subsistence farmer, crop inventories to meet food requirements of the household are as important as cash flow requirements to meet operating expenses of the farm. The subsistence character of small farms enforces the need to incorporate consumption with production requirements in any serious consideration of economic behavior in general and financial behavior in particular.

*Financing production.* Most small farmers in developing countries do not have access to formal lending institutions such as banks, and when they cannot borrow from relatives or friends to meet their needs they must turn to merchants or moneylenders in the informal market. This dependence on high cost informal lending has a severe direct effect on production choices. The small farmer pays the moneylender an interest rate that may amount to 50 percent or more per year. Such rates impose minimum requirements in rates of return that simply exclude many alternatives that otherwise would be economically useful for him as well as for the economy of his country. Even important improvements in

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This chapter, extracted from a paper by Chester Baker of the Economics Department, University of Illinois, Urbana, Illinois, emphasizes the financial problems peculiar to small farmers and their implications for the design and purposes of credit programs.

technology or marketing may fail to generate payoffs that reach the 50 percent level.

Other terms of loans from the moneylender constrain the small farmer in making capital investments such as land improvements, bullocks, tillage equipment, etc. The moneylender is ill-equipped and uninterested in making loans over a period of time that allows for much of the increase in small farmer income to serve as the basis for repaying the loan. Credit access that is limited to informal lenders, on short term and with high rates of interest severely restricts the small farmer's response to production alternatives that otherwise might be rewarding to him and to the general economy. This is the basis on which small farmer credit programs are most often justified.

*Financing marketing.* Large seasonal variations in product prices are common in less developed countries. But even when he has enough facilities for storage, the small farmer's requirements in cash flow, which may include a repayment commitment to the moneylender, will often deny him the chance to hold his crop and gain from seasonal price appreciation. The moneylender typically requires the small farmer to repay at harvest time. He may commit the small farmer to repay in kind. Thus the moneylender may acquire a crop inventory with which to gain in seasonal price appreciation, in addition to the high rate of interest exacted from the small farmer. He also reduces the risk of default by controlling the small farmer's marketing in many cases.

Input marketing poses especially serious problems for the small farmer. When he is only marginally oriented to the market his cash purchases may be few and small, but they are demanding nonetheless because of his limited liquid resources. The small farmer may be and often is forced to use his and his family's labor as an important source of cash flow. Given the high cost of borrowing, he may withhold labor commitment in his own operation in favor of working elsewhere to generate added liquidity.

*Financing consumption.* In the organization of the small farm it is difficult and perhaps unrewarding to separate the household from the "firm"—consumption, as commonly understood, from production. Input requirements for the household are just as demanding as are input requirements for the firm. Here too there are not only the predictable deficits and surpluses already noted, but also unpredicted events. Payments for weddings, funerals and other ceremonies, however much these may be deplored by the designers of small farmer credit programs, are nonetheless very real requirements as viewed by the farmer. If a credit program does not allow for them, the small farmer is left to meet these requirements elsewhere. This means either the use of the informal lender, or holding reserves at high cost for such contingencies. The inclusion of consumption expenses within the scope of small farmer credit programs is a possibility explored below.

*Reserves management.* We have referred to liquidity and to reserves, and to how they affect and are affected by the financial behavior of the small farmer. We mean by liquidity the ability to generate cash, and by reserves, those assets held principally for this purpose: cash, cash substitutes, and other assets insofar as they can be converted to cash. Lack of market infrastructure restricts the conversion possibilities for many physical assets of the small farmer except at exchange costs that are so high as to make the conversion options virtually prohibitive. Therefore, cash plus gold, jewelry and other items readily accepted for

sale in a given society are commonly found on small farms, as reported in the country papers. In fact, Goldsmith[1] has found among economic units generally that the lower the level of income and value of assets, the higher the percent of all assets that are liquid. Limited in other forms of liquidity, the poor farmer simply has no alternative than to provide himself with such reserves. At the same time, we must recognize the high cost at which they are held. The opportunity cost of holding them as reserves is the potentially high returns they would earn if committed in production and marketing alternatives.

It is important to recognize the role played by credit in reserves management. In order to do so we will use a concept of credit that differs from the concept used elsewhere in this book. In this chapter we will speak of "credit" as an asset possessed by the small farmer, not a fund borrowed from a lender. We refer to the latter simply as a loan: the borrowing transaction is an exchange by the small farmer of his "credit" for a loan (the word will be kept in quotes for the discussion in this chapter).In effect, "credit" means the ability to borrow; it is like a credit rating, but unlike the concept of a reputation it implies a maximum sum, so that a farmer's remaining "credit" is reduced after he has borrowed and not yet repaid.

"Credit" is used as a reserve by simply not using it for borrowing. We may describe a value relationship for reserved "credit" that accords with the law of diminishing returns. In this sense, "credit" can serve as a cash substitute, just as can gold, jewelry or other cash substitutes. We recognize, of course, that hoards of gold, jewelry, etc. may serve purposes other than reserves; they may produce aesthetic or prestige values as well that "credit" may not satisfy. However, we might also note that some individuals gain considerable satisfaction from a "good credit rating."

To constitute a reserve, the "credit" must be perceived as predictable and permanent. For the small farmer in a less developed country, virtually the only source of loans that meets these criteria is the moneylender. The value of such "credit" in reserve can be seen in several country papers. For example, the small farmer in India is reported willing to borrow from a cooperative to finance modern inputs if in doing so he does not reduce his capacity to borrow from informal sources (Schluter). Clearly, he values the latter more highly than the former as a reserve. He perceives the moneylender as a permanent and reliable source, available to finance consumption expenses as well as production expenses. In contrast, the cooperative credit, though lower in interest costs, is perceived as more likely to be temporary. It also is less flexible as a reserve, owing to its scope being confined to production inputs. In any event, we may note that the small farmer feels he cannot "afford" to jeopardize his line of credit with the moneylender.

### *The Financial Environment of the Small Farmer*

It is difficult to generalize in much detail on the financial environment of the small farmer in developing countries. In most of Africa, national money markets with much sophistication have yet to be developed. In contrast, India and other Asian countries have long histories of well defined and highly differentiated financial intermediation and financial marketing. The countries of South America appear more mixed. In all developing countries, however, the financial markets appear to have failed massively in developing loan sources available to the

small farmer at interest rates falling between those charged by commercial banks at the one extreme (6-12 percent), and by informal lenders, at the other (e.g., 50 percent). In rural areas there is usually a "fragmented" financial environment, one that generates opportunities in financial management that vary rather widely for the small farmer from one location to another. The financial market relevant to a given small farmer is an extremely local one; the fragments remain unconnected within a more general market network.

What are the effects of this kind of environment on the small farmer's economic performance? Any commitment of cash to production, marketing or consumption must promise the small farmer a return that exceeds the value of his cash in reserve. Values may be imputed for the different reservation levels, to conform to the assumption that liquidity values of cash diminish as the amount of cash reserved increases. Cash consumption requirements would be met at a cost that includes the liquidity value of cash. In the same manner, "credit" use (i.e., borrowing) for production, marketing or consumption is subject to liquidity values of "credit" increasing as the amount held in reserve is reduced. Borrowing also generates a debt that must be managed and an interest expense that must be met.

Economic growth for the farmer may be measured in net worth (this does not necessarily imply increase in land size of the farm). If the rate earned on debt-financed assets exceeds the rate paid on the debt, borrowing accelerates the economic growth rate of the farm. However, this growth rate is dampened by the rate at which income is spent for consumption. In this relationship the rates of earning, interest, and consumption are likely to change with increases in borrowing that produces economic growth. The rate of earning is likely to fall after the more productive alternatives have been financed. The moneylender's rate of interest may increase as the borrower absorbs more and more of his borrowing capacity. The rate of consumption is more questionable: for large farmers, we suppose the percent of income spent for consumption to decrease as income and assets increase. For small farmers breaking out of subsistence agriculture, the answer is not so clear; it may depend to a considerable degree on the effect of growth on liquidity. The outcome of all these tendencies is to restrain the growth process, to keep the small farmer from adding rapidly to his net worth.

Another restraining factor in small farmer growth is the effect of borrowing on his vulnerability to risks. Any sizeable increase in his debt will magnify the impact of possible adversities when compared with the reduced value of his net worth. This simple fact is recognized by both borrower and lender: the lender uses rule of thumb to assure saftety margins for loans; the borrower protects his "credit" by placing increasing reservation prices on it. Analogous risks are added in terms of cash flow. Debt generates an obligation that is fixed in time and money (or kind), regardless of the economic outcome from the financed outlay. Therefore, any gain in expected net cash flow is subject to an increased variation in the net value when debt management commitments are taken into account.

In sum, the farmer values his ability to borrow, since such capacity generates a source of liquidity. This point is especially important for the small farmer, owing to the relatively few sources of liquidity available to him. Hence it is not surprising to find him averse to borrowing. The opportunity cost of using his borrowing capacity can be very high. In the absence of reliable institutional sources for loans, the only "credit" available for reserves management is his moneylend-

er "credit." The high cost of borrowing from the moneylender imposes at once a high reservation price on all forms of liquidity. It restrains him not only from borrowing, but also from committing cash and cash substitutes to his farm unit, owing to high reservation prices on his reserves.

*The Financial Environment of the Small Farmer with a Credit Program*

How does the availability of a credit program modify the financial environment of the small farmer? The answer depends, of course, upon properties of the program. At a minimum, it offers an added source of loans. Under provisions of virtually all such programs the loans are available at an interest rate that is nearly negligible when compared with rates paid to the moneylender. However, the interest rate is not the only basis for comparing the new source with the moneylender. The small farmer must consider the timeliness of delivery of loans from the new source, which is normally much less than that of loans from the moneylender. There is the formality and "red tape" of applying to the credit agency. Again, the moneylender has real advantages with his informal but effective control of information (and perhaps marketing as well). The credit agency typically is staffed by personnel from outside the village of the small farmer. The need for greater formality is clear, but it adds to the small farmer's "cost" in using the new source.

If the credit agency lends only for specified purposes the small farmer is confronted with added difficulties. Further, loans to the small farmer may be contingent on technical performance. If the small farmer must conform to farm plans consistent with an educational program, he must evaluate the content of the educational component of the agency in his own frame of reference. A common example is to disburse loans only for improved seeds and fertilizer, on the input side. Less common, perhaps unfortunately, is an assurance of market outlet on the product side. Such provisions confront the small farmer with the need to compare these parts of the package with comparable facilities he has been accustomed to using. And again, the timeliness and reliability of delivery is essential.

Should the small farmer be uncertain as to the performance characteristics of the program in these components as well as in lending, the outcome of the comparison may not always favor the new program. There is ample evidence that many credit agencies do not perform well when they contain these noncredit components. Hence it is easy to see why the small farmer may remain skeptical of net benefits for the program. It is also relevant to note that if the agency requires specified production and marketing performance, it must administer a monitoring system to prevent a "misuse" of funds. The diversion of production loans for consumption purposes occurs frequently in reports of the country papers. The agency is likely to be more formal in monitoring activities than is the moneylender; indeed the moneylender may be unconcerned about such diversions if they don't jeopardize the safety of the loan. In any event, the "cost" of the program loans, as seen by the small farmer, may be effectively higher than is appreciated by credit agency personnel.

If the small farmer perceives the credit agency to be culturally ill-adapted, he will view it as temporary and therefore his ability to borrow from it will be valueless to him as a reserve. Two results follow, both exceedingly damaging. (1) He may consider default to be an acceptable behavior. He will "get his" while

the program *is* there, and return to the moneylender after it has departed. (2) He may consider the temporary advantages gained in the new program to be outweighed by damage done to his line of credit with the moneylender. Moneylender "credit" is permanent and versatile, however costly it may be to borrow from the moneylender. Program "credit" is fleeting and questionable, however rewarding it may be in the short run to borrow from the lending agency. Hence he may, understandably, ignore the credit agency until its permanence is demonstrated to his own satisfaction.

*Desirable Properties in a Small Farmer Credit Program*

The moneylender may well be more appropriate as a guide to successful properties in a small farmer credit program than is the commercial bank. Small farms have been and remain outside the scope, traditions and interest of commercial banks in most developing countries. On the other hand, the moneylender has survived through time making loans to the clientele of small farmers, and he will remain an alternative or supplemental source of loans for them, even if the credit program is successful. Should the credit program dislodge the moneylender, it is essential that institutions of the new program not fail to deliver valuable services heretofore delivered by the moneylender.

It is inappropriate to the economic objectives of such a program, however, that the moneylender model be followed slavishly. If public resources are used to develop the program, it is reasonable to require that the program be made to meet the objectives of the national economy which are not normally a concern of the moneylender. But where the pursuit of national objectives runs counter to small farmer objectives, a credit program may have great difficulty in surviving.

A more modest program objective than those commonly asserted, but perhaps more appropriate to the means employed, is that of financial independence of the small farmer. This objective is met with credit (and perhaps marketing) choices opened to him by the existence of a viable credit program, *whether or not* he chooses to participate in the program. Simply providing an alternative may be the surest method of curbing the excesses of informal lenders without denying the small farmer the positive contributions that can be obtained from them.

*A line of credit.* We may assume that a primary national objective for a small farmer credit program is the increased output from small farms, and that technical change is widely perceived as the prime source of increased output. A reduction of interest rates paid by the small farmer, if he is given reliable access to timely loans, *can* increase the range of production alternatives that yield positive returns to him; this is a direct production effect. There is also a potential indirect effect of the program on production: an increased commitment by the small farmer of his cash and cash substitutes to production and marketing uses. This commitment is gained by providing reliable lower cost credit to substitute for cash and other cash substitutes in reserves management.

Both direct and indirect effects are important in terms of production. But to achieve both requires a program that meets *all* the financial management needs of the small farmer—not just the narrow part of the spectrum identified as credit to finance inputs for technological change. A line of credit made available to the small farmer in the credit program, enabling a farmer with a good repayment record to get a loan quickly up to a maximum amount for uses that he chooses

without supervision, will provide him with greater flexibility to respond to market opportunities. When this is possible he need not remain tied to his credit line with the moneylender. But we must remember that, for the small farmer, financing consumption is as demanding as financing production and marketing. Failure to accommodate consumption finance leaves him still dependent on the moneylender—thus he is restricted in his capacity to perform well in the credit program. Conversely, participation in the program can jeopardize his line of moneylender "credit." This is the logic behind the proposal to provide a line of credit within a small farmer program.

Admittedly, this approach to small farmers requires an act of faith in the farmer's capability to manage his financial affairs with foresight, and in the strength of his desire to increase his output. Such faith is not universal: more commonly, credit managers tend to think that the farmer will neglect his debt obligation unless he is required to repay at harvest time when he has the cash in hand, and that he will not use credit for appropriate inputs unless he is so required and then supervised. Failures to repay, and to use credit for production purposes are, of course, widely reported; but this could be taken to mean that requirements and supervision simply don't work very well. To infer that the best remedy is to apply more of the same treatment is to profess a considerable faith in the potency of formal requirements and in the capabilities of supervisory personnel. It is possible that the farmer may better understand his own farm situation than the makers of generalized requirements. The argument over which type of faith is better justified will not be concluded here, since other chapters will explore further ramifications of the issue. At this point it will suffice to point out that there is a case to be made for managing credit programs on the basis of an orthodox (if unconventional) economic analysis of the farmer's financial situation, treating him as a rational being in the circumstances in which he finds himself.

*Permanence.* To be successful, a credit program must be perceived by the small farmer as permanent. Otherwise, the program provides no basis for reserves management as outlined above. Indeed, all the problems already identified become manageable only if the program is recognized as permanent. The conditions for permanence are: the program must be culturally adapted; it must provide simple and reliable access for the small farmer; and it must be operational within budget constraints of the host country.

Cultural requirements will be discussed in the next chapter. Concerning access to credit, Spring Review papers and workshops suggest that the small farmer frequently is repelled by the complexity and formality of procedures in credit programs as contrasted to the informality of the moneylender. To gain the permanent adherence of the small farmer, some means must be found in a credit program to reduce the difficulties of access and to provide a more understandable and feasible basis for the small farmer to perform on his debt contract. Providing a line of credit would simplify the application procedures and remove the artificial (to the farmer) distinctions of production from other credit which are, in any case, difficult to enforce. Problems of "misuse" of loan proceeds would no longer arise, nor would prior claims of other lenders if all credit needs could be met within the program.

Permanence of a credit program after the departure of foreign donor agencies, and an expansion of the program, require a reduction in its dependence on a

public sector subsidy. The interest rate can be raised to a level that more closely approximates the opportunity cost of capital plus administrative costs without endangering most of the positive effects (direct and indirect) on production; the reduced subsidy would increase the feasibility of public support to meet the remaining costs. All these matters will be taken up in more detail later.

*Incentives*

It is well within the comparative advantages of a credit program to provide educational services to small farmers in financial management. This educational component could be provided at low cost and reduce the default costs as well. If it were to include a savings program, this could also add to the lending agency's resources.

This educational effort in the sphere of financial management could be made more effective by building into the design of the credit program some incentives for borrowers directed toward better repayment performance, including a kind of savings and reserve component for the farmer. A proposal has been made (Stickley *et al.*) for a credit agency that systematically responds to loan applications and charges interest rates in accordance with past payment performance of the applicant. Given the differential in interest rates between the moneylender and the commercial bank, there certainly is room for developing an incentive system that might produce important gains in client performance.

Let clients in all categories be charged an interest rate fixed at "market level," plus an amount for administration calculated for the client who is defined as modal in the portfolio of small farmer loans. Add a premium to be paid by a given borrower into a reserve fund. The premium would be scaled for him in proportion to his ranking relative to the mode. Clients above the mode would pay less; those below, more. The regressive effects of such a plan are likely to be minimal when compared with pre-program options of the small farmer. They can be reduced still further by two added provisions: (1) at the time of loan retirement, return to the borrower a portion of the premium he previously paid, the fraction depending on his performance on the debt contract; and (2) at disbursement of loan, advise the client of the prospect of earning an "advance in grade" in a new future loan, and hence a lowered premium requirement to be met by him in the future. The premium would provide also for rewarding borrowers for good performance in the presence of external causes of default—e.g., weather disasters, disease, health problems, etc.

*An Example*

The general approach to small farmer programs outlined above has not been widely adopted in practice, but there is one program which illustrates some of the advantages that could be expected. The Ivory Coasts's National Bank for Agricultural Development (BNDA) started a program in 1968 called *prêts de soudure*—loans for the pre-harvest period—described in a Spring Review paper by the BNDA staff and further elucidated by Bank spokesmen at the workshop in Abidjan. Short-term loans, limited in size to 15 percent of a small farmer's commercial sales in the two preceding years, are extended to farmers in groups of 6 to 30 members who assume joint responsibility for repayment. No requirements for loan use are imposed, and no supervision is attempted. Repayment has been over 94 percent except in 1972/73, a year of drought, when it fell to 85 percent

on the due date, but 92 percent had been paid up a month later. In that bad year, loans by the same bank to larger farms and farm organizations for productive inputs were repaid only 65 percent on their due dates—in contrast to the record on "non-productive" loans. It should be added that the good repayment of *prêts de soudure* loans was obtained despite a tradition of generally poor repayment of government loans in the Ivory Coast in earlier years.

This is a tidy, solvent, well-managed and low cost program. The BNDA has been sufficiently pleased with the results to expand it gradually to reach the significant number of 660,000 farmers in 1972/73; it is planning cautious experiments with the attraction of savings deposits. The Bank's main purpose (politics aside) is the improvement of small farmer financial management. Because no questions are asked about loan uses, there are no data to prove or disprove that farmer-clients are increasing their output or reducing their indebtedness; but the BNDA has been hearing complaints from moneylenders, which strongly suggests that the small farmers may be increasing their net worth as a result of the bank's activities.

*NOTES*

[1]Raymond Goldsmith, *Financial Structure and Economic Development* (New Haven, Conn.: Yale University Press, 1969).

# 6 *The Credit Connection: Cultural and Social Factors in Small Farmer Credit*

In looking at the cultural factors bearing on the success or failure of small farmer credit programs, we may begin by noting that farmers who fail to participate in government programs are commonly considered "unmotivated" or tradition-bound. Yet, from their own standpoint and circumstances, farmers may be rational in such a decision. We find a frequent divergence between the formal economic models that serve as guides to planning in developing countries, and the informal economic systems which represent actual consumption, demand, supply, production and investment patterns. On the basis of such models, the "modern" sector of a developing country may seem to the planners to offer the farmer greater opportunities for economic reward; but within the realities of the informal system, this sector may be less well articulated than the "traditional" sector, especially in rural areas. Economic growth depends on the functioning integration of markets, prices, inputs, credits, savings, etc. When markets are inadequate, inputs absent, or credits delayed this simply means that the modern sector has failed to make its informal system work—for whatever reason. Traditional sectors may not offer the same growth opportunities, or they may be inequitable, but they have the clear advantage of being coordinated, on-going systems; of being adapted to local conditions; and of providing reasonably predictable incomes. Small farmers, on the basis of economic rationality, may well choose to follow the traditional patterns if government programs are corrupt, favor the big farmers, or simply fail to operate successfully.

In small farmer credit programs, government strategies show a preference for devising complicated schemes based on standardized economic assumptions, and relying on a transfer of "modern" institutions from an urban to a rural setting. For example, banks rely on the ability of customers to reach their offices; on the use of a monetized system of exchange; on collateral for loans. To transfer such institutions into an environment that is poorly monetized, with customers who are remote and largely immobile, and who have little or no collateral is virtually

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This chapter, except for the final discussion of "Implications," was extracted from a paper by Cynthia Gillette and Norman Uphoff of the Departments of Anthropology and Government, Cornell University, Ithaca, New York.

to ensure failure in reaching small farmers. If their participation is often disappointing, this should not be too surprising.

Given the millions of small farmers living in the developing countries, it is essential to recognize the inherent limitations of such government programs. It is unrealistic to suppose that centrally administered, trained personnel could—in most of these countries—effectively reach more than a small fraction of their farmers. To expand beyond such a limited coverage, it will be necessary to rely far more than has been usual on the farmers' own motivations and leadership potential. If credit programs are to be reformulated or adapted with this objective in view, it will be necessary to explore the conditions in which farmers live, how they look at the world and what stimuli they could be expected to respond to. In so doing, it will be useful to try to see things from their point of view, and to assume that given the actual conditions they confront they either are or could be making decisions that are economically rational.

We will first analyze the culture of the small farmers, the borrowers in the credit relationship, from an anthropological perspective. They are assumed to be living in village societies in which various kinds of traditional or semi-traditional forms of social organization, and the corresponding attitudes and values, are the main determinants of their behavior. Next we will apply a similar analysis to the culture of the lenders, the people who work in agricultural credit agencies and guide their policies. Again, social organization, values and attitudes determine their behavior, and with consequences that may not be obvious to those living within the culture. Then we will examine some of the results of an interaction of people from these divergent cultures when they are brought together in the credit relationship. The chapter will conclude with a look at the implications for credit programs of the results of applying this kind of cultural analysis.

### *Culture of the Borrowers*

*Social organization.* The importance of social organization is that it places each individual in a particular position within his community under any given set of circumstances. An individual may be dominant or subordinate, powerful or weak, rich or poor, respected or despised. What he is or is not able to become depends both on the kind of society in which he lives and on the position he is given within that society. An individual's access to productive resources is deeply influenced by the structure of his community.

Kinship structures will partially or wholly define a farmer's access to land and other productive resources; they will define many of the financial responsibilities he must meet to maintain his membership; they will also help to define his relative power within the society. In addition, his kin group may provide a significant but informal source of credit. His membership in a given kinship group may entail inherited animosities and alliances vis-a-vis other groups. Attempts to build cooperatives across lineage or clan lines, for example, may meet considerable resistance owing to the social structure.

The types of relationship which normally exist at the village level are characterized by multiple ties. In other words, a man who engages in an economic transaction with another may also be related to him by kinship ties, by political faction, by ritual responsibilities, or by common membership in some form of voluntary association. The complex interaction of such multiple ties, not just a calculation of individual profit, will shape economic transactions. Someone who

is politically dominant, or holds a higher status in the kin group, or is a ritual leader, can often obtain more favorable terms in any given economic transaction than will a man who is not a member of a powerful kinship group or is subordinate in other relationships. At the same time, it must be recognized that the former has certain obligations to the latter for protection, for employment, for sponsorship, for aid in times of emergency. This last may imply credit; to replace these multiple bonds with the single-purpose connection of the credit-agent/small-farmer relationship is a very difficult task indeed.

The local political structure can facilitate or inhibit the operation of credit programs. A centralized village-level leadership can act effectively to ensure repayment of loans, whereas a factionalized structure would very likely have a good deal of trouble in monitoring default rates. On the other hand, a centralized village power structure is much more likely to direct loans to its own privileged members and thus leave out more of the small farmers than would be the case in a factionalized community, where competing leaders could spread loans more widely to build and cement their followings. This incentive toward equity would be even more pronounced in an electoral situation, where rival factions could offer loans as part of their effort to entice the votes of small farmers. This brings the danger, of course, that the borrower may think his reciprocal obligation discharged by voting for his patron rather than by repaying the loan.

Patron-client relationships of the sort described are extremely important in many societies. Where insecurity is common, attachment to some more powerful figure or family can provide some margin of security. We do not want to idealize the relationship, or the conduct of "patrons," for the balance of benefit certainly rests with them and the relationship can be quite exploitative and denigrating. At the same time, it must be appreciated that the relationship is complex and not without functional features for clients. Such ties have economic, social and political ramifications and may not be broken for short-run economic reasons alone. The responsibilities of the patron are numerous and often include provision of production or consumption credit. Displacing him by a lending institution as a source of credit may be desirable from certain policy perspectives, but other sources of benefit for the small farmer may also be cut off thereby. Patron-client relationships at the local level need to be considered extensively and accurately by change agents coming from outside the community.

A local community is, despite whatever cleavages or conflicts exist, an entity in which some mutual benefits derive from maintaining at least a minimum of social harmony. The prevalence of rituals and festivals in farm communities around the world gives evidence of this. A community has its own calendar of seasonal activities, generally coordinated with ritual activities connected with the agricultural cycle. Such coordination may be necessitated by seasonal peaks in labor requirements and traditional mechanisms for allocating the labor supply. Credit programs tied to new production practices, especially those demanding more labor, may upset seasonal ritual and social activity and threaten the social organization of the community as a whole; resistance to such practices has an objective basis and should be understood in such terms.

*Attitudes and values of borrowers.* Without knowing something about the values, attitudes and beliefs held by particular groups of farmers, it is impossible to understand how they will respond to formal credit programs. Attitudes toward work and division of labor, toward time and thrift, toward credit and

indebtedness, toward government in general, are all critical factors influencing the farmer's use of credit and his willingness to repay.

Values relating to work and leisure condition both the kind and amount of activity that requires credit. In some societies, hard work signifies low economic status. To recommend that a man improve his economic condition through additional labor in his fields may sound like poor advice when *he* thinks that making a good marriage is his only real hope for improving his status; and he may be more right than wrong, given the possibilities he confronts with limited factor endowments. Attitudes vary considerably toward different types of work. An interesting example, cited by Roberts, indicated that some groups in Zambia relegate agricultural endeavors to the provision of subsistence, while wage labor supplies their cash income. Consequently, little investment is made in agriculture. This seems to be quite important in places where men regularly migrate to the cities or mines as laborers, and of course it affects the demand for agricultural production credit. In regions where cattle raising competes with crops, it is not unusual to find that men gain greater prestige from their cows and leave as many of the agricultural chores as possible to the women. This generally means that men have only a minimal interest in improving crop production and may well resist changes which would require additional time, labor, and managerial inputs. Sexual divisions of labor can rather rigidly define some tasks as feminine and others as masculine. For a man to do a woman's job may subject him to severe ridicule; yet this is what some of the supervised credit programs involve.

Time concepts will also affect borrowers' approaches to agricultural innovation and credit use. How long, for example, should a farmer work in his field? New agricultural practices associated with credit programs may well exceed what are culturally defined limits on how long certain tasks should take; spending more time at them can expose the farmer to ridicule. Each culture has norms prescribing what is a proper use of time, norms which it may take an outsider years to fully understand. The attitude a farmer has toward a credit program will be influenced by the extent to which its agents understand, for example, how long a visit constitutes a "proper" or "respectful" visit. Agents who do not spend "enough" time with a farmer when they come to see him will be seen as rude.

Attitudes toward thrift vary significantly from one individual to the next, but such attitudes can become cultural norms so that variations between groups of people become important. Penny[1] found significant differences between Javanese, who spent larger amounts of money on food-stuffs as their incomes increased, and the Karo Batak, who spent little of their additional incomes on foods, clothing or housing, preferring to save increments in income in order to invest. Swift[2] notes that among some Malays, expenditures on watches, bicycles, radios and fountain pens were thought proper only for young men free of family responsibilities; husbands were not expected to show an interest in such items. It should be noted that living up to certain community norms for prestige, attained by certain forms of consumption, can have economic advantages, as one who conforms to the standards of a higher group may be able to achieve some of the advantages of that group in its economic relations with others. Expenditures for "prestige" thus are not necessarily only for "consumption" purposes but can have productive consequences for the individual at least, if not for the community.

Investment choices, such as whether or not farmers will choose to invest in cattle or chemical fertilizers, are certainly influenced by the expected economic returns but also by the norms and social pressures of peers. Some Malays, for example, value property, in the form of cattle, more than increases in daily cash income which is readily spent without giving lasting value.[3] Absolute increases in current income may or may not be valued in and of themselves; conversion of income into particular types of goods is often necessary before additional income is valued. The degree to which such conversions are possible will certainly influence farmers' motivations for adopting practices which offer to increase their income.

Substantial economic gains often incur jealousy on the part of others, and the result may be social and economic sanctions against the progressive farmer. This is particularly true if other members of the society customarily believe that such a farmer's gains were made at their expense. In other cases economic equalization is maintained through extensive social obligations, through the expectation that the more well-to-do must be generous to anyone in need of financial assistance, or through ritual obligations. It is through such assistance that a farmer converts economic goods into status within his society. Though it may appear ironic to outsiders, such mechanisms can offer incentives for agricultural innovation and for the productive use of credit along with their social security function. Should misfortune befall a family in any given year they can rely on the redistribution of wealth by those who were successful, which reduces risk aversion.

An extremely important difference in attitudes from society to society relates to the meaning given to credit. In many areas, Shakespeare's admonition, "Neither a borrower nor a lender be," has constituted part of the folk wisdom about credit for hundreds of years. For some, indebtedness is seen as a sign of failure and a reflection upon a man's ability to provide for his family. For others it may signify the establishment of a reciprocal relationship defined by certain rights and obligations, often the latter more than the former. To those who provide credit, it is usually viewed as an input which can assist the farmer. To call it "debt" arouses unfavorable emotions—one ought not to burden poor people with debt.

One of the significant facts emerging from numerous Spring Review papers is the lack of trust farmers have in government agencies. The reasons cited are generally related to inefficiencies of such agencies in meeting farmers' needs: the farmers frequently believe that credit will be given too late to be useful, or that inputs will not arrive on time. Such beliefs may or may not be based on fact in a literal short run sense. But it must be remembered that the distrust displayed toward government-sponsored credit programs is often rooted in a long history of antagonism between centralized power and the rural population. In the past, center-periphery relations have frequently been characterized by taxation, military or labor conscription, corruption, etc.,with few services going to the periphery. This would be true of colonial as well as indigenous rulers. The changes in these relationships which are now occurring under the impetus of modernization and economic growth are largely new to the peasantry. Governments are trying to move into activities which were formerly under local control, and a critical question arises as to the legitimacy accorded to

government programs by the intended participants. So long as the government is seen as distant and voracious, and so long as its locally visible representatives do little to establish a new image (whatever the policy intentions as seen in the capital), it is unlikely that farmers will view the new programs as instrumental in meeting their needs.

A number of governments are clearly trying with some success to redefine the relations between government and farmers, partly in an effort to gain political support and partly to modernize agriculture. Such efforts are often expressed in promises of benefits to farmers, and credit programs may be viewed as government grants or gifts in fulfillment of these promises. In this setting, it should not be surprising that many farmers do not expect to repay loans.

*Culture of the Lenders*

The behavior of lenders in the credit relationship affects the way farmers respond to credit availability, and it can only be understood after looking at the influences of lenders' attitudes, goals, rules of behavior, and forms of organization. This means looking at the creditors' "culture". To see how credit programs for small farmers really operate, one needs to look at the broader setting within which the programs function. Most credit officials have little or no influence over this setting but must work within the constraints and opportunities it creates. The particular environment is generally accepted as tacitly by the officials as any peasant farmer accepts his environment and the values it holds forth as given. The social organization and the attitudes prevailing in this credit program environment shape behavior, and also the way credit agents view borrowers and their own work.

Credit agencies operate as one element of the government's banking programs, which is to say that they generally lack autonomy and must be responsive to pressures originating outside their organization. Governmental or policy changes are frequently marked by drastic reorganization of credit institutions or the creation of totally new programs. Changes within the government can also expand or curtail the amount of funds available through the credit agency or the terms on which funds are made available. In some cases, the credit agency is dependent upon particular ministries or departments for supporting activities. For example, credit tied to the introduction of new farming practices may require coordination between the credit agency and the Ministry of Agriculture, and this coordination may simply be unachievable because of ministerial rivalry, interbureaucratic ill will, or the like.

The goals and targets of a credit program will generally be determined by the sponsoring government, or by an international agency if it provides support for the program. Though the ends of external sponsors may be compatible with those of the local community, the instrumentalities and priorities can be quite out of phase with the needs and preferences of the local population because the focus of decision-making is quite removed from the micro level. When outside pressures result in discontinuities or curtailment of credit operations, this will generally not be seen as a "social" or "cultural" condition; but it reflects culture-bound means of operation every bit as "irrational" to the farmer as his behavior may often appear to credit agents.

*Social organization of lenders.* While the forms of organization differ among various credit agencies, they can be described as "bureaucratic" with at least as much confidence as the farmers' communities can be called "traditional." Bureaucratic organization of credit programs implies that they have a formal organization chart which establishes a hierarchy of positions. Authority flows from the top down, and the delegation of power may be such that actual control remains at the top on the underlying assumption that knowledge and ability increase as one goes up the hierarchy, and that the whole represents a system which should operate smoothly through a chain of command. Formal procedures minimize ambiguity in decision-making and presumably standardize the activities of the agency. These procedures are determined by the authorities or experts at the top who are most distant from the actual relationship with the borrowers. The nature of these procedures can generally be described as meeting criteria important to the internal functioning of the credit program; to the borrower, and perhaps even to the field representative, they are appropriately called "red tape." For example, there is a penchant for government programs to require large amounts of information, more than can reasonably be used. Credit programs send written notices to farmers who neither read nor write.

In a bureaucratic system the requirements for staffing the organization chart are also formalized. There is considerable concern with the level of formal education achieved by staff members. College degrees become badges for ascriptive status, crowding out consideration of promoting less-educated staff members whose only claim is achievement or accomplishment on the job. Almost every discussion of credit programs mentions the need for more qualified staff members. But members of the educated elite, usually drawn from urban areas, have difficulty in communicating with the rural poor or in winning their confidence. Increasing the educational levels of staff would presumably add to these communication problems. Performance criteria in staffing tend to give way to formalistic criteria, to the detriment of the credit program which needs persons who can understand the farmer's language, community, perceptions, and needs.

Bureaucratic culture can become rigidified from either the top or the bottom. Whether or not staff members are expected to address their superiors formally, how much time can be spent in informal or unstructured discussion of program problems, how rigidly deadlines for particular activities are enforced—all of these hierarchically imposed norms of behavior affect the morale of the staff and the factual knowledge that program leaders obtain from their subordinates. If credit is late in reaching the farmer and this becomes a consistent pattern, then it also becomes the "norm" supported by informal understandings and unofficial rules followed by the personnel. Changing this pattern can be as difficult as altering the "traditional" planting date for a particular crop. On the other hand, formal organizations which are supposed to be responsive to direction from the top have informal means of circumventing superiors' requirements. Thus, an innovative leader at the top of the agency may be as frustrated by the behavior of his staff as his field agent is frustrated by the persistent activities of small farmers, neither group being very responsive to what they see as "outside" interference in their life routines.

*Lender attitudes and values.* Staff members from an educated elite very likely will have an attitude of superiority to their clients and be reluctant to spend

much of their time in the field, for they aspire to a white collar job and find visits to small farms demeaning. These feelings, whether inadvertently or openly, are communicated to farmers. Other attitudes are also communicated to the farmer—whether or not the agent sees credit as a productive input for agriculture, as a transfer payment, or as an effort to gain political support in the rural sector. Ethnic differences between lender and borrower can exacerbate the effect of negative attitudes. It is common for field officers to adopt an impersonal and official stance (even uniforms in some cases) vis-à-vis the borrower, thereby hindering communication of a two-way information flow.

Credit program administrators expend much effort in finding ways to reduce risks. One method is the effort to organize farmers into cooperatives which will borrow from the credit agency and take responsibility for lending to individual farmers. One result of this practice is a diffusion of the responsibility for risk of failure if the loans are not repaid. Quite irrational incentive structures can be created for the farmers in this way which may not be perceived by the lending organization.

Another risk-averting method is close supervision over the granting and use of loans. The assumption is that farmers would not use credit for productive purposes without supervision, and thus would be unable to repay the loan. Low default rates are widely regarded as a test of performance in such programs, one that has an aura of objectivity and exactitude. Increase in the agricultural productivity of clients might be a more meaningful measure to use, but a much easier one is the default rate which requires little work outside the administrative headquarters building. The credit agent's retention and promotion then come to depend on keeping down the default rate in the portfolio he is managing. The agent responds by averting risk, which means taking steps not only to minimize the defaults but—since these cannot be eliminated—to be in a position to show that any defaults happened despite his having observed the proper precautions.

For these reasons, loan agents will seek to lend only to "creditworthy" people. In urban banking procedures, elaborate loan application forms requiring much information on a firm's business are used to estimate creditworthiness, and collateral provides an element of security to the bank in the event of default. When the would-be borrowers are farmers, it is the more educated, larger-property owner who can most properly fill out the most impressive looking application forms, and who is most likely to have a clear legal title to a valuable piece of land for use as collateral. Further, he is more likely to feel at home in a bank, and to have the kind of appearance and behavior that would convince an educated loan agent of his respectability—ergo reliability—than is the smaller farmer. Thus there is a cultural bias here toward lending to larger farmers (added to the economic and political pressures mentioned earlier that work in the same direction), and this remains true even though it is reported from a number of countries that it is the big farmers who are responsible for the largest share of defaults. A cultural perspective on lenders' behavior suggests that complex application procedures and the evaluation of creditworthiness have more than a few elements of ritual, whereby a greater probability of success in hazardous undertakings is thought to be assured if all the prescribed practices are strictly adhered to. Supervision to ensure that loans are used for approved purposes may

also have a ritual element. (The instrumental value of various banking procedures will be discussed in more detail in a later chapter.)

One aspect of bureaucratic values is that the central concerns of credit programs come to revolve around financial aspects of their operations. Evaluations tend to concentrate on efficiency within the organization and on items recorded in the bookkeeping. Less attention is given to actual changes which occur on borrowers' farms. Very little data were reported in the Spring Review papers which could measure the increase in production achieved through the use of credit, or the effectiveness of introducing new farming practices. Such data are difficult and costly to assemble in any reliable form, to be sure; but there is also a cultural—i.e., organizational and attitudinal—bias involved. For whatever reason, the result is an encapsulization of the program, whereby the internally accepted norms displace and substitute for external standards.

*Interaction Between Borrower and Lenders*

It is apparent from the foregoing that neither the farmer nor the credit agency is as responsive to the other as to the particular set of risks and considerations operating on each separately.

In the context of the borrower-lender relationship, it is the credit agent who acts as the expert. This consistently places the farmer in a dependent, client position, no matter what his status within his own community. The field agent may have received a degree in agriculture, but his knowledge of farming is often restricted to that gleaned in the context of formal education if his own background is urban. He believes in the technological package that he is "selling" to the farmer because of his educational background. It probably falls outside his responsibilities to conduct field trials under the farmer's conditions, and he probably does not know precisely how to allow for variation in farming skills possessed by individual farmers. The farmer does not have a scientific education, yet he does have some practical expertise. He can rely on his own experience and a personal, intimate knowledge of his farm. He is also more fully aware of other limiting factors operating in his area such as marketing conditions, availability of labor, the likelihood of poor weather, and so on. The two individuals in the credit relationship will have different images of what the economic possibilities are and what are the critical limiting factors.

The real economic opportunities will remain obscure to both the farmer and the field agent until the package is actually tried. But if the relationship is predominantly an expert-to-client interchange, the flow of information will go in one direction only. The farmer may be intimidated by the status differential. He may adopt a subservient stance vis-à-vis the agent, accepting formal education as a sign of superiority, as does the agent himself. The farmer then asks few questions and raises few issues on his own initiative. At the same time, the failure of the agent to deal with the questions that concern the farmer may represent incompetence or an incomprehensible approach from the farmer's point of view. The farmer will not trust the agent's understanding of his farm or the other factors which limit his ability to improve his financial situation. To the agent, the farmer must appear simply ignorant and unappreciative of the scientific knowledge he brings.

It is always the borrower who must speak the lender's language, whether it is a question of differing dialects or the use of different kinds of words, and this

can introduce misunderstandings and distortions into their relationship. The farmer may well view the credit agent as a "patron" of sorts and expect a wider variety of services and favors, while the credit agent sees his client simply as a borrower and is unprepared to become involved in local political affairs, in extending the period of a loan, or in supplying transportation. From the creditor's point of view, such activities would represent a deflection from his purpose or even a form of corruption. Particular aspects of the supervision process can create a negative response on the part of the borrower. Surprise visits to his farm may be demeaning, or simply inconsiderate if he feels obligated to extend hospitality in ways that are not easy to arrange on the spur of the moment. In societies where great respect is accorded to the elder person, accepting instructions from a young field agent reflects badly upon the older man who receives such advice and supervision.

*Implications of the Cultural Gap*

The materials above indicate, in sum, that any number of things can go wrong in farm credit programs as a result of the pervasive cultural gap between lenders and borrowers. Most of this chapter has been devoted to the negative side of that relationship. It has tended to stress the farmer's outlook, and the damage done to credit programs by failures of bureaucrats to take account of that outlook. This emphasis is intended as a corrective to the usual tendency to look at problems from the other side. Credit programs are analyzed at length in the literature from the standpoint of economists or administrators, in writings addressed to persons with an urban-based education, but seldom if ever from the point of view of the small farmers. The latter do not publish articles or books, nor are they consulted in the design of credit programs or in conferences on the subject. But it is their responses, or failures to respond, to activities which affect them that will cause these activities to succeed or fail. The purposes of credit programs may be various, but they all have at least one common denominator: they are intended to bring about changes in the behavior of small farmers.

Thus it is necessary to explore the behavioral qualities of the farmer-borrowers and those of the bureaucrat-lenders; and in light of the generally disappointing record of credit programs, it would appear that a good many of the difficulties encountered can be attributed to aspects of the cultural gap. But it is not sufficient to describe and analyze a mountain of difficulties, while assuming that cultural realities are impervious to change. Persistent they may be, but not immutable in the conditions of change that are already underway around the world. The problems associated with persistent behavioral characteristics are very real, and any attempts to institute credit programs will confront them. The challenge is to find ways of shaping the responses of farmers and bureaucrats so that they may lead to desirable rural development, and to avoid investing resources in programs that are foreseeably doomed to frustration or will result in rural disorganization and unrest.

Some observers, notably "hard shelled" economists, may become impatient with the anthropologists' elaborations of cultural barriers to economic progress, and feel that whatever their origin these barriers would melt away if economic incentives were strong enough. For example, if farmers fail to adopt innovations this may be chiefly because they are insufficiently profitable; if a 25 percent gain in profits will not do it, then perhaps 50 percent would be more persuasive,

or it might take 100 percent. The anthropologist would reject this view as one-dimensional and superficial, misleading as a guide to change, and potentially destructive of village societies in its implications. Both parties to such a dispute would, of course, be jealous of the importance of the functional relationships of their areas of expertise. The position taken here is that we support the goal of economic progress—more emphatically than some anthropologists—but we would suggest two points. Even if "everyone has their price," credit agencies may have difficulty in paying the required price for behavioral change from their scarce financial and technical resources if they rely only on farmers' spontaneous profit incentives. Second, the use of such resources is filtered through the bureaucratic cultures of agency staffs, and these cannot be reshaped by fiat into ideal forms for achieving developmental goals.

A constructive response to some of these anthropological findings might be the following. Let us assume that increased farm production is an objective that should be generally acceptable to economists, administrators and farmers alike if it can be managed to everyone's satisfaction; that it is a basic ingredient in anyone's definition of rural development; and that credit can be an aid to production. We must also assume that there is a cultural gap between farmers and the credit agency (cum extension workers) such that it can distort or nullify production incentives, impede the flow of technical information, and lead to misuse and non-repayment of funds. There are certain kinds of pitfalls that could be avoided if policymakers paid attention to the village cultures of their intended clients. If new crops or new methods of cultivation interfere with established sex roles, with village ritual calendars or other customs, then productive accommodations should be obtainable if the farmers' views are treated as worthy of consideration. Similarly, if customary banking procedures interfere with timely, appropriate loan extension, accommodations should be possible. But in either case, and regardless of which party must in the end concede most to the other, the most productive accommodations will not be reached without some kind of meaningful and positively oriented communication. How is this to be attained?

For all that can be said of the shortcomings of a bureaucratic culture, it is hard to imagine how large scale undertakings can be accomplished without some of the familiar aspects of hierarchy and orderly regulation. Even though they may induce non-communication, they seem necessary where money and policy direction are involved. But within the apparently inevitable bureaucratic organization the voice of the small farmer must somehow be heard, and also heeded. Mere communication of voices across the cultural gap will not be enough, for it might only show more clearly to each side how little the other side really thinks of them—and how stupid such opinions therefore are. The voice of the small farmer must be listened to with the aim of finding—among other things—workable productivity incentives.

To produce communications that might be heeded, several devices can be considered: forming farmers' organizations with the capacity of communicating upward (hardly novel, and the gap may still remain); extending the bank hierarchy downward by employing village agents; motivating bank staff toward two-way communication with clients, starting with instructions followed by promotions and perhaps bonuses based on positive field results; influencing

top policy with appropriate studies of client cultures by disinterested specialists outside the bank; inclusion of villagers on bank boards of directors (reportedly tried in Colombia with little effect). Some would say that major political change is needed before the voices from below will be taken seriously; but once the revolution is over, bureaucrat-villager communications would still be problematical for the familiar cultural reasons, and would be as necessary as before—if not more so. The devices mentioned here are less than complete remedies for communications problems, but they indicate policy directions worth exploring with the cultural gap in mind. Farmers' associations, village bank agents, bank staff incentives, and related matters will be taken up in Chapter 10 in a different context; their communications aspects should also be kept in mind.

*NOTES*

[1]D.H. Penny and M. Singarimbun, "Economic Activity among the Karo Batak of Indonesia: A Case History in Economic Change," *Bulletin of Indonesian Economic Studies,* Canberra, Australian National University, February 1967, p. 31.

[2]J.G. Swift, "Capital, Saving and Credit in a Malay Peasant Economy," in *Capital, Saving and Credit in Peasant Societies,* ed. R.W. Firth and B.S. Yamey (Chicago: Aldine, 1964).

[3]Ibid., p. 138.

# 7 *Credit Program Goals and the Evaluation of Program Results*

As the reader will have noted in the many criticisms of the foregoing chapters, small farmer credit programs are a difficult undertaking with many possible causes of failure. The estimation of success or failure in any given program is a complex matter, requiring not only a knowledge of the facts of a program's performance but also a set of criteria for success against which these facts can be judged. AID and other agencies which finance such programs have developed formal procedures designed to assemble the relevant facts and to measure them against conventional criteria in order to make performance evaluations. Such evaluations indicate how effectively an agency's money has been used; they can serve as the basis for policy inferences in planning future program support; and, when evaluations are conducted during the life of a project, they can enable administrators to remedy the project's current weaknesses by appropriate actions. But despite much thought and effort that have been given to developing evaluation methods, the procedures are fallible in many respects. One of the principal problems is the assumption of program goals to be used as criteria for success in evaluation. Such assumptions are the focus of this chapter.

The Spring Review, because of its general purposes, gave considerable emphasis to program evaluation. The Spring Review reports on credit programs followed an outline which called for answers to a number of searching questions on the performance of these programs and the ways in which their results could be evaluated. The portion of this outline that came under the heading of evaluation included the following topics:

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This chapter, apart from its introduction, was extracted from a paper by Judith Tendler of the Center for Advanced Study in the Behavioral Sciences, Stanford, California. It centers on the nature of the commonly accepted goals of small farmer credit programs, and the problems these present for the evaluation of a program's performance in the attainment of such goals.

III. Evaluation
  A. Performance
    1. Apparent uses of credit (the formal record)
    2. Effects on:
      a. Production, farm income
      b. Technology
      c. Savings
      d. Employment
      e. Political and social structure
    3. Progress toward other objectives
    4. Image:
      a. Farmer attitudes
      b. General image of program
  B. Evaluation Procedures and Feedback:
    1. Program evaluation procedures
    2. Feedback, changes in program
  C. Problems:
    1. At government level
    2. At agency level
    3. At farm level
  D. Conclusions about small farmer credit. The final section on conclusions had further subheadings asking about general aspects of farm credit as they appeared in the country in question, terminating with the query: How could the program be improved?

The responses in 60 reports to this array of questions are difficult to describe. There were a number of thoughtful statements representing efforts to deal with the complexities of various national situations, and it is not possible to do justice to them here. Some of the specific questions often could not be answered very fully due to the lack of information, and others were answered in various ways depending on the interests of the authors and sometimes on the degree of their detachment from program activities, their willingness to generalize or speculate, etc. Almost all programs were found wanting in one respect or another, as could be inferred from preceding chapters; but how many of them should be given bad marks, or characterized as "failures," depends very much on the criteria used in passing judgment. Several different kinds of criteria were used in these evaluations, and were given varying weights by the authors of the reports.

Rather than attempting a systematic summary of the contents of this mixed bag of evaluations, the remainder of this chapter will discuss the evaluation process and its implications for policy and program design, using examples from the Spring Review. Emphasis will be given to the areas of conflict or consistency in the principal goals, i.e., the assumed purposes of small farmer credit, on the basis of which credit programs are evaluated and their successes or failures assessed. The over-addiction to certain goals, and the neglect of aspects of credit programs not contributing to these goals, will be examined.



BEST AVAILABLE

*Program Goals and Their Problems*

The objectives or goals of small farmer credit programs, and the concerns about their performance, seem to fall into three broad categories. One has to do with the economic efficiency of the activities financed by credit; a second with the ability of a program to serve a hitherto neglected portion of the rural population; and the third with the financial viability of the institution through which funds are administered. The three can be referred to as the pursuit of efficiency, equity, and institutional viability. They are basic to almost all small farmer credit programs—explicitly, or implicitly in the positions taken on certain issues as discussed below.

Most of the issues around which the usual program evaluation has revolved—default, interest rate, supervision, profitability, lending criteria, technology, etc.—do not belong exclusively to any one of these three categories. Indeed, different policy positions with respect to these issues were expressed frequently in the Spring Review workshops, depending on the goal context from which a person was speaking. Substantial default rates, for example, were considered highly undesirable, and to be avoided at all costs, when one was concerned about institutional viability. At the same time, however, some participants felt strongly about not overemphasizing default when they were speaking out of an equity concern for accomplishing a transfer of income to farmers that was considered otherwise difficult. Similarly, raising of the interest rate on small farm credit from subsidized to market levels was persuasively argued when one has the viability of the credit institution or the efficiency goal in mind. However, the interest rate also enters into equity concerns: subsidized low interest rates for the benefit of small farmers were considered by some to be one of the more politically feasible avenues of subsidy (this argument loses force when most of the subsidy reaches large farmers, as is frequent).

The issue of lending criteria also elicited varying responses in the workshops depending on the goal context of the moment. With institutional viability in mind, the credit institution's preoccupation with estimates of repayment capacity in the selection of borrowers was considered justified. The issue takes on a different cast when couched in terms of efficiency goals: if the technology is right, ability to repay will be a function of the successful application of a profitable technology, and not necessarily of the pre-existing repayment capacity of the borrower. A look at borrower selection through equity "lenses" brings yet a different response. Lending criteria based on concerns about institutional viability would be seen as resulting in the exclusion of the less-established farmer, thus undermining the basic strategy of such institutions. From this point of view the problem must be dealt with by the imposition on the institution of rigorously equity-oriented criteria for lending to small farmers only.

Much of the controversy in the discussion of small farmer lending results from the different answers that these three different goals evoke. Indeed, the disappointing results of many programs, as reflected in their evaluations, may be caused to some extent by the failure to recognize that their underlying goal structure is quite problematic. It is not that the basic goals of efficiency, equity, and institutional viability are mutually exclusive, or highly incompatible. Rather, the pursuit of any one of these goals will often require significant compromise of another, or a reworking of program design so as to cause less damage to the compromised goal. If these goals continue to be put together in credit programs

as an inseparable threesome, then there needs to be some recognition and working out of the problems that result from that combination.

*Equity and efficiency.* The pairing of the equity and efficiency goals is particularly problematic. The CADU project in Ethiopia (Holmberg) provides a classic example of the kind of problem that can result from a failure to foresee the difficulties in combining these two goals. CADU was one of the few programs which was highly successful in promoting the adoption of modern inputs and increasing the yields of farmers. At the same time, it was just as much a disaster in that the adoption of modern techniques and the resulting increases in outputs led to an increase in the value of land, great interest in increased production by large landholders, and the resulting eviction of smallholders by those who wanted to consolidate their lands and cash in on the new innovations. The significance of this CADU outcome is that the disaster was a *direct result* of the success: an improvement in terms of efficiency was the direct cause of a loss in equity.

Such a possibility needs to be made explicit at the time the objectives of such a program are being laid out, so that various decisions can be made: whether certain losses in equity are a reasonable cost to pay for the projected gains in efficiency; whether there are other equity gains that might counterbalance the direct equity losses; whether there are ways of building into the program an assurance of these gains; and whether the equity-efficiency conflict might be diminished by, for example, altering the chronological sequence of the program design.

Small farmer credit programs frequently end up being damned for having failed on one of the two counts because, as may not be noted, it was successful on the other. The evaluation of the agricultural credit scheme of Sri Lanka (Gunatilleke) is another example of this one-sided damning. In contrast to CADU, the Sri Lanka program is criticized on efficiency grounds, though it seems to have made notable progress on equity grounds (see Chapter 2). Conversely, the credit programs in India for promoting the use of high-yielding varieties of wheat and rice made their success on efficiency grounds and, like CADU, were criticized for failing on equity grounds (Sen). Given the technology of the new seed varieties—the need for irrigation and the special sensitivity of output to divergence from recommended input proportions—it should have come as no surprise that the benefits of the Green Revolution were found to have been greater for the large farmers.

Another variation on the equity-efficiency bind can be found in the frequent exhortations to the efficiency-oriented credit banks to become more "development promoting"—for example, the Brazilian Bank of the Northeast (Meyer), the Caja Agraria in Colombia (Tinnermeier), and the Cooperative Credit Societies in India (Abraham). In other cases, development-promoting banks are exhorted to behave in a more efficient way. Again, both objectives had been initially announced as if they were perfectly marriageable forms of institutional behavior, thus precluding discussion of whether and how they could be brought together. Because of the generalized censure of credit institutions that occurs on either equity or efficiency grounds, evaluators do not look into the part of a program that was successful. The program or institution, in turn, doesn't get to sense its own strengths.

How is it that these goals came to be so readily paired, with so little attention paid to the task of reconciling them? It is not unusual that, in order to garner as much political support as possible, public sector programs are presented in terms of large, encompassing objectives that are difficult to achieve. It may also be that the lack of confrontation of this particular issue has to do with the difficulties of basic political and economic questions that cannot be avoided when one really grapples with the question. If one feels that equity and efficiency are dichotomous for a small farmer program, then one may have to entertain the idea of major diversions from the market mechanism in order to achieve any gains in equity. Or, pursuit of the efficiency goal could mean that equity proponents will have to be pacified with claims of a filter-down effect which, everyone knows, will not satisfy such proponents and, moreover, will not necessarily take place. Or, a small farmer program successful on equity grounds may signify an unavoidable change in the power structure of a region; the prospect of such change may not be tolerated by those with power to approve and fund the program—witness the fate of the Farm Security Administration program for small farmers in the United States (Hartman).

It is sometimes easier not to face these issues. In this way one doesn't run up against the supposition that the existing economic system might not be able to make inroads into the problem. As one evaluator said, agricultural credit "has the advantage of being relatively neutral politically" (Davis). Exposing the equity-efficiency conflict, for example, may require serious consideration of such non-neutral questions as land reform. For example, the designers of the CADU project had considered land reform an essential that would be required at a later stage of the program. But when "later" came, it turned out that the first stage of the program had, by its very success, helped to mobilize opposition to land reform. Had the question been grappled with seriously at the start, the program's designers might have understood the inevitability of such an outcome and, to prevent it, might have planned a different sequence for their program.

Sometimes development officials are found weaving the two warring objectives into their public rhetoric about a small farmer program at the same time that they are privately admitting to themselves and colleagues that these constitute an irreconcilable dichotomy. For political reasons, however, the dichotomy cannot be brought into the open. To gain support for programs, one must behave in public as if the two goals belong together, directing institutions to implement them jointly and reprimanding them when they don't. As a result the problem is never aired, and there is no chance for exploration of a middle ground where the two goals might be found to conflict less.

The difficulties of coping with equity-efficiency issues have been compounded by the policies of international lending institutions. Donor agencies have more and more required the pursuit of both equity and efficiency objectives in a credit program as a condition for their obtaining financial support. The donor world would better play its role by assisting borrower countries to work out the reconciliation of these two objectives, instead of encouraging their superficial and problematical pairing.

*A middle ground*, however, has started to emerge in the literature of agricultural economics, although it has hardly been acted upon in the world of policy. Recent studies, that is, have indicated that equity and efficiency need not be as opposed as they had seemed to be. The small farmer has been found to respond to innovations, given the right market signals. Rural savings, as well, have turned out to materialize more than was thought, given such signals. The major defaulters in many credit programs were found to be the larger farmers—a remarkable reverse in the image of the defaulting poor. These defaults, in short, turned out to be a function of the possession of economic power, not of the lack of it. Small farmers have been found, in various cases, to use resources more efficiently than larger ones. Economies of scale in agricultural production are turning out *not* to be the rule, as everyone once thought. Indeed, demands for continuous managerial decision-making, inherent in the biological nature of agricultural production, are now being portrayed as sometimes more easily met at the smaller-farm scale. Concentrating resources on the small farmer, in sum, does not necessarily mean that choices have to be made between equity and efficiency.

In view of this new learning about the economics of small farm agriculture, well-designed credit programs don't necessarily have to sacrifice efficiency in the course of striving for equity. The findings cited above show that, given a well-designed program, they might on occasion mix together quite well. This does not mean that equity can be gained easily, or in many circumstances, without some losses in efficiency. Rather, program designers must be careful to keep under control the tendency of social and political systems to produce efficiency-only outcomes. An efficiency-cum-equity goal is not unrealistic thinking. To make it come true, however, takes hard work and careful, foresighted planning.

*Goals After the Fact: The Coverage Criterion*

Evaluations of farm credit programs often contain criticism that amounts to an after-the-fact setting forth of objectives. The major example of such an implicit objective is the frequent statement that a certain program reached "only" a certain percent of the population. For example, in El Salvador, it was reported that "only 30-40% of small farmers" adopted hybrid corn (Davis). In Colombia, the INCORA program covered "only a little over 2%" of small farmers (Rochac). In Sri Lanka, the credit schemes "reached only 20-25%" of the farming population (Gunatilleke). In Brazil, the ACAR program of Minas Gerais covered "only 5%" (Meyer). Implicit in these statements was a judgment that the program should have reached substantially more farmers than the percentages achieved in the particular time period. Such a goal, however, is rarely stated as an objective at the beginning of agricultural credit programs—in part, perhaps, because of the above-mentioned avoidance of the equity-efficiency issue, in part because the cost would have then looked much too large.

If these judgments are to be applied retroactively, administrators should know about them from the start. It is important to have some kind of understanding about what the resources at hand can buy. If it costs several times more to get a fuller coverage of the farm population, and if that higher sum is completely beyond the realm of possibility in the time allowed,

then this is an important fact about the program to be undertaken. This might force policymakers and program designers to consider different approaches to the problem; or a program for a small percentage of the target population might be considered suitable as a first step toward learning about the costs, problems, and successes of such an approach (as is suggested by Davis).

In addition, the emphasis on a percent-covered criterion may obscure what methods actually worked and what didn't. After all, the 30-40% coverage achieved in the El Salvador case doesn't really seem like a failure. Perhaps there was a problem of not knowing how to change techniques for the remaining 60-70% after having experienced a success with the first forty. It is important to know whether that first forty really was a success or not, how it was accomplished, and what stopped the program from moving on to the rest.

*Goal Addiction*

The equity-efficiency issue is part of a more general obscuring of certain developments that occur when programs are measured against their stated goals. Goals sometimes become overly fixed, even if midstream readings indicate that the course might be altered somewhat, or that progress in an unexpected area might be pursued further and traded for lack of progress in a goal-related area. There is sometimes not enough "displacement of goals" as a result of experience, in contrast to the frequent case where public programs are criticized *because of* goal displacement—that is, a diversion from original objectives toward other ends considered less worthy.

One of the few cases of a constructive reevaluation of goals and means in midstream is found in the Ethiopian CADU study. Holmberg's report notes that grazing land was converted to wheat land by small farmers in the project area, resulting in wheat monoculture. This could have been regarded as a setback for the project's goal of diversifying agricultural production in the area and developing livestock production, considered by CADU to be most economically suited to the region. CADU officials, however, did not view this development unfavorably. The initial capital requirements for establishing cattle grazing production units were perhaps unrealistically high for people coming up from small farmerdom. The more divisible, less capital-intensive wheat, CADU reasoned, could be a vehicle by which incomes would increase to the point where investment in cattle capital was more feasible. The shift to wheat, then, was not looked on as a step backward, or away from the cattle goal, but as a move which would ultimately facilitate the development of cattle grazing. This altering of program goals in accordance with new information obtained from experience in the program seems to have occurred rarely, and to have been hindered by an excessive adherence to initially stated goals.

Another example of change in midstream—with a somewhat different lesson—is the CIBA-BIMAS contract in Indonesia for aerial application of pesticides and bulk supply of other inputs (Hansen). Before the Indonesian government entered into the contract with the Swiss chemical firm CIBA, it was encountering various problems in the so-called BIMAS rice program it was sponsoring. Fertilizer and seeds were not reaching many farmers or were not properly used. The pesticide aspect of the program in particular had been working badly; farmers either didn't see the reason to use pesticides or didn't use and

maintain well their hand sprayers. Other problems related to the instability of input and output prices and faulty delivery systems for inputs. In response to these problems, the government entered into a contract with CIBA for the large scale provision and delivery of standardized packages of seeds and fertilizers, and for aerial spraying with pesticides. The contract specified fixed prices for these inputs, and delivery provisions which were supposed to work much better than the previous ones. The aerial spraying, of course, was to solve the pesticide problem in one fell swoop.

There was tremendous resistance to the CIBA program by the farmers, and the contract was cancelled two years after its signing. The farmers objected to the arbitrary decisions that aerial spraying imposed on their activities, and also to the nature of the input packet which they had to use: the proportions of fertilizers were rigidly fixed according to an average formula and allowed no variation to accord with the soil composition of any particular plot. Many peasants also disliked the new seeds. When the government terminated the CIBA contract, the packet program was replaced by a more flexible system permitting the peasant to select his input proportions within a maximum and minimum range. In addition, the government had promoted research into the development of a miracle-rice variety more adapted to consumer tastes and the production conditions of the country. The BIMAS story is remarkable in that it reveals two major policy changes in midstream in response to feedback from the program: the decision to undertake the contract with CIBA, and the decision to abandon it. As described in the BIMAS paper, however, it is presented as a story of failure. But in comparison with other studies of small-farmer programs, the BIMAS story stands out as a remarkable case of sequential learning and action.

*Goal-unrelated achievements.* There are many useful aspects of agricultural development and program strategies that seem to be unrecognized in evaluation reporting because they didn't directly pertain to the original objectives of a program. Either they didn't fit the standard criteria by which such programs are judged (percent effectiveness, default rate, increases in output, etc.); or, because failure had occurred with respect to an important objective, everything else that happened was considered secondary.

Tinnermeier's Colombia paper, for example, reports that the credit program probably brought about no significant changes in income or productivity levels "with the possible exception of small potato growers and small farmers in the more heterogeneous farm size areas where the new technology has become available." Why potatoes? Did heterogeneity play a role? How precisely did the new technology impact on this development? Is there anything about this exception which sheds light on the reasons for lack of significance in the bulk of the program?

The CADU paper (Holmberg), as another example, briefly mentions one interesting subject which was not given much attention in program evaluation. CADU was quite careful about the type of equipment it promoted. It shied away from sophisticated equipment and stuck close to the simple tools to which farmers were already accustomed—mainly plows and oxcarts. It also embarked on the production of improved versions of these implements, as well as

introducing simple harrows and threshers. This story stands in marked contrast to the more typical tale of the imported tractors, trucks, and sprayers which sit unused because of the lack of a spare part, of local maintenance know-how, or of maintenance capacity—as occurred, for example, in the Thai program (Gamble). It would be useful to know what kind of secondary effects occurred in the input markets in Ethiopia as a result of this policy, whether problems were encountered, and how the decision to proceed in this way emerged unscathed in a program sponsored by a developed country (Sweden) with a sophisticated equipment-producing industry.

*Political Importance of Agriculture*

It was noticeable that the Spring Review reports paid almost no attention to the question of mobilizing government resources for small farmer programs. The point of inquiry seemed to have started after the funds were granted, and concern revolved around how the monies were spent and repaid. Yet many issues which did receive the spotlight—the interest rate, default, lending criteria—gained much of their importance from the fact that they were crucial to the credit institution's supply of funding, and hence to its institutional survival. Of course, the objective of attracting outside funds could not properly be designated as a "goal" of credit programs, and it would be somewhat awkward for government-employed authors of evaluation statements to speak of "success" or the lack of it in this respect. Nevertheless, it is appropriate to conclude this review of credit program goals with a brief discussion of a factor which has an important bearing on a program's capability for success in attaining the more commonly accepted objectives.

Whether or not an agricultural credit program will continue to obtain the public funding that it requires, especially when it is directed to small farmers, will be very much a function of its political importance to government leaders. When the subject of political significance appears in most of the program evaluations, however, it takes on a negative light—political meddling, political causes for high defaults, or undesirable "welfarism." It is not recognized that some of the shortcomings of programs in many countries may be due to the *lack* of political importance of the agricultural sector.

The story of the BIMAS program in Indonesia is a good example of the impact that political significance can have. One striking thing about the story of the CIBA contract is that the program was so involving of the peasant population that it could provoke the widespread resistance that it did. It is impressive that this resistance, in turn, could claim the political attention that it did. It is difficult to imagine the president of, say, a Latin American country being impelled by political self-interest to visit the fields and discuss with the peasants their beefs about a credit program—as did the president of Indonesia.

What happened in Indonesia was a far cry from the quiet projects of many other countries—occupying small corners of their development programs for years, not achieving much, not provoking resistance, and not changing in response to their failure to achieve. No massive demands are made upon them to change what they are doing, as occurred in the Indonesian case, or to try some things they are not doing.

In general, many of the Asian programs give the impression of stirring things up and having wider and deeper impact than do, say, the programs of Latin

America. The latter countries have passed through a long period during which their development hopes were focused on some form of industrialization. Agricultural programs usually came second in such circumstances. Even with the recent shifts of policy emphasis from industry to agriculture, the sector has never become the focus of profound development aspirations and dramatic rhetoric in the way that industry has been. In many of the Asian cases, in contrast, one may note the more central position of agriculture in a country's concerns and budgets, the absence of industry as an overwhelming competitor for development attention, and the political weight of the rural population. Agricultural development policy—even if it has failed or has been ridden with problems—is a more first-class citizen in these countries in comparison to Latin America.

The political importance of small farmer credit programs in the Asian-type situation is not always more advantageous for such programs than the absence of political interest in the Latin American setting. The active interest of politicians has induced them to treat credit as a political tool, and this has often undermined the basis of loan allocation and the establishment of proper repayment obligations. But political significance should not always be looked upon as a debit. It can result in greater perceptiveness and responsiveness to problems, as in the Indonesian case, as well as a greater commitment to provide public resources. In this light, the negative aspects of political significance can be seen as the costs of obtaining a certain type of decision-making, and a certain commitment of funds, which are crucial to the success of a small farmer program. Once this aspect is looked at as a cost which yields some benefits, then one can start thinking of ways to minimize the cost, or maximize its potential benefits.

# Part 3
# Financial Institutions and Policies

# 8 *Rural Capital Markets*

*Nature of Rural Capital Markets*

Small farmer credit programs are only a small part of the rural capital markets in developing countries. Indeed, institutional credits of any kind, including loans from all types of public and private banks—which we will call formal, or institutional lending—reach a small percentage of the total farmers in most cases; only in Taiwan, with 95 percent coverage, does this value exceed 40 percent. A great many loans are provided informally to farmers by their relatives and friends; and a large proportion originates with informal commercial lenders such as local merchants, larger farmers—including landlords lending to tenants—and full-time moneylenders. Although sample surveys have been made of informal or non-institutional lending in a number of places, and such findings may be extrapolated into estimates for whole countries, it must be noted that rather little is known with any precision about informal credit, either in its aggregate values or in its distribution among types of lenders. Nevertheless it is of interest to see what some of these estimates look like, as shown in Table 3 which indicates the relative importance of different kinds of lenders.

Of the figures in the table indicating the scope of institutional credit, the percentages of farmers getting institutional loans (column 1) are somewhat more reliable than the shares of such loans in total agricultural credit (column 2), since the latter involve estimates of the national values for non-institutional lending. In particular, the institutional shares in agricultural credit estimated for Brazil, Chile, Colombia and Ecuador look too high, though the value for Costa Rica may be credible. Both measures point in the same direction: with the exception

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Table 3: Estimates of the Distribution of Agricultural Loans by Types of Lender

| | Institutional Loans (IL) | | | | Noninstitutional Loans (NL) | | |
|---|---|---|---|---|---|---|---|
| | % of farmers getting IL | IL as % of agricultural credit | % of IL Public | % of IL Private | NL as % of agricultural credit | % of NL Commercial | % of NL Noncommercial |
| **Africa** | | | | | | | |
| Ethiopia | 1 | 7 | | | 93 | | |
| Ghana | 1 | | 75 | 25 | | | |
| Kenya | 12 | | 60 | 40 | | | |
| Morocco | 10 | | 23 | 77 | | | |
| Sudan | 1 | | | | | | |
| Tunisia | 5 | | 90 | 10 | | | |
| Uganda | | | | | | | |
| Western Nigeria | 1 | 40 | 0 | 100 | 60 | 42 | 58 |
| Zambia | 0 | 0 | | | 100 | 1 | 99 |
| **Asia** | | | | | | | |
| Bangladesh | 15 | 14 | 100 | 0 | 86 | 39 | 61 |
| India | 20 | 30 | 87 | 13 | 70 | 71 | 29 |
| Iran | | 10 | | | 90 | | |
| Jordan | 8 | | 90 | 10 | | | |
| Malaysia | 2 | | 54 | 46 | | | |
| Pakistan | 5 | 14 | 100 | 0 | 86 | 27 | 73 |
| Philippines | 28 | 42 | 38 | 62 | 58 | 88 | 12 |
| So. Korea | 40 | 34 | 100 | 0 | 66 | 30 | 70 |
| So. Vietnam | 21 | 23 | 100 | 0 | 77 | 5 | 95 |
| Sri Lanka | 14 | 20 | 100 | 0 | 80 | 56 | 44 |
| Taiwan | 95 | 65 | 18 | 82 | 35 | | |
| Thailand | 7 | 8 | 87 | 13 | 92 | 39 | 61 |
| Turkey | 23 | 40 | 95 | 5 | 60 | | |
| **Latin America** | | | | | | | |
| Bolivia | 5 | | | | | | |
| Brazil | 15 | 83 | 80 | 20 | 17 | 65 | 35 |
| Chile | 15 | 85 | 86 | 14 | 15 | | |
| Colombia | 30 | 96 | 28 | 72 | 4 | 75 | 25 |
| Costa Rica | | 70 | 100 | 0 | 30 | 67 | 33 |
| Ecuador | 18 | 90 | 26 | 71 | 10 | | |
| El Salvador | | | 15 | 85 | | | |
| Guatemala | 2 | | | | | | |
| Honduras | 10 | | 23 | 77 | | | |
| Mexico | 15 | | 72 | 28 | | | |
| Nicaragua | 20 | | 83 | 17 | | | |
| Panama | 4 | | | | | | |
| Paraguay | 6 | | | | | | |
| Peru | 17 | 27 | 85 | 15 | 73 | 67 | 33 |

Source: Bank Policy on Agricultural Credit, World Bank, 1974, Annex Tables 2 and 3. All estimates of types of lender are based on sample surveys except in India where a national credit survey was available. Estimates of farmers getting institutional loans are usually nationwide, but some are from sample surveys; in a few cases they represent potential rather than actual borrowers in a given year. The line between private and public institutions may not be uniformly drawn: for example, farmer's cooperatives are treated as public in South Korea, while similar bodies are classed as private in Taiwan.

of Taiwan, where farmers' associations are functioning in virtually all rural communities, and of Costa Rica where the state banks have been very active in agricultural lending, it is probably safe to say that informal lenders supply most of the credit in rural capital markets. In most countries this will probably remain true for some years, although institutional credit for agriculture has been increasing generally and some displacement of informal credit has occurred; but the dimensions of the latter are clearly difficult to assess.

Estimates of the shares of different types of lender in the informal markets are necessarily even more sketchy. In a few countries rough estimates of the shares of commercial and non-commercial lending have been attempted (see last two columns of the table). These indicate that credit supplied by informal commercial lenders may be more important than loans from

relatives and friends in Latin America, but less important in Africa, with a mixed picture in the various Asian countries. (One may question these categories: for example, is a rich farmer acting as a "friend" if he helps out a poorer neighbor with a loan? He may charge interest, as is customary even among relatives in some places; how high an interest rate is unfriendly, and what kind of repayment obligation is involved?) The village moneylender-merchant seems to be a more important figure in parts of Asia than elsewhere, and in Latin America the larger landowners would seem to be best supplied with loanable funds. In Africa, neither group could be expected to supply as much capital.

More is known, of course, about the lending institutions which are required to keep written records and report to their governments. In the majority of countries, public credit institutions supply more credit to agriculture than do private banks, but this is not universally true; in Latin America more often than elsewhere, private credits predominate in some countries. (In some cases the private sector lending indicated in Table 3 may be extended to farmers by cooperatives rather than banks.) In every country there are some private banks supplying credits to at least the larger producers of agricultural exports, and to large farmers generally. But it is characteristic of private banks that they are usually not eager to lend to farmers, and certainly not to small farmers. If their agricultural loans exceed in value those of public institutions, it usually means that the latter are poorly developed in a particular country, or in some cases that private banks are required to maintain a minimum fraction of agricultural loans in their portfolios. Banks specializing in agricultural loans are likely to be public institutions; banks intended to specialize in small farmer credit are almost invariably public, or at least government-sponsored and supported in some way.

It is generally the case that institutional credit focuses on the larger producers, and this is true even in many public institutions organized to help the small farmers. Sixteen surveys of loan allocation by size of borrowers' farms are shown in Table 4, from credit institutions in the Spring Review Reports. Size categories are not comparable: in six cases they are not defined; in Taiwan and South Korea all the farms are small by any standard, and the other Asian dividing lines are all in the low brackets compared to most of Latin America. Only in the land reform agency of Colombia do the smallest farmers—undefined—get the largest value of loans (this is hardly typical of other institutions in that country). In ten cases larger farmers get the largest share of loan value, most often at an 80-90 percent level; in four countries (and possibly in South Korea) the largest share goes to an intermediate group. These are the results in institutions intended for small farmers, where small or medium farmers usually get the largest numbers of loans. In other kinds of institutions, the small farmers get very few loans.

In sum it would appear that the increases in total institutional credit to agriculture have been directed predominantly to the larger farmers. Whether or not this tendency has been generally decreasing over time, as it certainly has in some countries, its persistence remains an important fact of life in developing countries. The small farmer has very limited access to institutional credits: he has much greater access to informal credit, but this is probably used more to meet short-term consumption needs than for production purposes. The informal market is in any case poorly adapted for financing substantial medium-term investments. Thus, it appears possible that most small farmers obtain more funds for

Table 4: Percentage Distribution of Loans by Size of Farm

| Country | Number of loans | Value of loans |
|---|---|---|
| **Africa** | | |
| Kenya | | |
| Small | 98 | 41 |
| Large | 2 | 59 |
| **Asia** | | |
| Bangladesh | | |
| Less than 1 acre | 23 | 18 |
| 1-3 acres | 50 | 31 |
| More than 3 acres | 27 | 51 |
| India | | |
| Less than 2 acres | 16 | 16 |
| 2-4 acres | 35 | 25 |
| More than 4 acres | 49 | 59 |
| South Korea | | |
| 0-0.5 ha. | 36 | |
| 0.5-1.0 ha. | 35 | |
| More than 1 ha. | 29 | |
| Malaysia | | |
| Less than 4 acres | 36 | 18 |
| 4-8 acres | 48 | 51 |
| More than 8 acres | 16 | 31 |
| Pakistan | | |
| Under 10 acres | 40 | 23 |
| 10-25 acres | 45 | 46 |
| More than 25 acres | 15 | 31 |
| Taiwan | | |
| 0-1 ha. | | 26 |
| 1.01-2 ha. | | 47 |
| More than 2 ha. | | 27 |
| **Latin America** | | |
| Brazil | | |
| Less than 20 ha. | 17 | 1 |
| 20-100 ha. | 45 | 13 |
| More than 100 ha. | 38 | 86 |
| Bolivia | | |
| Small | 38 | 6 |
| Others | 62 | 94 |
| Colombia | | |
| Small | 93 | 62 |
| Medium | 6 | 21 |
| Large | 1 | 17 |
| Costa Rica | | |
| Small | | 10 |
| Others | | 90 |
| Ecuador | | |
| Less than 30 ha. | | 24 |
| 31-50 | | 41 |
| More than 50 ha. | | 34 |
| El Salvador | | |
| Less than 10 ha. | 85 | 7 |
| More than 10 ha. | 15 | 93 |
| Honduras | | |
| Small | 91 | 19 |
| Others | 9 | 81 |
| Nicaragua | | |
| Small | 90 | 10 |
| Others | 10 | 90 |
| Peru | | |
| Less than 3 acres | 49 | 21 |
| More than 3 acres | 51 | 79 |

Source: Spring Review reports. Some of these figures come from sample surveys rather than institutional totals.

production from their own savings, or from sale of their assets, than from either lending institutions or informal commercial lenders; and when such savings are supplemented by loans from relatives and friends the main source of such funds is still small farmer savings.

It follows that informal unrecorded savings, going directly into physical capital without intermediaries or with only the kind of small-scale unrecorded lending that occurs within farm communities, have been and probably continue to be the largest financial bulwark of smallholder agriculture in most developing countries. (Capital improvements to a farm obtained by labor time without financial outlay by the farmer are equivalent to those bought from his savings.) We cannot know very clearly what the savings or capital values involved may be, other than by applying some rough measure of inference based on market values of outputs (with farm consumption estimates included). But we can say that where small-holder agriculture looms large in a country's economy its farmers' savings are clearly of importance, presumably more so than could be inferred from the usual estimates of national savings values based on the kind of institutional savings that supply the quantified data for national accounts tables.

*Farm Credit Programs in the Rural Capital Market*

This static description of rural capital markets must now be supplemented by consideration of how they are affected by the introduction of agricultural credit institutions. As noted earlier, there has been a very considerable injection of capital into this type of institution in developing countries over the last two decades. In the thinking behind the expansion of institutional credit, it has been widely assumed that factor proportions in agriculture were badly distorted: too much labor, and too little capital. Transfers of labor out of agriculture, and a channelling of capital into rural areas, have been dominant themes in agricultural development policy. Farmers were assumed to be facing profitable investment opportunities, yet in need of inducements in the form of concessionally priced credit in order to make these investments. At the same time farmers were not thought to be capable of making significant savings. With these assumptions, it is small wonder that rural capital markets in most countries have experienced lopsided growth: heavy emphasis on bringing in credit funds from the outside, and little attention to rural savings mobilization.

Another outcome of these assumptions has been the adoption of relatively low interest rates for institutional loans, the consequences of which are explored in more detail in the next chapter. It seems likely that this policy has inhibited commercial banks, which are limited in what they could charge, from seeking to expand their loans in rural areas: instead, institutional credit has been brought in from government funds, or from funds supplied by external aid donors, concessionally priced to the farm credit agencies and passed on to the farmer at low rates. The greater part of such credit, as we have seen, has gone to the larger farmers, with the great majority of small farmers and many of the large farmers as well remaining dependent on informal sources. The existence of this low-interest credit, it is logical to suppose, has further discouraged other credit institutions from entering the rural market in competition with credit agencies that were getting their funds cheaply. It must also have discouraged the evolution of institutional savings that might have been forthcoming to augment rural loan funds (see chapter 12 below). And the low interest rates have held down the in-

come of the public-supported credit agencies, restricting their loan capabilities to the limited supply of concessional funds they could get, and involving many of them in operating losses that necessitated a flow of subsidies to stay alive.

If this analysis is correct, the result has been a perpetuation of dualism in rural capital markets. The public credit agencies were locked into their artificial and often precarious sphere, with other institutional lenders held back, but without any contact with or stimulus to improve in the informal sphere. The latter has remained, for the most part, as fragmented as before. There does not seem to have been the kind of healthy competition between the two spheres which might have invigorated the service to farmers, nor have there been new institutional outlets for rural savings to move into. Instead, a limited number of farmers have had cheap loans, subject to administrative allocation that did not ensure flows to the most profitable investments. Most farmers have simply saved or borrowed as before within the confines of the prevailing market fragmentation.

Thus, service to farmers has been spotty and inadequate and less than it could have been. Public capital that might have been deployed more productively has often been tied up in this operation, and made subject to depletion from operating losses when it might under other policies have become seed capital with potential for accumulation. Since the greatest beneficiaries have been the richer farmers, rural income disparities have probably been accentuated rather than moderated, and some farmers have surely received more capital than could be justified by social criteria while others did without. Such a harsh and sweeping judgement does not apply with equal severity to all credit programs, but it is valid often enough to call for a re-examination of the assumptions and premises on which farm credit programs have been constructed.

*Lender Characteristics: Formal vs. Informal*

We turn now to an examination of the differences between the two sectors of the dualistic rural capital markets. Generally speaking, the formal or institutional lenders supply capital to agriculture from urban sources (public or private) while informal lenders provide capital which is often rural in origin. The methods by which credit is made available to farmers in these two types of market offer a number of contrasts.

*In the institutional credit market,* the suppliers of loanable funds include private and public commercial banks, private and public savings and loan institutions, and specialized public financial institutions such as cooperative and development banks or agrarian reform institutions. (In addition, a few large farmers may get supplier credits from large input distributors.) Generally, all these providers of credit appear in rural areas as branches of large, urban-based institutions.

In the institutional markets most loans require that the borrower sign a promissory note that often demands a co-signer. Many such loans (especially medium and long term) also require a mortgage or other real collateral; collateral values may exceed the amount loaned. Nominal interest rates, normally subject to law or official regulation, vary from 4 up to about 25 percent annually, depending in part on the rate of inflation in the country. The largest concentration is in the 6-12 percentage range. Rates on agricultural loans are usually a little below the bank rates charged in other sectors, and are sometimes less than the annual rise

in the consumer price index. Most loans are short term (one year or less) but some medium and long term loans up to about eight years can be found. Application procedures vary among lenders but some form of commercial bank procedure predominates. The borrower goes to an office and answers questions submitted by secretaries; then he is filtered through various white collar employees and finally he talks to a loan officer or the manager. The borrower must present a series of forms (statements of financial condition, tax records, land titles, references, co-signers, etc.) all properly stamped. These forms will vary depending on whether this is the first loan he is requesting from the institution, whether he is a large or small farmer, and whether he has friends and/or influence in the lending institution. In many cases the borrower is asked to come back in a few days, a few weeks, or even a month or more to learn the preliminary decision on the loan application. Sometimes the farm is inspected by bank employees to evaluate the property and potential production.

*The informal credit market* consists of relatively localized transactions of money, real goods and services among friends, neighbors, relatives, shopkeepers, itinerant traders, landlords, and moneylenders. Many loans in the informal market carry no conventional collateral; here the guarantee for repayment is the verbal promise of the borrower. In other cases, however, there may be an informal mortgage on land, or *de facto* agreement that the farmer's crop will be sold to the lender. Almost all loans are short term, that is, one year or less. The interest rate charged may range from 20 to over 100 percent annually (see Table 6 below). The effective rates charged may be even higher if it were possible to account for "hidden charges." These could include: requiring that the borrower pay a premium for the privilege of receiving credit; lending in the form of a check that must be passed on to a third party to be cashed for an additional charge when borrower has no checking account; demanding repayment in kind for a loan made in cash and undervaluing the commodity received; demanding labor services for the favor of giving the loan; or giving no receipts, so borrower can be required to pay more than the original amount. On the other hand, informal lenders may supply various goods or services to the borrower.

The application procedure for credit from commercial lenders in the informal market is quite simple. The borrower talks directly to the lender about his financial needs. There are usually no forms to fill out, additional interviews to complete, no references to submit, no lines to stand in, no land titles to present, no taxes to pay or stamps to buy. Since the lenders and borrowers know each other, the borrower asks for credit directly without preliminaries and the lender usually accepts or rejects the request immediately. A 1965-66 field survey in Chile by Charles T. Nisbet revealed that 64 percent of informal borrowers received the loan the same day, and the rest from two to seven days afterwards.

The zones of operation for the informal credit market will vary somewhat depending on the type of lender. Relatives might travel up to 100 miles to carry out a transaction, and some itinerant traders will roam the countryside throughout entire provinces seeking clients. Moneylenders, however, tend to operate within rather small areas; and loans granted by neighbors and friends would normally originate in the same neighborhood. Generally, the informal zones of operation range from one-half mile to perhaps 15 miles depending on geographical conditions and population density. The informal credit market is found everywhere, around small villages and in dispersed settlements through the entire

Table 5: Borrower Characteristics for Chilean Informal and Institutional Credit Markets

| Characteristics | Informal | Institutional | Totals |
|---|---|---|---|
| Farm size: | | | |
| Less than 5 ha. | 60.0% | | |
| More than 5 ha. | | 89.4% | |
| Tenure type: | | | |
| Landless | 64.0% | | |
| Landowners | | 75.8% | |
| Education: | | | |
| 6 years or less | 93.4% | | |
| More than 7 years | | 53.1% | |
| Mechanization: | | | |
| Light or none | 86.7% | | |
| Heavy or medium | | 63.6% | |
| Gross output: | | | |
| Less than $650 | 62.7% | | |
| More than $650 | | 80.3% | |
| Total number of borrowers | 75 | 66 | 141[a] |

Source: Nisbet's Spring Review paper (Vol. XV, article 1, p. 41). The empirical evidence presented in the table was obtained from a sample field survey for the 1964/65 agricultural year covering the following types of farm operator: owners, sharecroppers, administrators, commoners, and renters. The sample was selected on a quota basis from these groups in the main agricultural provinces of Chile.

[a]The remaining 59 cases from the sample of 200 were either non-borrowers (35 cases) or farm operators who utilized both the institutional and the informal credit market (24 cases).

countryside. Informal lender zones exist next to, away from, and in the middle of the zones of operation of the institutional credit market.

Table 5 offers a comparison of the characteristics of borrowers in the institutional credit market with those of the informal market, in a survey sample in Chile, 1964-65. Over 60 percent of institutional borrowers were landowners, controlling more than five hectares of land, having more than seven years of formal education, working farms that utilize modern machinery and equipment and producing a gross output of over $650 a year. In contrast, over 60 percent of informal borrowers were landless farmers with no more than primary education, operating farms of less than five hectares with only hand tools and an occasional horse or ox, producing less than $650 a year.

Despite the higher interest rates and the potential for exploitative "hidden charges," many rural people prefer to borrow from informal lenders. Some of the reasons for this preference pattern among small farmers can be drawn from the farmers' own statements. The following were obtained by Nisbet during field studies in Colombia (1963), Mexico (1964) and Chile (1965-66).

(a) They [informal lenders] don't require so much, if any, paper work. (b) "He [informal lender] does not delay, he just says sign this note and take the money...all in the same day." (c) "Even though I must pay more interest

he [informal lender] gives me more time to pay." (d) Informal lenders are not as difficult to deal with, they speak the same language as the client. (e) "They [informal lenders] have more confidence in the small farmers." (f) A farmer often needs to anticipate his needs to obtain loans from the institutional credit market. (g) Loans from informal lenders "can be obtained more quickly and with less red tape." (h) "The bank is an all day trip from my farm while he [moneylender] is just down the road." (i) "He [village merchant] will also buy my crop at harvest time but the bank won't." (j) "The banks are just for the rich."

*Some advantages of informal lending.* Most observers of rural areas agree that informal lenders have an advantage over institutional lenders in terms of the risk of non-repayment of loans, due to their personal information about clients. Having been born and raised in the rural area the informal lender has accumulated this knowledge over time. An equal accumulation would be very costly for an institutional lender to obtain. Since the informal lender knows personally the farmer who comes to him for credit, he does not need to have him fill out an application form or even waste time talking to him if he is an extremely bad risk. An on-farm inspection is unnecessary because he already knows the size, condition of the farm, number of farm animals, etc. This type of information is available to most people who live within the rural community, and the informal commercial lender has the incentive to catalog mentally and to keep such data current so as to minimize risks.

The informal lender is able to adjust the terms on his loans to reflect the costs and risks peculiar to the loan situation. Often there are no legal barriers to a freely adjusted interest rate; but even with usury laws, lenders find ways to build an added risk into their loan charges. The borrowers may lack alternative sources of funds. Thus, the segmented informal lender market (imperfect competition on the supply side) and the lack of information (on the demand side) create and maintain differential rates of interest among informal lenders and for the same lender. The institutional lender, on the other hand, usually charges the same interest rate for all loan applications of a given category as a matter of policy, even if it is not required by regulation. There may, however, be closing charges or other aspects of loan terms where adjustments are made.

Typically, it is not as difficult for informal lenders to collect outstanding loans as it is for institutional lenders. On the demand side, borrowers tend to view the two loan markets differently. Usually the farmer gives priority to repaying a loan in the informal market, even if it takes longer than he had planned originally. In some areas many farmers may view the institutional credit as a kind of gift, or as a right to assistance from the government after hearing promises from politicians. On the supply side, the informal lender has more complete information on the true financial condition of the borrower, where he can be found, who his relatives are, etc. He can apply indirect pressures through his acquaintance with local personalities to whom the institutional lender has no ready access. Informal lenders, to be sure, do not have infinite capabilities for enforcing their demands; in many situations a moneylender may have to watch his step when he is unpopular in his community. Still, he is in a stronger position than a credit agency.

Administrative costs are typically lower for the informal than for the institutional lender. The institutional lender will buy or lease a piece of expensive

rural real estate, a section of the village plaza; a special building will be constructed or leased; plant and equipment will be purchased, which all adds up to substantial fixed costs. The informal lender carries out business from his home or farm, from his village store, etc., and purchases no special plant or equipment for his lending operations. The institutional lender will employ secretaries, bookkeepers, loan officers, bank managers, farm inspectors, chauffeurs and perhaps extension agents. The informal lender employs only himself, and when he needs information he goes to the farm for inspections.

Some institutional lenders provide services to the farmer in some aspect of marketing, either in crop sales or input supplies, or they may work through farmers' organizations that supply such services. Other credit agencies do not attempt to perform these functions, or if they do their performance may be inferior to that of the "non-institutional" services which the farmers continue to use. While a number of informal lenders provide no marketing services to farmers, a great many of the commercial variety of informal lenders are also traders—indeed their credit activities often grow up as a means of keeping their trading activities in motion. Whether on balance the credit agencies actually provide farmers with more efficient marketing service than informal lenders is a question we will not try to answer in general terms. However, the tendency of farmers in many credit programs to bypass the institutional alternative suggests that, at least for them, it seems less efficient.

*Some disadvantages of informal lending.* Once credit is granted, there is usually no further contact between the informal lender and borrower until time of repayment. What the borrower does with the funds or goods is normally of no concern to the lender, so there is an absence of supervision. Unless the lender happens to be a dealer in fertilizer or other inputs, he is unlikely to tie his loan to the purchase of such inputs as many credit programs do. Informal lenders do not provide technical assistance to their clients; often the informal lenders possess no technical agricultural knowledge themselves.

Within the informal lending process there is no explicit development goal that necessarily favors the economic improvement of the client. In some cases the informal lender might actually wish to promote the decline of his client so that he could acquire real assets, or accumulate labor services and other personal contributions (loyalty, voting support, etc). Public institutional lenders have no reason for any such negative intentions; indeed, the economic improvement of the small farmer is the rationale for establishing public credit programs. The disadvantage of informal capital markets most often cited is that the informal lenders, often in conjunction with their marketing activities, are thought to be taking advantage of the farmer in ways which the credit institutions do not. This is a complex matter: the question of whether the predominantly higher interest rates charged by informal lenders represent monopolistic power will be given a preliminary treatment below, to be follwed by a more comprehensive look at the role of interest rates in the next chapter. But the level of interest rates is only one part of a relationship that encompasses other aspects of the lenders' terms, and their relation to the nature and quality of what the borrower gets out of the transaction. Here we will merely note that a number of people believe that small farmer credit institutions are needed to free the small farmer from his "exploitation" by the informal moneylender; although not everyone agrees, this belief is an important reason why some credit programs have been started.

To summarize: the informal lender has advantages over credit institutions in selecting borrowers, enforcing repayment, adjusting loan terms more easily, and operating with far fewer administrative costs. On the other hand, he supplies no technical services or supervision and exerts no pressure to use credit for production, while the higher interest charges and associated practices in the commercial portion of the informal market are often regarded with hostility. Beyond these particulars, it must be remembered that informal lenders are an established part of the rural culture in most areas. This means, on the one hand, that their activities are associated with the backward conditions which institutional credit programs are designed to overcome, and, on the other hand, that they have proved their ability to survive in rural areas while many credit institutions have faltered or failed. The advantages just listed help to explain the survival of the informal lenders, who are indeed better adapted to their terrain. However, their very survival has been regarded by many with disfavor for a variety of reasons.

*Monopoly and the Moneylender*

Turning now to the commercial lenders in the informal capital markets, as opposed to those who are lending to their relatives or friends, we shall enter into the thorny and controversial question of the monopolistic elements in their position. A number of people feel strongly that the moneylender, a term we use here as shorthand for an informal commercial lender (who may also be a trader or large landowner), is extracting unjustifiably large profits from poor farmers by his monopolistic position. Others believe that the moneylender is a victim of unfair prejudice, that he performs a valued and necessary service for the farmer, and that his income would be amply justified by the costs and risks of lending if his circumstances were better understood. In order to approach such a subject with any clarity, it is necessary to define the terms of discussion.

The discussion here will be focused on economic entities in an effort to distinguish what can be objectively concluded, and to avoid the emotional connotation that the words monopoly and moneylender so commonly arouse. The key question to be examined is the probability of a prevalence of monopolistic profit in the income of moneylenders, i.e., an excess of price over average cost. These terms may be given precise values in examining the alternative costs and price levels for a business firm in the kind of diagram used for an economics course. But they become very elusive when applied to informal activities where accounting records are not available, and inferences must be made from indirect evidence that can only be very roughly estimated. Further, the estimates in question must cover extremely diverse conditions in perhaps a hundred different developing countries. Indeed, the discussion would hardly be worth attempting were it not so closely related to issues involved in small farmer credit programs and the reasons why such programs are undertaken. Certainly it has a bearing on one of the most frequent and lively topics arising in the Spring Review meetings.

The general characteristics of the markets where moneylenders operate are the starting point. As noted, these markets are small in geographical scale. They are located in the rural parts of developing countries where there is little movement of potential lenders or borrowers in and out of small market areas. The number of lenders is restricted by the small number of those living in a limited market area who have sufficient capital to engage in commercial lending, with the entry of additional lenders restricted by low mobility. A much larger number

of people will have a little money for lending to their relatives or friends, and it may be assumed that they will offer it on terms more favorable to borrowers than those available from commercial lenders. However, there are always farmers who wish to borrow but cannot get such loans and must turn to the commercial lender—or so it would appear from the ubiquity of moneylenders throughout the developing world.

How much monopoly power is implied by this situation? The market for informal commercial lending could not be called monopsonistic or oligosonistic, nor one with perfect competition (lenders could hardly be facing horizontal demand curves); and bilateral oligopoly-oligopsony is improbable with farmers far more numerous than lenders. The possibilities range from pure monopoly (the one-lender village) down to some point well short of perfect competition. Oligopoly would seem to be the best general descriptive term for these markets, given their diversity. However, the usual analysis of oligopolistic behavior leading to price rigidities, based on the assumption of large firms and well-articulated markets, does not seem useful. If individual moneylenders can vary their terms with each customer, as seems probable, and when they have few firmly fixed costs to worry about, the pressure for even temporary price rigidities would be weak. These conditions suggest a relatively free exercise of lender monopoly power, such as it may be; and it should be noted that when borrowers are poor farmers under some form of time-bounded economic pressure, an inelastic demand with respect to interest rates seems likely. The probable constraints on monopolistic tendencies in the behavior of lenders would be of two kinds: custom may (or may not) restrain prices or other loan terms; and potential competition from lenders in nearby market areas, to whom borrowers might go if hard pressed, may be a consideration—in addition, of course, to whatever competition prevails among lenders within the market area. This last will often be weakened by particularistic ties between informal lenders and borrowers.

This range of possibilities is still fairly wide. Thorough-going monopolistic situations are not excluded, but neither are situations which could result in reasonably restrained practices by lenders aware that borrowers have alternatives. The greater weight is on the monopolistic side of the overall spectrum, but there is room for considerable variation in degrees of monopoly. To evaluate that, we must turn to whatever light can be shed by the rough evidence on prices and costs. The main price measurement is the annual interest rate. While this rate does not encompass all the complexities of loan terms, it is the best measure that can be used in inter-market comparisons.

Data from the two most comprehensive surveys of reports on the interest rates charged by informal commercial lenders in developing countries are shown in Table 6. The IMF survey by Wai, published in 1957, which covers a wide variety of credit studies including a number prior to World War II, has two categories: "usual" rates, indicating those found in over half the loans surveyed in a given study, and "occasional" rates representing 10-20 percent of loans. (Wai also reports on "exceptional" rates applying to less than 5 percent of loans—not shown here—which, on the low side, are less than 20 percent a year and on the high side go into multiples of 100 percent). Most of Wai's findings are expressed in ranges of rates, some very wide. The extreme diversity of findings may be seen in the table, not only as between countries but in some of the different studies on the same country. To get one representative figure for each country, midpoints of

Table 6: Interest Rates Charged by Informal Commercial Lenders
(percent per year)

| | Wai Survey 1957[a] | | | Bank Survey 1974[b] | |
|---|---|---|---|---|---|
| Africa | "Usual" rates over 50% of loans | (Mid-points)[c] | "Occasional" rates 10-20% of loans | Nominal rates | Real rates[d] |
| Egypt | 25-40 | (33) | | | |
| Ethiopia | | | | 70 | 66 |
| Ghana | | | | 70 | 64 |
| Ivory Coast | | | | 150 | 144 |
| Nigeria | 45 | (45) | | 200 | 192 |
| Sudan | | | | 120 | 120 |
| **Asia** | | | | | |
| Afghanistan | | | | 33 | (n.a.) |
| Burma | 24-36, 24-36 | (30) | 50-100, 50-60 | | |
| Cambodia | 36-84 | (60) | 120 | | |
| Ceylon/Sri Lanka | 18-24, 6-18, 17-20 | (17) | 67, 27-36 | 50 | 44 |
| China (prewar) | 20-30, 24-48 | (30) | over 40, 72-96 | | |
| India | 12-50, 25-50 | (32) | | 25 | 15 |
| Indonesia | 50 | (50) | 200 | 40 | 28 |
| Iran | | | 200 | | |
| Iraq | 35, 100 | (68) | | | |
| Jordan | 60, 24-40 | (45) | "exhorbitant" | 20 | 15 |
| Lebanon | 22-24 | (23) | | | |
| Malaysia | | | 100 | 60 | 58 |
| Palestine/Israel | 140, 30, 18-24, 30 | (55) | | | |
| Pakistan | 30, 25-30 | (28) | | 30 | 27 |
| Philippines | 60-200, 25-30, 20 | (59) | 100-200 | 30 | 22 |
| South Korea | | | | 60 | 49 |
| Syria | 40-45, 40 | (41) | 150 | | |
| Thailand | 36, 25-30 | (32) | 60, 40-60 | 30 | 28 |
| Vietnam | 36-100, 50-100 | (70) | 240-300 | 48 | 20 |
| **Latin America** | | | | | |
| Bolivia | | | | 100 | 96 |
| Brazil | | | | 60 | 39 |
| Chile | | | | 82 | 52 |
| Colombia | 18-24 | (21) | 48 | | |
| Costa Rica | | | | 24 | 20 |
| Cuba | 24-30, 24-40 | (30) | | | |
| El Salvador | | | | 25 | 23 |
| Guatemala | | | 100 | | |
| Haiti | 100 | (100) | | | |
| Honduras | 24-36 | (30) | | 40 | 38 |
| Mexico | 60 | (60) | | 60 | 53 |

[a]Source: U Tun Wai, Staff Papers (International Monetary Fund), vol. 6, no. 1, November 1957, p. 140-42. Interest rates found in a single credit study on a country are given either as a single figure or a range; results of additional studies on the same country are placed on the same line separated by commas. Credit studies are cited in the original.

[b]Source: Bank Policy on Agricultural Credit, World Bank, 1974, Annex Table 9. Each nominal rate is a representative figure from materials available on a given country in one or more studies, either in credit studies or in less fully documented reports.

[c]To get a representative figure for each country, the midpoints of ranges in the "usual" rates were used; when several studies are given for a country, the midpoints or single figures from each study are averaged and rounded. The "occasional" rates were not used.

[d]Real rates are obtained by subtracting from nominal rates the average annual rate of increase in the consumer price index in 1967-70.

the ranges in the "usual" rates were calculated by the editor; averages of these midpoints are presented in parentheses in the table where there were several studies on one country. The second survey, by the World Bank in 1974, presents a single representative nominal interest rate for each country, based on reports largely from the late 1960s and early 1970s.

The diversities revealed in Wai's figures, and even in the Bank's single figures per country, illustrate the very wide-ranging nature of the practices of moneylenders which makes generalization hazardous. The highest rates are found in some of the least developed countries, like Bolivia, Haiti, and those in Africa. But among most countries the relation of reported interest rates to levels of development is not so obvious; and the diversity in findings for given countries indicates that researchers could have been looking at rather different types of lenders in their studies, a probability which also enters into the international comparisons. Wai's overall grouping may have included a few somewhat more "institutional" lenders than those we call informal in this book—for example "registered" pawnbrokers and moneylenders in Ceylon. When surveys are made in countries which have usury laws, especially government surveys, the reported rates may be biased downward by lender fears of legal jeopardy—indeed, information supplied by informal lenders may be generally suspect in some degree. We know too little about the quality and coverage of the reports included here to attempt evaluation, and we cannot apply any discrimination or weightings. Some of these reports may be no more than hearsay. Among the more serious credit studies, there are unavoidable problems of methodology affecting the selection of types of lender to survey and of informants to query, which could bias the results; we can only guess what the biases of the various researchers may have been. Further, many informal loans are extended and/or repaid in kind; given the seasonal volatility of agricultural prices, the valuation of the interest equivalent is often problematical. It should also be noted that where loans are for several months only, as most probably are, the conversion of interest to an annual rate tends to exaggerate both the burden on borrowers and the income of lenders.

Nevertheless, the data summarized in Table 6 represent a wide—if uncertain—coverage of the subject, and it will be of interest to define such central tendencies as they reveal. The median is a better representative measure here than the average with its upward bias due to some very high values. In the series of midpoints for Wai's "usual" rates, the median value is 40 percent.[1] There is some clustering of Wai's lower rates at the 30-35 percent level, while the rates above 40 are more widely spread. In the Bank series of nominal rates the median point is 50 percent, and the median range is 40-60 (7 cases under 40, 9 of 40-60, and 7 above 60). It is of some interest to note that if we take the Bank series on real rates, obtained by subtracting prevailing rates of inflation in each country (1967-70) from the observed nominal rates, we find the median value dropping to 40, i.e., to the value in the earlier series. The two series have rather different countries in them, and comparison of the figures on the same countries in the two series shows little regularity. It is evident that the medians (or averages) in both series are affected by the countries where studies happen to have been made; for example, the addition of more studies from Africa would no doubt increase the central value in any such series. However, if we are to indulge in a generalized consideration of monopoly and moneylenders in light of what has

been learned, the round figure of 40 percent is probably the most defensible value to use in discussion as a representative or medium level for the annual interest rates charged by moneylenders.

While our knowledge of the interest charged by moneylenders is sketchy, our knowledge of their lending costs is almost nil. The best that can be done is to make some inference from the cost levels of institutions that keep accounts. Data from agricultural lending institutions that have been surveyed in the Spring Review indicate administrative costs ranging from 5 to 25 percent of annual loan values (Table 8). As noted above, the informal moneylender will not have the same need for specialized buildings and staff, and should be able to operate with much lower administrative expenditures. Rural lending institutions usually obtain their capital at zero or concessional interest rates (2 to 4 percent). Moneylenders probably use chiefly their own capital, plus that of relatives or informal partners; some may also obtain bank loans at perhaps 7-15 percent rates; others, however, may have to borrow occasionally from other informal sources at high rates to meet an increasing demand (at higher rates). Institutions typically serve a much wider geographical spread of clientele: increases in loan volume can reduce their unit cost quite considerably while the effects of changes in loan volume on moneylender costs would be conjectural. We may safely conclude that the moneylender has a strong cost advantage at low volumes, and it seems that a quite high volume of institutional lending would be necessary to overcome this advantage.

The supply of lending capital for institutions covered in the Spring Review is usually fixed by administrative decisions unrelated to demand, whereas market relations are found in the informal markets. The supply elasticity of response to shifts in demand in the informal markets depends on the mobility of funds, on lender capabilities or desires to expand clientele, and on the ability of new lenders to enter the market. The extremely wide range of informal commercial interest rates found in Table 6 could be explained in large part by a prevalence of low supply elasticities, both in the short and long run. Low elasticities of demand would also contribute to this result, given a wide range of probable demand levels relative to existing supply levels and a low mobility of funds and lenders.

The discussion up to this point suggests a prevalence of considerable monopoly profit in informal money lending. It is difficult to see how interest rates ranging from 20 up to 100 percent could correspond very closely to differences in cost. And from what we know of administrative and capital costs in lending institutions in conjunction with the clear cost advantages enjoyed by the informal lenders, it may be hard to imagine that informal costs would often approach the benchmark level of 40 percent (for interest charged), even where the volume of loans is small. However, the impact of defaults, and the appropriate risk premia, have yet to be put into the equation. The default levels found in reports from rural credit institutions vary widely, and some of them are very high. Knowing very little about default rates among moneylenders, we must again rely on inferences from the institutional experience and from the differences between the conditions facing the two types of lenders.

When we address the question of whether moneylender interest rates can be explained by risk of default rather than monopoly profit, we are entering an area of controversy with only loose factual guidelines. Some economists emphasize the

hazards of weather and prices for agricultural incomes, and the resulting risks faced by moneylenders whose incomes are closely tied to those of their small farmer clients. Anthony Bottomley makes this case in one article[2]; in another article, he acknowledges the existence of many imperfections in competition in informal capital markets, though he questions whether these are important determinants of interest rates.[3] In a more recent paper,[4] Bottomley elaborates further his analysis of default causes, and mobilizes Spring Review materials to construct hypothetical cost curves for moneylenders with sharply rising risk premia, leaving little scope for monopoly profit. A similar though less sweeping view is expressed by Millard Long.[5] He begins by describing general conditions that could lead to monopoly; he then examines evidence from credit surveys in India (1951-52) and Thailand (1962-63), showing average interest rates of 12.3 and 35 percent respectively, and concludes from his review of costs and risks that monopoly profit was a minor factor in these two cases, affecting perhaps 10-15 percent of total loans.

A different approach is taken by U.T. Wai,[6] who constructs a table giving the interest rates necessary to insure lenders against default levels in addition to given costs. For example, a 40 percent interest rate would cover costs of 5 percent plus defaults of 25 percent; alternatively, the same rate would cover costs of 25 percent plus defaults of 12 percent. Comparing the values in this implied supply schedule with a hypothetical demand schedule based on alternative productivity increments combined with percentages of income borrowed, and considering the array of actual interest rates (see Table 6), Wai reviews briefly some scattered evidence suggesting fairly low default levels, and concludes (p.113): "...the urgent and inelastic demand of borrowers and the absence of alternative sources of credit are the principal factors that enable moneylenders to exact very high rates of interest."

Still another approach is that of Charles Nisbet,[7] reflecting his field surveys of informal lenders and borrowers in Chile and Colombia. He finds little evidence of price competition and many instances of "excessive" interest and other exploitative devices. He deprecates the importance of default costs, stressing that informal lenders are in a much better position than lending institutions to judge creditworthiness of their local borrowers and to bring pressure on them to pay debts.

Aside from the different shadings of opinion represented in these authors, there is a difficulty not spelled out in the literature bearing on what can be regarded as legitimate costs for informal lenders. In principle, perfect competition would reduce their interest rates to the level of average costs. The difficulty arises from the highly elastic nature of the "costs" faced by informal commercial lenders. Aside from the need to cover defaults, the typical small moneylender has few if any firmly fixed costs to meet, and his main concern is to obtain an acceptable income level for his family from his activities. The minimum acceptable income level which will keep him in the market as a lender may be regarded as the equivalent of a competitive level of return on his capital and time: any income above that level could be defined as monopoly profit. When the lender is geographically immobile and lives in a low-income farming community, his minimum acceptable income level may be quite low—at least by comparison with urban income standards, though perhaps higher than those of his neighbors who have no lending capital. He might have alternative local uses for his time and

capital, but these may well be circumscribed by his economic environment—i.e., his opportunity costs are low. Thus, it can often be true that monopoly profits will exist at the same time that moneylender incomes do not appear to be excessive by the standards of outside observers. These minimum acceptable income levels will, of course, vary widely with different individuals and their circumstances, and would be difficult to ascertain since they are somewhat subjective and variable in nature.

To summarize what appears to be the direction of the evidence: if an excess of lender income above minimum acceptable levels is treated as the test of monopoly profit, if the apparent levels and wide range of observed interest rates are considered, and if consideration is also given to the prevalence of conditions conducive to monopoly power, and to the moneylender's ability to judge creditworthy borrowers and collect his debts, then the case for expecting a relatively frequent occurrence of monopoly profit seems convincing. The strongest objections that can be raised to this conclusion are that mobility of funds and people may often be greater than is assumed here, and that many reported high interest rates may not be representative or verified but are accepted because the moneylender is an object of adverse prejudice. Such prejudice does exist; but there are also reasons why reported interest rates may be too low.

*Policy implications.* If monopoly profit exists, it is generally regarded as undesirable by economists and moralists alike. Although high interest rates may be thought valuable for inducing savings and capital accumulation, it would be difficult to defend existing moneylender rates on these grounds in view of the prevailing weaknesses in capital accumulation. The estimated prevalence of monopoly profit is significant because it indicates the degree of probability that the interest paid by small farmers to moneylenders might be reduced in one way or another without driving all such lenders from the market, as would occur if there were no monopoly profits. However, it must also be recognized that these interest rates are market prices, for better or worse, that the moneylender supplies a service which farmers are willing to pay for at going rates. A number of countries have tried to apply usury laws setting maximum rates, but these have usually been unenforceable. In general, high interest rates imply a scarcity of capital. While this scarcity may often reflect a shortage of loan funds relative to the demand for consumption credit in rural areas, as opposed to a demand based on production possibilities, nevertheless the demand is genuine. And even if policy makers are opposed to consumer credits in principle and deplore the level of debts accumulated by farmers, the conditions that created the demand for such credits cannot be altered by decree.

A more hopeful approach to the reduction of moneylender interest rates is to add to the competition in rural areas by increasing institutional credits, an increase that is desirable for a number of other reasons already discussed. The position taken in this book is that institutional credits offered at "medium" rates higher than those now prevailing could be sufficient to cover the costs of small rural loans (see the argument of the next chapter) and would also be lower than the majority of moneylender rates. Whatever interest is charged by credit institutions, the potential supply of institutional loans is unlikely for some years to fill all the demands of farmers in most local markets, and would thus leave scope for moneylenders to work in. Competition between them and the institutional lenders will be less than perfect, as Bottomley has warned.[8] The results

of such competition will vary from place to place, in part because the monopoly profit element in moneylender rates that could be squeezed out by competition will vary widely. If institutional credit drives out too much informal credit from agriculture, there may be no gain for farmers. But on the whole this approach looks more promising than other alternatives.

Assuming that we can accept the desirability of a continuing operation of numerous moneylenders in rural capital markets in conjunction with increased institutional competition, it is not necessarily the best policy to try to drive their interest rates down to a point where they are barely receiving their minimum acceptable incomes (even if that were feasible). Some other standard of socially justified income levels in return for their services needs to be developed. The costs of institutional lending operations are too different from those of informal lenders to serve as a standard of comparison for use in determining what the informal costs and income levels ought to be. It would, therefore, be useful to know far more about moneylender costs and incomes, i.e., about the ranges of real cost which actually prevail in these viable lending operations that are so well adapted to a rural environment. Such information would have application in attempts to estimate socially justifiable cost levels for small farmer lending generally. Research designed to contribute to this purpose could be of value.

*Integration of Capital Markets*

We have noted the inadequacies of the dualistic rural capital markets in developing countries. Informal lenders serve highly localized borrower clienteles; their capital sources are not only limited in area but in volume by the local savings. The usual rural lending institutions do bring in outside capital, but in most cases their scope is limited and they are biased toward large farmers. Genuine small-farmer projects are few, and are so designed that they can hardly be said to reflect either supply or demand in any systematic way for the smallholder sector. Rural savings institutions are underdeveloped; the relatively meager savings they attract tend to leave the countryside—on balance—and generally fail to augment the capital available for agricultural investment. In short, the credit and savings institutions in most countries, with some exceptions, have done rather little to overcome the weaknesses of the segmented informal capital markets.

Thus, the small farmers are poorly served by the capital markets they confront. This judgment implies that there is a larger job to be done that is worth doing; and the earlier discussion of limitations on traditional technologies suggests that much of the time this may not be true—i.e., that the small farmer may be getting about what he needs in productive facilitation from the informal capital markets. But this logic does not apply when new profitable and capital-using technologies appear; and these clearly are not enough in themselves to bring about the requisite institutional change. To assume that there is no effective demand for capital just because no adequate supply has yet been organized is to carry laissez-faire thinking too far, and to deny the potential for more than slow, faltering rural development.

Let us consider what should be the functions of a well-organized, integrated capital market in a developing country. On the one hand, it should stimulate and mobilize savings where the potential exists; on the other, it should move funds to areas and to individual producers who can make the best productive use of

loans; and it should provide for dynamic growth, both in eliciting increasing volumes of saving and in facilitating output increases from farmers who have been less productive than they could be. (Capital markets cannot do the job of experiment stations and extension agents, but let us assume that some appropriate technologies are known and can be made available.) We need not suppose that the optimum capital users are distributed in local areas in the same proportions as potential savers, that existing institutions could bring them together in an efficient or timely fashion even if they were, or that savings and growth are maximized. If a well-articulated integrated banking system could be extended to rural areas, the savings by farmers (and neighborhood lending) would continue but there would be a much wider range of producing options with outside capital flowing in, augmented by growing options for institutionalized savings. The contribution to output and to farmers' net worth that could be made by a flexible, fast moving flow of funds in a national network that encompassed the rural areas, and that reacted to supply and demand forces, would be very great.

The sheer mechanics of organizing such a system are formidable in many countries, but they are not beyond the realm of possibility. The Western banking models can supply some of the ingredients, but the developing country institutions will need imaginative adaptations to rural conditions as will be discussed below. Western models, accepted uncritically, are high in cost and poorly designed to attract farmer participation. Without cultural adaptation to build up such participation, they cannot achieve economies of scale; and their banking practices involve costs which may be excessive for the resulting benefits. So both the reduction of costs and the means of developing acceptability will have to be considered.

But assuming that these mechanical operations can be mastered, a question remains as to whether there will not be a bias against small farmers in the economics of the system, even with the most sensitively designed cultural adaptations of banking practices. And if that is true, would not the very success of an integrated banking system lead to growing disparities of rich and poor farmers, and exacerbate all the problems of class conflict and rural unrest? This is certainly a strong possibility, one which cannot be refuted from the history of Western countries where well-integrated banking systems, widely used by a variety of farmers, have existed for some years. While this result should not be attributed to the banks alone, the flow of funds can be an important influence. So in addition to cost reduction and cultural acceptability, we must also consider how to build into institutions of the capital markets of developing countries some correctives that will not just open the doors to small farmers but, if possible, effect a bias in their direction.

A further consideration in respect to the integration of capital markets is the relation of a growing network of lending institutions to the existing structure of informal lending. There is evidence in Spring Review papers that the introduction of agricultural lending institutions does displace informal credit in some degree, though this cannot be well quantified. It is generally considered that such a trend represents progress. But, as noted above and also in Chapter 5, the farmer may lose some of the advantages of informal borrowing facilities in the process, especially if the new institutions should drive informal lenders out of business without providing adequate small-farmer access to themselves.

There are several possible approaches here. If we accept the desirability of a

well-functioning integrated credit network, then we should try to build into the credit institutions those qualities that the small farmer wants and needs. This may be a bit idealistic, however. A fallback position would be that these institutions can't be expected to do everything well, but that insofar as they fail the moneylenders will still be around and are likely to become more competitive in their behavior. The latter will lose some of their monopoly powers as a result of increasing institutional competition, so that the farmers will be better off. This answer does not justify complacence, but it does seem realistic.

Another possibility would be to integrate the informal lender into a larger system by a program for channeling outside institutional funds to him, since the small farmers have better access to him than to the banks. This would appear to augment his monopoly power, unless the funds were purposefully spread around to create competitors. Even then, this solution would imply abandonment of a supervised production orientation in lending; it could lead to an increase in small farmer debt without equivalent income gains, and quite likely to a growing income concentration in villages. Thus, the mere transfer of institutional funds to moneylenders does not have much to recommend it except, perhaps, simplicity and low cost administration.

In conclusion, the integration of rural capital markets with one another and with the urban commercial sector holds promise of important contributions to agricultural development. It will not come about easily or rapidly in the best of circumstances, and it will not evolve in a way that serves small farmers as well as it could without a great deal of effort and careful planning for that purpose. Integration is clearly a long-term objective. Much of this book is occupied with more immediate or medium-range concerns, but the longer-run aim and its requirements should also be kept in mind.

*NOTES*

[1]Wai stated (p. 123) that in most countries "the weighted average rate of interest in the unorganized money market must be between 24 and 36 percent per annum." By "unorganized" Wai means rural: he includes both "moneylenders" and institutions like farmers cooperatives and government banks. His data reproduced in Table 6, however, refer only to the "moneylenders," i.e., informal commercial lenders, whose rates are generally higher than those of institutions.

[2]Anthony Bottomley, "The Premium for Risk as a Determinant of Interest Rates in Underdeveloped Rural Areas," *Quarterly Journal of Economics,* November 1963, pp. 637-647.

[3]Anthony Bottomley, "Monopoly Profit as a Determinant of Interest Rates in Underdeveloped Rural Areas," *Oxford Economic Papers,* November 1964, pp. 431-437.

[4]Anthony Bottomley, "Interest Rate Determination in Underdeveloped Rural Areas," *American Journal of Agricultural Economics,* May 1975, pp. 279-291.

[5]Millard Long, "Interest Rates and the Structure of Agricultural Credit Markets," *Oxford Economic Papers,* July 1968, pp. 275-288.

[6]U Tun Wai, "Interest Rates Outside the Organized Money Markets of Underdeveloped Countries," IMF *Staff Papers,* November 1957, pp. 80-142.

[7]Charles T. Nisbet, "Interest Rates and Imperfect Competition in the Informal Credit Market of Rural Chile," *Economic Development and Cultural Change,* October 1967, pp. 73-90; "Moneylending in Rural Areas of Latin America: Some Examples from Colombia," *American Journal of Economics and Sociology,* January 1971, pp. 72-84.

[8]Bottomley, "Monopoly Profit as a Determinant of Interest Rates," op. cit.

# 9 *Interest Rates in Institutional Lending*

The dominant theme in this chapter is the undesirability of the low interest rates on agricultural loans, and especially small farmer loans, that are currently found in the credit institutions of almost all developing countries. The principal reasons advanced to justify low rates, and reasons for their political attractiveness, will be examined. But these considerations, on the whole, do not carry as much weight as those which indicate the destructive or stultifying impact of low interest rates on small farmer programs. This theme was given considerable emphasis in the presentations to Spring Review workshops, and it often appeared that the academic economists favoring higher interest rates were confronting a solid wall of contrary practice with no compromise in view. Some of the bank and government officials participating in the workshops—not all by any means—tended to agree with the economists that interest rates ought to be raised, but they would usually add that this was a political decision for which it would be very difficult to find support in their particular countries. These seem to be the facts of life at present. We will argue below that what is needed here is an enlarged conception of what small farmer programs can and should be doing, with change in interest rate policies as one of the necessary ingredients.

*Interest Rate Policies in Developing Countries*

A persistent pattern of low interest rates is found in credit institutions covered by the Spring Review papers, as in other studies of agricultural credit in developing countries. Table 7 provides a relatively comprehensive survey of such interest rates. There are several respects in which these rates can be regarded as being too low.

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The largest contributor to this chapter, author of a Spring Review paper expounding the case against low interest rates, was Claudio Gonzalez-Vega of Stanford University, Palo Alto, California, and the University of Costa Rica, San Jose. The economic arguments presented in the first part of the chapter, up to the section on "Political Factors," were extracted from his paper. The contributions of Dale Adams of Ohio State University, during the workshop discussions and more generally, were also important.

Table 7: Interest Rates Charged by Agricultural Credit Institutions
(percent per year)

| Africa | Nominal rates[a] | Real rates[b] | Rate of inflation (1967-70)[b] |
|---|---|---|---|
| Ethiopia | 12 | 8 | 4 |
| Ghana | 6 | 0 | 6 |
| Ivory Coast | 10[c] | 6[c] | 4 |
| Kenya | 7 | 7 | 0 |
| Morocco | 5 | 3 | 2 |
| Nigeria | 6 | -2 | 8 |
| Sudan | 7 | 7 | 0 |
| Tunisia | 6 | 3 | 3 |
| Uganda | 12 | 1 | 11 |
| **Asia** | | | |
| Afghanistan | 9 | n.a. | n.a. |
| Bangladesh | 12 | 9 | 3 |
| India | 9 | -1 | 10 |
| Indonesia | 14 | 3 | 11 |
| Iran | 6 | 4 | 2 |
| Jordan | 7 | 2 | 5 |
| Malaysia | 18 | 16 | 2 |
| Pakistan | 7 | 4 | 3 |
| Philippines | 12 | 6 | 6 |
| So. Korea | 16 | 5 | 11 |
| So. Vietnam | 30 | 2 | 28 |
| Sri Lanka | 12 | 6 | 6 |
| Taiwan | 10 | 3 | 7 |
| Thailand | 11 | 9 | 2 |
| **Latin America** | | | |
| Bolivia | 9 | 5 | 4 |
| Brazil | 15 | -7 | 22 |
| Chile | 14 | -16 | 30 |
| Colombia | 12 | 4 | 8 |
| Costa Rica | 8 | 4 | 4 |
| Ecuador | 10 | 7 | 3 |
| El Salvador | 10 | 8 | 2 |
| Honduras | 9 | 6 | 3 |
| Mexico | 10 | 7 | 3 |
| Nicaragua | 10 | 8 | 2 |
| Peru | 10 | 3 | 7 |

Source: Bank Policy on Agricultural Credit, World Bank, 1974, Annex Table 9.

[a]Nominal rates are averages of the reported rates charged on various types of agricultural loans by one or more institutions in given countries. Generally the rates in private banks are higher than those in public institutions by about 3 percentage points.

[b]Real rates were obtained by subtracting from nominal rates the average annual rate of increase in the consumer price index over 1967-70, the period for which most nominal rates were reported.

[c]Not an annual rate; a commission of 10 percent is charged on loans of varying durations less than a year.

1. The rates charged are usually comparable to or lower than the rates charged in the more advanced, capital-rich countries. Most of those in Table 7 are within the range of 6 to 12 percent per year, and there are other reported instances of still lower rates such as 3 or 4 percent. (The few cases in the table of rates higher than 12 percent a year are almost all in countries with high rates of inflation.) Most of these rates would appear to be low. Such rates of interest do not come near to the actual market rates, or to most of the shadow prices for capital calculated in planning exercises in these countries.

2. In the majority of cases, the rates of interest charged on public agricultural credit are lower by approximately 3 percent than the prevailing commercial bank rates in the same countries. Where there are small-farmer-specific credit programs, most of the interest rates charged are lower than those applied to other agricultural credit. When low rates of interest imply a subsidy, preferential rates imply an additional subsidy for which a specific justification should be provided.

3. Given the existing national rates of inflation, the *real* rates of interest charged by most of these programs are even lower than the nominal rates quoted and are sometimes negative—see Table 7. (A negative real rate of interest results from a rate of price increase which is higher than a nominal rate of interest). In several Latin American countries, real rates have been substantially below zero for long periods of time. Real rates of interest are more relevant than nominal values in terms of their impact on the real value of lenders' portfolios, on the actual size of the subsidy captured by borrowers, and on economic behavior in general.

4. The rates of interest charged by small farmer credit institutions are low in that they tend to generate a demand for credit greater than the supply of institutional funds. When demand exceeds supply, "rationing" of credit becomes necessary. The availability of credit for small farmers is then influenced by the rationing mechanism chosen to allocate loans among farmers.

5. Another sense in which the rates charged are low is that they often do not cover the average cost of delivering credit to small farmers. The financial difficulties that a lending institution would have to face if it expanded its services to small farmers under these circumstances will, in turn, influence adversely the choice of the rationing mechanism that the under-equilibrium rate requires.

6. Financial institutions must pay even lower rates of interest on deposits and financial instruments for the collection of savings than those charged for loans. The low level of such rates has inhibited the organization of savings programs and thus curtailed a potential source of loan capital for these lending institutions.

It can be argued that in some instances the rates effectively paid for loans have been higher than the nominal rates quoted (Eckaus). This could be a consequence of the practice followed by certain lenders of discounting the interest payment when the loan is originally granted. In some instances, interest payments may have been calculated on the basis of the whole amount and duration of the loan, although disbursements were to take place in installments. In other cases, credit institutions have attempted to compensate for low loan rates by requiring a potential borrower to open an account before applying for credit and to maintain in it a minimum deposit. Manipulation of commission fees has been used with similar objectives. Some lenders have become skillful at avoiding offi-

cial rate ceilings and regulations. On the other hand, the Spring Review papers also describe several programs for which additional concessions are linked to small farmers' institutional loans, actually lowering the rate of interest effectively paid by them. For example, forgiveness of commission fees or of regular legal fees is not infrequent, as in Costa Rica (Gonzalez-Vega).

The pattern of interest rates that emerges from the examination of institutional credit in the Spring Review papers is complicated by the practice of charging different rates depending on: the agency that distributes the funds, the use that the farmer declares he is going to make of the funds, the period of the loan, and the type of collateral offered. The arbitrariness of many of these distinctions is illustrated by examples of countries where short-term credit is cheaper than long-term credit, and examples of countries where the opposite is true. Such practices can impede the efficiency of the capital market in allocating resources among competing borrowers.

*Reasons Behind These Policies*

There are two types of reasons why low interest rate policies have been adopted for the formal financial markets. One type reflects the general nature of monetary and financial policies in developing countries. The other type of reason is related to problems which are thought to arise in connection with agriculture in general, and with small farmers in particular.

*At the macro-economic level,* most developing countries have not pursued a flexible interest rate policy. Interest rates have been excluded as an active policy instrument from prevalent theories of development.[1] The level of interest rates has been legally fixed in most cases, and the number of instances in which these fixed rates have been revised is very small. This is particularly striking in countries that have consistently experienced high and widely varying rates of inflation. Policy-makers have been more preoccupied with the nominal level of the rates, and with the moral implications of "usury," than with the possibility of enlisting the rate of interest as a powerful instrument for development.

Development theorists, indeed, have frequently argued that strategic economic activities are not responsive to the signals that originate in the level and structure of interest rates. Their proof usually comes from some econometric study of the impact of interest rates in developed countries, and the theoretical underpinning usually derives from short-run Keynesian theories of unemployment and depression in advanced countries that are inapplicable in developing countries. Rigorous analysis, however, shows that interest rates are crucial determinants of the processes of capital accumulation and of allocation of resources and therefore lie at the very heart of the development problem. Their influence is particularly crucial during periods of rapid changes in technology, with new production frontiers and consumption opportunities.[2] In the few cases in which more reliable empirical information is available for developing countries, significant changes in consumption, savings, investment, the demand for liquid assets, production and choice of techniques have been induced by substantial changes in the real level of the rate of interest.[3]

We must consider that interest rates have had an important and widespread influence on economic behavior even though this influence has so far been examined carefully in only a few developing countries, and behavioral functions cannot yet be quantified. By fixing artificially low rates of interest, policy-makers have attempted to render them inoperative; resource allocation could

then be influenced by allocation procedures chosen by the policy-makers. But while interest rates have been inhibited from serving as efficient economic signals, they have nevertheless influenced decisions and affected the evolution of economic life. This influence has seldom been conducive to either efficiency or equity.

Interest rates are relative prices. In the most fundamental sense, they are the price of the future in terms of the present. The level at which the rates of interest are set influences consumption, savings and investment behavior. Low rates of interest tell savers not to bother with saving, that the future is amply provided for, that now is the time to consume. High rates of interest tell consumers that sacrifices in present consumption will be highly rewarded. Low rates of interest on loans tell investors that investment goods are plentiful for use in the production of consumables. High rates of interest tell investors that capital goods are scarce and have to be economized.

Artificially low rates of interest motivate consumers to bid resources into consumption markets, but these low rates also encourage investors to bid resources away from consumption. This conflict is resolved by administrative decisions on who will get loans and who will be denied them. Interest rates are, in this way, deprived of their role as a device that requires potential spenders to pit their spending options against others in a way that reflects productivity and consumer time preferences. Rates of interest are also the prices relevant in financial markets. As a deposit rate paid on financial assets, interest rates affect the allocation of saving among various types of assets, some of them more socially productive than others. Savings incorporated in gold, jewelry, luxurious housing, and any other form of idle inventories have little social productivity. Low rates of interest not only direct savings into those assets, but also into inventories of commodities which may involve costs of depreciation and handling. Rates of interest that underprice savings not only put them to inferior uses—other than productive investments—but also divert them to financial markets abroad. In a fragmented capital market, the release of resources from inferior uses is as important as the accumulation of capital per se. A policy of higher interest rates could improve both.

As the price of a factor of production, loan rates of interest affect the relative factor intensity of the productive processes undertaken. Low rates of interest charged on loans direct resources into more capital-intensive methods of production which can increase unemployment in capital-poor, labor-abundant countries. This could take the form of premature mechanization of agriculture in the presence of heavy rural unemployment, for example. In sum, rates of interest affect the demands for and supplies of goods, assets and factors of production over time, and in this way influence the rate of growth of the economy, price stability and the distribution of income. Inappropriate interest rate policies distort capital markets and reduce their contribution to economic development. The low rates of interest charged in small farmer programs are a reflection of these more general policies.

*Credit and agricultural sector problems.* The rates charged by small farmer credit institutions are usually preferential rates. Several arguments have been advanced to justify this policy.

1. In many cases, preferential rates have been justified on the grounds that small farmers have been exploited by informal lenders and by market inter-

mediaries in general. A concern for the welfare of poor farmers is probably the most influential cause for adoption of preferential low interest rates by institutions intended to serve them. But, as indicated in the last chapter, most of this low interest credit does not actually get to the small farmer. Subsidized credit which is captured by larger farmers only creates conditions disadvantageous to small farmers to the extent that its beneficiaries will use the funds borrowed from the lending agency to buy additional land, or to displace small farmers in the purchase of scarce inputs—that is, it adds to the large farmers' access to resources.

2. Prevalent interest-rate policies have been based, in other instances, on the claim that traditional farmers need special inducements to use highly productive inputs, and that only highly subsidized credit will induce them to adopt modern technologies. A more sophisticated version of this justification for subsidy is based on differences between the private costs and benefits and the social costs and benefits of an activity such as a project to promote new farming techniques. Because of this divergence, the activity does not expand as much as would be socially desirable in the absence of a subsidy. Subsidized rates of interest have been justified on these grounds. Further analysis is necessary, however, to determine whether in fact such a divergence between private and social costs and benefits exists, and what is its nature.

(a) In some cases lack of private profitability simply reflects low social returns to an innovation. Reluctance on the part of small farmers to borrow funds and adopt the new technology thus reflects a lack of profitability that should not be countered with a subsidized rate of interest. In these circumstances, a subsidized rate of interest will only lead to inefficiency.

(b) In other instances, the lack of profitability of the innovation highlights unavailability of certain inputs, the existence of a bottleneck, or the absence of a market for the product. Such obstacles will not often be removed by an expansion in the volume of credit. A subsidized rate of interest will not create a missing market; high enough subsidy, however, can transform an unprofitable activity into a profitable one, despite the continued weakness of the market. Subsidized credit, then, only perpetuates the imperfection. By concentrating attention on the credit link of the process, measures dealing directly with the imperfection are not taken.

(c) Reluctance to borrow, even at relatively low rates of interest, might reflect the absence of an appropriate technology. The distribution of credit at subsidized rates of interest might induce farmers to accept the "gift" and to use the funds for consumption, but it will not make the missing technology available. Rates of default will then be high. The attempt to induce farmers to use credit by means of a subsidized rate of interest diverts attention from the basic weakness of the available technology and from the measures needed to improve it.

(d) There may nevertheless be circumstances in which, because of the learning processes involved and of the demonstration effects generated, relatively sophisticated "infant industry" arguments could be advanced. But even in the cases for which some sort of subsidy could be justified, it is not obvious that the most efficient policy instrument is an interest-rate subsidy (see chapter 16). As a general rule subsidies should be given directly at the source of an externality. In most instances relevant to agricultural development, the learning processes and externalities involved are not a direct function of the use of credit. A subsidized

rate of interest might expand the activity upon which the learning process depends, but also will, on the other hand, cause additional distortions. For instance, it could artificially increase the capital intensity of production.

3. Low interest rates have also been justified as a mechanism for income transfers to small farmers, and to offset fiscal, foreign exchange and pricing policies that have adversely affected the agricultural sector. Low rates of interest are of course advantageous to the individual farmers who are able to borrow at such rates. Unfortunately, the mechanisms of credit allocation induced by low rates of interest have consistently discriminated against small farmers, as will be demonstrated below, and have restricted their access to credit. Little consolation can be gained, therefore, from the contemplation of the very small proportion of small farmers who have received credit at low subsidized rates, while the large masses of them continue to depend on a fragmented informal market where high rates of interest are charged.

Thus, the use of credit as a mechanism for income transfers to poor farmers is very inefficient. Furthermore, the perception by the farmer that he is dealing with a "welfare" program designed to transfer resources to poor farmers will induce a reluctance to repay his loans, even if he could, particularly if he realizes that more powerful members of the community are not paying back either. Lack of repayment, of course, effects an additional income transfer but in an erratic fashion not controlled by the lender. If defaulting is a function of political power and other status variables, much of the income transfers channeled through the credit program will be delivered to non-members of the target population, while the program is kept going by the many small farmers who do repay. In any case, this kind of unacknowledged rural welfare burden is unfair to the administering lending agency. The institution is forced into a dependence on outside funds, while its performance will still be judged as a failure by the normal criteria applied to credit institutions.

In summary, the policy of low and preferential interest rates is generally justified as a means of helping small farmers, but analysis of the implications of such a policy shows that these efforts are misdirected. The policies adopted have actually misfired, and have in most cases led to a more limited access to credit for small farmers than would otherwise be the case. We shall now examine reasons why this result is probable—indeed inevitable.

*Negative Impact of Low-Interest Policies*

As a mechanism for improving the access of small farmers to credit, a policy of low interest rates presents important disadvantages because it actually reduces the total volume of credit flowing into the small farmer sector. A higher rate of interest charged on loans would increase the amount of resources that an institution has available for loans in the following year. A low rate of interest depletes the credit agency's resources and reduces the volume of loanable funds that it manages. It also closes off the potential loan funds that it might attract if it could pay higher interest on savings deposits.

Low rates of interest charged by formal lenders may also reduce the funds available to small farmers from the informal market when the formal institutions offer too much competition for informal lenders. If low interest attracts the majority of large, low-cost and low-risk customers to a credit agency, the informal lenders are left to serve the most costly and risky potential borrowers which may

discourage their operation. If the interest ceilings imposed on formal lenders were to be enforced on the informal lenders, as is sometimes attempted, this would further reduce the supply of funds for small farmers.

*Small farmers' share of credit.* Low rates of interest reduce the propensity of formal lenders to service small farmers. All lenders, sooner or later, no matter what their objectives, are forced to find some kind of balance between revenues and costs. Interest payments constitute the main source of revenues for a credit agency. Low rates of interest generate low revenues, and often these are not sufficient to cover all the costs of delivering credit to small farmers. Given strong pressures on an institution to keep its costs in line with revenues, and given the shape of the cost functions involved, the agency is forced to reduce the proportion of its portfolio devoted to small farmers. By increasing the average size of loan the institution can bring down average costs. Where the potential for government subsidies is limited or uncertain, such a cost reduction may be a necessity for survival.

If the rates of interest that they are allowed to charge do not cover their average costs, it is not surprising to find that profit-maximizing institutions like commercial banks are reluctant to serve the rural areas. Losses are also a hazard for public institutions, even though they may attempt to rationalize them in terms of "social" objectives. Public lending institutions cannot be sure that they will permanently receive ample funds from their governments, or from international donors. In any case the continuous receipt of such outside funds subjects the institution to an undesirable dependency on the political-administrative process of allocating public funds, and leaves it highly vulnerable to political pressures. It is not realistic to assume that small farmers will always have enough political power to maintain a substantial allocation of funds in their favor.

Lack of sufficient and timely appropriations can severely impair the efficient functioning of any subsidy-dependent institution that serves small farmers. The continuity of the program itself, the possibility of achieving its goals, not to speak of the possibility of expanding the program to reach more of the target population, are all threatened by continuing losses. The prospect of a disappearance of its capital due to high and persistent operational losses, an outcome related by several Spring Review papers, leads either to the elimination of the program or to its reorganization away from the service of the small farmer. The danger of erosion of the volume of loanable funds is particularly acute in inflationary environments, since not only is the nominal value of the funds reduced by losses, but the real value of the remaining funds is quickly devoured by rising prices.

All these conditions lead to one result: the lower the interest rate charged on loans, the lower the proportion of the lender's portfolio, *ceteris paribus*, that will be devoted to small farmer credit.

Even in institutions whose funds are specifically earmarked for small farmers, two developments were frequently reported by the Spring Review studies. There has been a tendency on the part of such credit institutions to lend an increasing proportion of their funds to the larger farmers within the target population. Progressive leniency with respect to the verification of the "smallness" of a farmer, coupled with the political pressures that accompany non-price rationing, have permitted many farmers in the borderline between those eligible and those who are not to become the beneficiaries of the program. In other cases the maximum

values for eligible borowers' incomes or wealth were raised to accommodate larger farmers.

Secondly, credit programs all over the world seem to reach a point after which the number of borrowers stagnates, while the amounts of credit given out and the average size of loan may continue to increase as the institution "expands." There are even examples of reductions in the number of borrowers, as in Brazil (Meyer *et al.*) When the country studies provided enough detail, they revealed that not only did the number of borrowers fail to increase, but that the beneficiaries of the program seemed to be the same persons year after year. In cases of "expanding" programs, it was not clear whether the institution had always financed the wealthier farmers eligible or whether its repeat clients had become wealthier due to their continued access to subsidized credit. When the privileged clients of such a lending institution reached a ceiling imposed on the size of loan per eligible borrower within the program, pressure developed to raise these ceilings and adjustments of them were rather frequent.

*Credit rationing.* Another influence working against small farmers is that the low rates of interest charged tend to generate an excess demand for institutional funds. At the rate of interest set there are more potential clients willing to borrow than those who could be satisfied with the institutional resources available, so that some non-price mechanism for rationing becomes necessary. The lending institution must select the beneficiaries of the credit program, rejecting other potential users of its funds. The lower the rate of interest the more extensive is the excess demand generated, and the greater will be the reliance of lenders on rationing devices for allocation of their limited funds. The lower the rate of interest and the higher the implied subsidy, and the greater will be the motivation of borrowers to exert social and political power in order to capture it. The lower the rate of interest and the greater the potential losses for the credit institution, the more likely it will be to succumb to such political pressures.

The high scarcity value of the limited resources that are being distributed at low official prices creates the conditions for a "black market price." This price may involve extra payments or bribes which richer farmers are better able to pay, or it may take the form of political and social pressures on the institution and its officers by influential persons. Such influences on the allocation of credit have led everywhere to a distribution of the credit pie in favor of the larger farmer. There have been instances when the allocation of subsidized funds has been turned into a purely political struggle as in Bolivia (Royden) or Morocco (Ulsaker).

Another consequence of low rates of interest is that lending agencies overemphasize their reliance on collateral requirements as criteria for borrower selection. This emphasis on collateral results partly because lenders have an increased risk aversion when revenues do not cover costs, and partly because it represents a convenient rationing device for loan allocation in the face of excess demand. Collateral requirements restrict access to credit to those who own sufficient assets to be acceptable to the credit agency, i.e., the wealthier members of the community. In a number of countries many small farmers do not have adequate titles to the land they operate, whether because they are tenants or because title registration is incomplete, especially in the transition from tribal ownership in Africa. It is the larger farmers who have the clearer land titles along with other assets.

Other kinds of rationing devices also discriminate against small farmers. This is the case with the long delays and elaborate formalities in loan approval which

serve to screen out potential borrowers. Timing is crucial in agriculture: if the resources are not available when needed for a particular activity, the activity cannot be undertaken. When credit is being granted too slowly, only those farmers with enough resources of their own can afford to go ahead with the activity and receive the borrowed funds later.

*Other disadvantages.* Some further disadvantages of a low interest policy may be mentioned. Low rates of interest for example, encourage the use of funds borrowed from a formal institution for consumption purposes. This use of funds is more readily available to the richer farmers with better access to institutional loans, who are less likely to find their loan uses subjected to enforcement of requirements that they use the loan only for designated purposes since their political power makes such enforcement more difficult. Even if this is not true, the low cost of money resulting from a policy of low interest rates does make it more tempting to borrow from institutions for consumption purposes, either by directly spending in this fashion or by using such funds to pay off moneylender loans (Eckaus). High rates of interest would curb this propensity.

Access to subsidized credit also permits the beneficiaries of institutional credit to use the borrowed funds for relending, given the higher rates that prevail in the free market. Credit program funds might also flow out of the agricultural sector into speculative urban investments. Again, the temptation to misuse funds is greater for the richer farmers, who do not need the money for their own consumption or production and who can more easily evade the legal prohibitions and other restrictions imposed on these transactions. This mechanism allows the beneficiary of the formal credit program to easily cash in on the subsidy accorded by the low interest policy. If the larger farmers are capturing the subsidized credit, and the small farmers are borrowing from them at a higher rate of interest, this is not a very equitable arrangement.

### *Political Factors*

If the impact of low interest policies in lending institutions is as negative as has been indicated here, how is it that they are so prevalent in all parts of the developing world? The argumentation up to this point has been based largely on economic analysis; we must now turn to non-economic factors. While these are often ethical or religious in origin, and either tied to particular social groups whose influence is important or possibly reflective of generalized social attitudes accepted by all members of a society, we may call them political factors insofar as they represent influences that determine government policies. In effect, the decision to change an established interest rate policy becomes a political decision that is usually beyond the scope of economic technicians and must be fought out in the political arena. There are ethical and political grounds for supporting higher interest rates, but these need to be defined in the light of prevalent views that work in the opposite direction.

Two kinds of influence favor low interest rates on loans: religious traditions and related social attitudes in traditionalist societies; and "modernist" views which emphasize the socialist as against the capitalist elements in secular thinking. In European tradition, the medieval Catholic view that "usury" was to be condemned prevailed until it was gradually redefined to fit the emergence of expanding, relatively non-traditionalist societies in the Renaissance period. In Islam, the traditional strictures against charging interest were also very specific. But it

may be said that in contemporary Muslim countries one cannot in practice obtain the use of borrowed funds from institutional sources without paying interest for them, i.e., an evolution like that in Europe has been occurring. In other religious traditions, the focus on interest payments may have been less specific, but there was an emphasis in many cases on social values that condemn greed and over-acquisitiveness in somewhat the way that Catholic and Muslim traditions have done. Today these general attitudes are very much alive, whether or not they are still considered religious matters (some religions, of course, have never been anti-acquisitive). It may be said that such attitudes are derived from a static society where everyone knew his place and kept to it, so that they are out of place in a changing world of development and growth—as the Europeans discovered. Nevertheless, these attitudes cannot be dismissed as traditionalist only, since they tie into a new socialist-oriented view which opposes private profit.

We do not intend to explore the more profound questions of the capitalist ethic in relation to either the various traditional concepts of personal morality or the newer kinds of concepts regarding capitalists and moneylenders as a class. This is not necessary: some countries may wish to extend small farmer credit via private profit-making institutions, while others may prefer to use public banks where profits are retained and used by the institution. What can be said is the following: So long as a nation does not intend to abolish private ownership of farm land in favor of collective ownership and operation, and so long as it contains an important population of small farmers on whom it must depend on for food and raw materials, it must try to improve their output and living standards. This is the ethical foundation on which the argument over interest rates should be based. Insofar as credit institutions can make a contribution to such improvement, they must be conceived in a way that will allow them to do so. And we have seen that the low interest policy is one that foredooms them either to stagnation and small scale ineffectuality or to a shift of their lending away from the small farmer.

Once this lesson is accepted, it will be seen that the low-interest policy is a delusion. It pretends to help the poor farmer; but in fact it cheats him by directing funds elsewhere and curtailing their amounts. This is not to say the the designers of small farmer credit programs are consciously perpetrating a hoax; their intentions may be the best, but the institutions they have erected simply cannot do the job they have in mind. If they are not to be guilty of "tokenism," that is, of gestures that give an appearance of good will without the substance, then they should turn their attention to building institutions that can have the strength to do the job.

This does not mean that higher interest rates alone will solve all the problems; more ingredients are obviously required. But it does mean that the espousal of higher interest rates in lending institutions is a struggle *for* the small farmer, even if he and others in his society do not immediately see it that way. It is a struggle for what should be *his* institution. Unfortunately, it looks to be the opposite: once low interest rates have been adopted, and become customary, their increase is all too naturally seen as a hostile act by the borrowers and their partisans. If one were starting such institutions without precedents, it might be possible to avoid such a reaction; but with low interest policies in being, this is not possible. Hence the political difficulty.

The idea that some portion of a nation's budget should go into subsidy for an

activity that will benefit small farmers may be generally acceptable; but funds are limited. Subsidies for particular crops or inputs rather pointedly go to particular interest groups, and they can get rather costly. Covering the deficits that may be incurred by a low-interest credit institution seems to be a more benign activity for a large but vaguely defined group, involving less overt favoritism than direct payments of government funds to private parties; it arouses no particular hostilities, and it may have some religious or social-attitude sanction; and it can probably be done more cheaply than other subsidies. For all these reasons, it is politically easy and attractive. But, once it is done, its reversal would arouse hostile feelings among the beneficiaries of low-cost loans without creating any one group who could feel that they were directly benefiting from higher interest rates. If rural credit programs had built up a large number of savings account owners, these might see themselves as beneficiaries of a rise in interest payments; but such people are few and are more alive to their interests as borrowers. There is no large or well-identified constituency to lend its political support for a move to raise interest rates other than the people who can be persuaded that this is essential for the cause of rural development. Once a successful and growing credit program employing a self-strengthening rate of interest had started to prove itself in practice, then its political supporters would begin to materialize among the farmers involved, plus those who gain from their prosperity. But until that time, the arduous job of persuasion remains to be done, with whatever allies can be found or brought around in each political situation.

*How High an Interest Rate?*

While considerable attention was given in the Spring Review workshops to the question of whether interest rates in small farmer credit should be raised above current levels, much less consideration was given to the levels that they ought to rise to. The objections that were voiced to the higher interest position, as presented here, were not so much reasoned defenses of existing levels as they were expressions of generalized opposition to interest rates that were too high, or of the view that an increase in rates would accomplish much less than its protagonists were claiming for it. No analytical counter-position favoring low interest was formulated; but there was a feeling among a number of participants that the well formulated higher-interest argument had been overemphasized, and was in any case politically unrealistic. These reactions must be noted; but they do not lead to any way out of the practical problems posed by the negative impacts of low-interest policies as just described. It may be that higher interest on savings deposits will not immediately create institutional savings habits, as will be discussed in a later chapter, and some of the other benefits of a higher interest policy may or may not have been exaggerated in particular statements. But the negative effects of low loan rates on the income of lending institutions and their allocation of credit to the small farmers can hardly be refuted. Political considerations do not change these hard realities.

Once the desirability of an increase in lending rates is accepted, what criteria should be applied in setting a level? As a preliminary objective, let us assume that the costs of lending should be covered so that subsidies are not needed and an institutions's capital is not eroded. If one is concerned with serving smallholder agriculture in capital-poor countries, interest policies should also provide for capital accumulation and the attraction of rural savings. With respect to the

covering of costs, however, it might be argued that cost reduction comes first, that unjustifiable costs like excessive defaults should not be covered. Action on both fronts is obviously needed, and cost reduction is dealt with in the next two chapters. Here we will offer some general proposals on how loan rates ought to be determined, beginning with lending costs.

The administrative costs of institutional lending vary rather widely, as shown in Table 8. In part this is because the credit institutions vary in the functions they include in their budgets: Most of these figures include the headquarters staff and activities, but some do not; some probably include technical assistance and loan supervision (this was excluded where it was clearly identified); and some institutional budgets include other activities additional to agricultural credit.

Other reasons for the variations in average cost are the difrerences in the size of the average loan and in the numbers of loans per institution, also in the timing of expansion or contraction in loans. The BPM in Malaysia, for example, had a high cost at the time of observation because it had recently hired full staff for new operation but had only begun to expand its loans; average costs must have since decreased very considerably. Three of the figures in Table 8 are probably underestimated in some degree, since they are presented in the original source as percentages of an undefined base which is apparently larger than the value of the new loans (see table footnote a). If these three figures are excluded, the median for the remaining 17 cases is 10 percent. This is a conservative value for administrative costs to use as a representative figure in considering interest rates; it is almost certainly higher than what could be achieved in a well-run program with a substantial loan volume, even with rather ample services to farmers included in the budget.

Cost of capital is the next major category, and it presents certain problems. Public credit agencies customarily obtain their lending funds from their governments at concessional rates ranging from zero to perhaps 4 percent. For a credit program using only such capital, its lending income would only have to cover this kind of cost. But if there is any intention of mobilizing other sources of potential loan funds, a higher rate would have to be paid. If a savings program were to be incorporated, the costs of capital obtained in this way would include the interest paid on deposits plus the administrative cost of handling the deposits. The latter might not be large, at least it would not be if a sizeable savings flow were obtained; but the interest rates paid to depositors to obtain such a flow of deposits could be more consequential. We have argued above that mobilization of rural savings is desirable as an integral function of a credit program, and that existing deposit rates are generally too low. It is difficult to say how high they should be because, as indicated in the discussion of Chapter 12, the nature of the organization of a savings drive seems to be a more important variable in the observed cases of successful deposit mobilization than the level of interest paid. There has been too little experience with the interest variable in effective rural savings attraction to draw firm conclusions. But let us very arbitrarily set a figure of 8 percent interest to be paid on deposits, and of 2 percent for the administrative cost of running the savings program. It may be noted that 8 percent is a rather low value for the opportunity cost of capital in developing countries, but that the security and convenience of a well-organized savings facility might be a sufficient attraction to offset this disadvantage.

Table 8: Administrative Costs in Selected Institutions as a Percentage of New Loans

| Africa | Institutions | % Cost |
|---|---|---|
| Ghana | Agricultural Development Bank | 10 |
| Ivory Coast | Caisse Nationale de Credit Agricole | 9[a] |
| Kenya | Agricultural Finance Corporation | 3[a] |
| Morocco | Caisse Nationale de Credit Agricole | 10 |
| Asia | | |
| Bangladesh | Kotwali Thana Central Cooperative | 17 |
| Indonesia | BIMAS Program, "Improved" version | 25 |
| Jordan | Agricultural Credit Corporation | 20[b] |
| Lebanon | Bank for Agricultural and Industrial Credit | 3 |
| Malaysia | Bank Pertanian Malaysia | 20 |
| Philippines | Rural Banks | 5 |
| South Korea | National Agricultural Cooperative Federation | 6<br>6 |
| Taiwan | Farmers Associations | 2.5[a] |
| Thailand | Bank for Agriculture and Agricultural Cooperatives | 13 |
| Turkey | Supervised Credit Program of the Turkish Republican Agricultural Bank | 5 |
| Latin America | | |
| Brazil | Associacão de Credito e Assistencia Rural | 10 |
| Colombia | Instituto Colombiano de la Reforma Agraria | 10 |
| Costa Rica | Banco Nacional de Costa Rica | 7 |
| Ecuador | Directed Agricultural Credit Program | 4 |
| El Salvador | Administracion de Bienestar Campesino | 16 |
| Mexico | Fondo de Garantia y Fomento Para la Agricultura, Ganaderia y Avicultura | 3 |
| Peru | Agricultural Development Bank | 6 |

Source: Bank Policy on Agricultural Credit, World Bank, 1974, Annex Table 13. To the extent possible, capital and supervisory costs were excluded from the cost data. But it was not possible to get comparable cost figures for these different kinds of institutions. Some of the high figures include the costs of more services to farmers, as in Bangladesh or Indonesia, than are included in other figures. Some institutions, e.g.,in Taiwan and Bangladesh, gave figures covering costs in only the lowest level of credit delivery, while the Fondo in Mexico operates only at the top level; in most cases, however, costs for a whole national structure are included, as in South Korea and Indonesia. The numbers of borrowers per institution vary widely. In some cases such as the BPM in Malaysia, the current program was small but the staff to enable it to expand had already been hired, so that costs will decrease relative to loans in future years.

[a]In these cases costs may be understated: they are given as "percentages of total resources" (undefined) rather than percentages of new loans.

[b]The 30 percent figure given in the original table included capital costs.

Now let us suppose that a representative credit agency has administrative costs amounting to 10 percent of its annual loan value, and that it plans to rely on public capital for, say, two-thirds of its loan funds for which it must pay 3 percent a year and to elicit savings deposits for the remaining third at a cost of 10 percent. The average cost of capital would be 5 percent, and the total for the operating costs considered so far would be 15 percent at an annual rate. Suppose also that its capital is out on loan and earning interest for an average period of ten months of the year. If it is to cover these costs as defined it must charge its borrowers with an annual interest rate of 18 percent.

We come next to a still more problematical cost category—the allowance that should be made to cover losses from default. It would appear that such losses are not treated as operating costs in the usual accounting of credit agencies, since overdue debts are carried on the books as accounts receivable most of the time (they may be counted as a cost very occasionally when they are written off). The available facts on delinquency, as shown in Table 11 below, point to a serious problem in a number of farm credit institutions, in that the amounts unpaid as a percentage of amounts due for payment in a year are surprisingly high. The median values are in the 20-30 percent range, with numerous high values of 50 percent and over. The problem, as is explained further when the table is discussed, is one of interpreting these figures: the late repayments that are eventually made cannot be disentangled from those that are never made in most of the reporting on the subject, so that it is difficult to estimate what proportion of loans end in default.

Even if defaults are not accounted as an operating cost, they are a genuine cost to credit programs in the form of capital erosion. It would seem wise for credit agencies to make at least some kind of allowance for such losses in their cost and income planning. Whether the full costs of actual defaults should be covered by lending charges is a question that cannot be answered categorically: in principle it would be far better to reduce defaults than to charge the repaying borrowers for the cost of their neighbors' delinquencies; but will this be done? Defaults vary very widely, not only as between lending agencies but over time in the same agency. How far can one expect to bring them down? If habitual defaults at a rate of 20-30 percent a year cannot be avoided, then credit agencies would have to charge annual interest rates of at least 50 percent for loans if they are to cover their total costs. This point of view has been argued by Millard Long, for example, in his Spring Review paper and in unpublished work. (Default rates are not the only reason why Long's cost estimates are high, but they are the most important one—see table 10 below.) His argument implies that it is unrealistic to expect to cover the costs of small farmer credit from lending income, since it would be politically impossible for public institutions to charge borrowers at the same rates as moneylenders; it follows that large subsidies have to be accepted as inevitable.

This argument cannot be entirely dismissed, for it does appear that the high costs of small farmer credit in general, and of losses from default in particular, have not been adequately faced by credit agencies or by governments and donor institutions. The scarcity of proper data on default rates is one symptom of that. However, we need not accept Long's pessimistic "realism" on default levels, either as reflecting established fact—given the ambiguities of the data—nor as a guide to interest rate policy. It is not ducking the issue to assert that 20-30

percent *default* rates are not inevitable, and should not be fully covered either by subsidy or by lending income. We will return to the subject in Chapter 11. But clearly a credit agency ought to make some allowance for anticipated bad debts as well as trying to reduce them. How much this allowance should be would vary widely among lending institutions: a 5 percent allowance might be reasonable where defaults were continuous but not too serious; 10 percent might be a maximum beyond which default losses should not be compensated by repaying borrowers.

Another factor bearing on capital erosion which is almost never recognized in credit agency accounting is the annual rate of inflation. While the past or the probable future rate of increase in a country's price level is not counted as an operating cost in public agencies, it is very much a part of the calculation of any private lender's interest rates when he is concerned with preserving his capital. Though somewhat unpredictable, it should have a place in the plans of a public agency. The rates of annual price increase in 1967-1970, shown in Table 7, run from zero to 30 percent, with a median of 4 percent. There seems to be a rising world trend in such values, however, though whether it will continue indefinitely is not obvious.

The question of what rate of planned capital accumulation should be built into a credit agency's loan rate, in addition to covering the enumerated costs, is a further consideration. Is it desirable to build up additional capital from a surplus in the proceeds of lending operations? Is it also desirable to attract urban funds into agriculture by offereing further deposit facilities in the farm credit agency, using an attractive deposit rate that must be exceeded by the loan rate charged? Such questions can only be answered within a larger framework of nation-wide analysis of the needs and prospects for agricultural and related rural development, in conjunction with other developmental needs and their relative priorities. The methods of capital accumulation envisaged here—including savings programs—are relatively untried on any significant scale in most countries, and the results of each method of bringing it about cannot be predicted with certainty. But the prospect for accumulation may well be promising in many countries if the possibilities are seriously explored. The price to be paid, it must be recognized, is an interest rate level that will be unfamiliar in banking institutions and open to criticism as being too high, even by cost-covering standards. Certainly a high level would be necessary to launch any very aggressive program of capital accumulation in its initial stages, and to sustain it into vigorous life. In time, however, the integration of capital markets and the expansion and proven efficiency in loan operations should make possible economies of scale, so that interest rates could be brought down without sacrifice of further capital growth.

What order of magnitude in interest rates is implied in this discussion? Beginning at the bottom, it is best to state categorically that any annual rate less than 12 percent is most unlikely to do what needs to be done. It is true that many farm credit agencies have administrative costs below that level; but the loan capital must be paid for, and some portion of this loan capital is likely to be unoccupied, not bringing in income during certain seasons of the year. Furthermore, it is a rare institution that can say that 12 percent level would also provide a secure margin to cover the risk of default. The minimum level begins to look more like 18 percent. There remains the problem of preserving the value of the agency's lending capital in conjunction with inflationary trends, and the consideration of

how much (if any) capital accumulation from lending profit will be thought desirable.

It may be noted that we have not attempted to include any extensive costs for technical assistance to farmers, which would usually come from an agriculture ministry; some supervisory activities could probably be covered by a 10 percent administrative cost level. Nor have we mentioned costs for auxiliary marketing services, cooperative organizations, or other activities; these could be paid for directly with government funds. Nevertheless, enough requirements for a viable small farmer credit program have accumulated to indicate that 18 percent may be regarded as a minimum loan rate if subsidy to lending operations is to be avoided. In many institutions this could hardly be done for less than 24 percent. In other situations it might require 30 percent or more, where high levels of inflation and/or default are anticipated. But we may plausibly speak of an 18-24 percent range as appropriate to many conditions.

These figures are intended only as very rough approximations, and they could be regarded as either too high or too low from different standpoints. They may, however, serve the purpose of giving some guidance to thinking about what should be regarded as "normal" in small farmer programs. They are low if intended to cover the actual losses from default in a number of credit agencies; they are low in comparison to most moneylenders' rates. They are higher than has been usual in agricultural credit or urban banking, however. They can be regarded as medium or modest estimates of lending costs; a comparison with two other cost estimates is presented in an appendix to this chapter. But if they are to be used as a basis for interest charged to institutional borrowers, they would be somewhat unfamiliar. There has been too little experience with such annual loan rates to predict their effects. We need to learn far more about the practical consequences of employing interest rates in this range over a period of years, and their ramifications in related areas.

How would farmer-borrowers react to interest charges of 18-24 percent? We may surmise that the farmer who can contemplate borrowing from a moneylender would prefer this kind of institutional rate if the accompanying conditions and services were not too unfavorable; and that the difference between such a rate and the prevalent 6-12 percent rates would not be too great to deter most farmers from using such short-term credit for buying agricultural inputs when these were thought to be reasonably productive. The interest paid on a six to nine month loan for fertilizer at 1½ to 2 percent a month, for example, could easily be less than the probable net gain from using it.

We may also look briefly at the 18-24 percent annual rate vis-à-vis the various opportunity costs for capital uses in developing countries. Generally it would fall between the lower regulated rates of banks and savings institutions and the higher rates of return on many unregulated loans and investments, rural and urban, informal and semiformal, paid by commercial or consumption-oriented borrowers. It should be able to accomodate medium level deposit rates which could attract some institutional savings if arrangements for savings deposits were provided in the design of a rural credit program. Such savings would be more likely to displace private hoarding or consumption (if the savings deposits are perceived as safe, and the credit agency as permanent) than to divert funds from the more lucrative unregulated uses into which they already flow. To this extent, "medium" interest rates could bring about net additions to a nation's supply of

transferable capital, and direct it more securely into small farmer agriculture than the 6-12 percent rates have been able to do, but without much sacrifice of non-agricultural investment. The net gain to agricultural investment would be less, since some farmers' saving and investment would be displaced, but a net increase here seems probable; and the institutional investments could be as well allocated as those from household savings if the credit agency's loan criteria were reasonably economic. All these shifts appear to be desirable. How large they would be is a matter to be determined in practice, with factors other than the interest rate playing an important role.

As to whether 18-24 percent loan rates could become politically acceptable, a few observations are pertinent. If agricultural credit extended to borrowers at such rates required no subsidy, it could be made far more widely available than the existing institutional credit; and since it would be cheaper than moneylender credit it could become popular. However, if other bank rates were unchanged, and higher rates were charged to rural borrowers—as a result of higher lending costs—than to urban institutional borrowers, this would mean in effect that the poor were paying more than the rich. Such a policy may become vulnerable to criticism. Nevertheless, it is not without precedent in developed countries—for reasons of relative cost. U.S. banks, for example, customarily charge higher interest on their small loans for consumption purposes than to larger business borrowers. In such lending, rates in the 20 percent bracket are high but not wholly "out of line" for many customers despite the greater abundance of capital in the U.S.

One qualification to the proposed policy needs to be mentioned. Although the subject of medium-term loans and larger investments is given less treatment in this book (as in the Spring Review) than it deserves, it is frequently true that such investments would do more to raise agricultural productivity than the short-term credit that is under discussion here. If a greater capability for medium-term lending is being contemplated in the design of credit programs, a lower loan rate than that which is justifiable for short-term loans probably ought to be used, because the resulting debts with high rates of annual interest due over several years could predictably over-burden the small farmer. This argues for a highly differentiated loan rate structure; and if the medium-term loans need to be subsidized from the proceeds of short-term loans, then the latter cannot be too low. What this implies for particular institutions depends on the proportion of short-term loans in their total portfolio. Most agricultural lending is short-term, as indicated in Table 9. But medium- and long-term lending is not negligible in some of these institutions, and in such cases a careful cost analysis by type of loan is needed to develop the kind of rate structure that would be appropriate.

In conclusion, it is worth repeating that the suggested 18-24 percent rates are intended here as a tentative view of what might be seen as a normal level of interest for small rural loans. It is certainly not a recommended level for all programs or all countries. Neither should it be presented as precisely "the" opportunity cost of capital, nor as presenting an equilibrium price of capital either in the small farmer capital markets or nationwide. When capital markets are highly fragmented, equilibrium values in such markets will vary widely. The integration of capital markets is necessarily a long-term objective; as it draws closer to reality, the question of equilibrium prices in different types of loan operation becomes more pertinent. As integration proceeds, small-farmer lending will no

Table 9: Duration of Agricultural Loans Made by Selected Institutions
(percentages of value)

| | | Durations | | |
|---|---|---|---|---|
| | | Less than 2 years | 2 to 5 years | Over 5 years |
| **Africa** | | | | |
| Ethiopia | All institutions | 100 | 0 | 0 |
| Kenya | All institutions | 26 | 31 | 43 |
| Morocco | All institutions | 73 | 27 | 0 |
| Tunisia | Banque Nationale de Tunisie | 62 | 38 | 0 |
| Uganda | Cooperatives | 100 | 0 | 0 |
| **Asia** | | | | |
| Bangladesh | Agricultural Development Bank | 44 | 48 | 8 |
| India | Cooperatives | 76 | 24 | 0 |
| Iran | Agricultural Cooperative Bank of Iran | 30 | 70 | 0 |
| | Agricultural Development Fund of Iran | 0 | 10 | 90 |
| Jordan | Agricultural Credit Corporation | 25 | 75 | 0 |
| Malaysia | Bank Pertanian Malaysia | 60 | 40 | 0 |
| Pakistan | Cooperatives | 88 | 12 | 0 |
| Philippines | Rural banks | 93 | 7 | 0 |
| South Korea | National Agricultural Cooperative Federation | 90 | 10 | 0 |
| South Vietnam | Rural banks | 100 | 0 | 0 |
| Sri Lanka | All institutions | 95 | 5 | 0 |
| Taiwan | All institutions | 50 | 28 | 22 |
| Thailand | All institutions | 71 | 28 | 1 |
| Turkey | Supervised Credit Program | 23 | 53 | 24 |
| **Latin America** | | | | |
| Brazil | Federal banks | 78 | 19 | 3 |
| Bolivia | Agricultural banks | 100 | 0 | 0 |
| Chile | Instituto de Desarollo Agropecuario | 70 | 30 | 0 |
| Colombia | Caja Agraria | 42 | 39 | 19 |
| Costa Rica | State banks | 40 | 60 | 0 |
| Ecuador | Directed Agricultural Credit Program | 100 | 0 | 0 |
| El Salvador | All institutions | 96 | 4 | 0 |
| Honduras | Banco Nacional de Fomento | 43 | 37 | 20 |
| Mexico | Fondo de Garantia y Fomento Para la Agricultura, Ganaderia y Avicultura | 95 | 5 | 0 |
| Nicaragua | Rural credit program of the National Bank of Nicaragua | 82 | 18 | 0 |

Source: Bank Policy on Agricultural Credit, World Bank, 1974, Annex Table 11. In some institutions the short-term total includes reschedulings for one year of non-repaid loans initially for a longer term.

doubt continue to occupy a position at the high-cost end of the spectrum, which would justify some differential in its equilibrium price above other lending rates. But any further discussion of national equilibrium values is impossible without entering the marshy terrain involved in estimating shadow prices for capital in markets that are small and particularized, and the data unreliable; where consumer or speculative borrowing may loom even larger in demand—as in rural moneylending—than marginal productivities; and where medium- and long-term investment, when it does not originate in family enterprise saving (urban and rural), is heavily dependent on government-sponsored institutions and administered public capital. These are the conditions in which small farmer programs must find their economic-political place, and try to expand their role. The interest rate can be viewed as a tool to be used in carving out that place, and a weapon in the struggle for expansion. Such an approach to the function of a government-determined interest rate, on loan funds that are at least partly state-allocated, is perhaps more cogent than one which emphasizes the balancing function of an interest rate among supply and demand forces in fragmented capital markets.

## *APPENDIX TO CHAPTER 9*

Table 10: Comparative Cost Estimates for Small Farmer Lending
(in percentages of annual loan values)

| Costs | Estimates discussed above | World Bank[a] | Millard Long[b] |
|---|---|---|---|
| Administrative | 10 (median) | 7-10 | 20 (average) |
| Cost of capital | 3[c]-10[d] | 8[e] | 10[e] |
| Allowance for defaults | 5 (10 max.) | 4 | 30 (average)[f] |
| Allowance for funds not on loan | 0-6 | - | - |
| Inflation rate | 4 (median) | - | - |
| | 22-35 | 19-22 | 60 |

[a] Source: Bank Policy on Agricultural Credit, World Bank, 1974, pp. 5-6.
[b] Source: Millard Long, Spring Review Vol. XIX, p. 84.
[c] Concessional rate on public capital.
[d] Cost of a savings program.
[e] Opportunity cost of capital.
[f] Reported delinquency levels.

It will be noted that the range of total costs shown for our calculations in Table 10 has a low point of 22 rather than 18, because it incorporates median or middling values for administrative costs, default allowance and inflation. In speaking above of a "normal" range of 18-24 percent, we assume that administrative costs could be reduced below 10 percent with high volume, and that defaults and inflation might be on the low side. Our "normal" values are thus on the lower part of the spectrum of probabilities.

The World Bank estimates for administrative cost are for small loans (lending to larger farmers, they have found, would have a 3 percent cost in an efficient institution). The Bank figures omit estimates for two items which could raise the

total cost if included (inflation was considered but not given a value). However, they use an opportunity cost for capital which, though given a low value for that purpose, is higher than what many credit agencies actually pay for their funds.

Millard Long's round figures were based on a small sample of ten Spring Review reports, and were intended as part of a general illustrative statement. He found total costs in this sample ranging from a low of 15 percent to over 100 percent. Loan supervision costs are included with administrative costs (whereas the data in Table 8 had eliminated them to some extent). Delinquencies (not proven defaults) are treated as a cost at reported values; the author did not specifically discuss whether they should or should not be covered in full by allowances, but included their full values in his total costs.

Anthony Bottomley's paper[4] includes a hypothetical cost curve for rural lending by an "urban bank." Average costs fall with the volume of loans from 100 percent down to 10 percent. Administrative and default costs are included, along with a 5 percent value for earnings on capital. This kind of calculation is not comparable to those in Table 10, but Bottomley may be mentioned here as supporting the view that rural lending costs are higher than has been widely thought.

*Note:* The use of opportunity costs for capital, as in the Bank and Long figures, is justified for a social (or economic) analysis where the question to be answered is whether the returns on small farmer lending would justify an investment of government capital. An opportunity cost would be the returns foregone by the diversion of public funds from other uses. We are asking a different question here, for which a financial analysis of credit agency accounts is more appropriate. We want to know how much loan interest the agency must charge to avoid dependence on operating subsidies; and the actual cost of capital to the agency is the appropriate measure. Only if the source of capital is undefined, or very broadly defined, would estimates of opportunity cost be pertinent.

## *NOTES*

[1]Edward S. Shaw, *Financial Deepening in Economic Development* (New York and London: Oxford University Press, 1973).

[2]*Ibid.*; and Ronald I. McKinnon, *Money and Capital In Economic Development* (Washington, D. C.: The Brookings Institution, 1973).

[3]See Spring Review papers by Adams *et al.* (Taiwan) and Roberts (Zambia); see also Albert T. Brown, "Economic Policy and Development: Korea in the 1960s," unpublished manuscript, 1970.

[4]Bottomley, "Interest Rate Determination in Underdeveloped Rural Areas," op. cit.

# 10 *Banking Practices: Possibilities for Reform*

The purpose of this chapter is to explore possible reforms in the practices of credit institutions in order to reduce the costs of small farmer lending and to make such credit more accessible to small farmers. These two objectives will be mutually consistent in many respects, although there are some ways in which they may present conflicts. We shall proceed by giving critical attention to a series of proposals for change in prevalent banking practices, followed in the next chapter by a more comprehensive look at the default question and concluding with an effort to evaluate the proposals reviewed in the two chapters. But first, a few words on whether the idea of providing an economical banking service to small farmers has any prospect of becoming a practical operation.

The great majority of bankers would probably say that it is not a very practical idea, and much of the experience to date could be interpreted to support this conclusion. Certainly it is clear from experience that small loans have been high in administrative costs, and it might be concluded that they can only be undertaken with subsidy or with higher loan interest than has been allowed by law in most countries. But just as the small size of loans raises average costs, the increase in numbers of borrowers can bring them down. For example, bankers in northeast Brazil, a low income farming area, argue that they lose money on loans of less than U.S. $2,000; but farmers' associations in Taiwan can make profits steadily on loans averaging about one quarter of that value. Real interest rates have been only moderately higher in Taiwan (by perhaps 20 percent); Taiwanese farmers' associations are generous in the services they supply to farmers, yet their administrative costs are very low (see Table 7).

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Contributors to this chapter from the Spring Review include Daniel Goodman, advisor under AID contract to the Western State Agricultural and Industrial Investment corporation in Nigeria, author of a paper on the organization of a small farmer credit agency; Thomas Stickley, formerly of American University in Beirut, Lebanon, with his proposal for village bank agents; P.N. Damry of India and Roberto Ruozi of Italy, as noted below; Dale Adams, of Ohio State University, for suggestions on incentives to private banks to increase loans to small farmers. Outside the Spring Review, staff members of the Pan American Development Foundation, Washington, D.C., supplied information and ideas on their methods of expanding access to credit.

A key difference here is loan volume: a Taiwanese farmers' association may have several thousand small borrowers per year, while the northeast Brazilian banks may only have several hundred. The implication is that an important way to reduce average cost is to increase customers, i.e., to increase small farmer access to institutional credit.

The average banker is unfamiliar with the experience in Taiwan, and is likely to remain skeptical. He might reply: "This may be all very well in Taiwan, but in my country you would never be able to find several thousand creditworthy farmers in the lending zone of one of our rural bank branches." And the extensive experience with defaults in small farmer lending in many areas could be interpreted to support his position. However, the logic of a relation between defaults and small farmers is a good deal less clear than it is with administrative costs and small loans, and the statistical record is sufficiently ambiguous and erratic that it raises basic questions. Why are default rates so very high in some small farmer situations and so very much lower in others? One suspects that the high administrative cost of small loans has been sufficient to keep bankers away from the field, for the most part, and to dull their curiosity about finding solutions to such specialized rural default problems.

Nevertheless, a few bankers have expressed a positive belief in the potential of small farmer credit for becoming more than a subsidized, welfare type of operation. In the Spring Review conference, P.N. Damry spoke from long experience in the Reserve Bank of India, and with strong personal conviction, of the scope for profitable commercial lending to small farmers that had already been undertaken in some areas by private banks in India and that could, in his view, be considerably expanded if banks were to take the extra trouble and find the right employees for the job. He suggested that it would be necessary to find people with ". . . the zeal to develop into a new field. Such men are available. They have the elementary principles of banking; they need orientation. . . " Here he spoke of a need to learn more about the special requirements of agriculture (but not at an expert level) and, more important, of an attitude toward small farmers that was not usual among urban white collar staff. But he affirmed that he had seen the right attitudes produced in men he knew well. At the same conference, Roberto Ruozi, a professor of banking at the University of Parma, Italy, with banking experience in Africa and the Middle East, also expressed an affirmative view of what banks have done and could do increasingly in small farmer credit. He included private banks, but stressed more the potential of non-subsidized public and cooperative-related institutions. Both men referred to rural savings mobilization along with production loans as important fields to expand. In addition, some of the private bankers participating in Spring Review workshops expressed positive views on small farmer lending, sometimes implying that theirs was a minority opinion within their institutions. While it is natural that the Spring Review meetings would attract those who were interested in small farmer credit rather than a representative sampling of bankers' opinion, still it is of interest that such bankers can be found.

The remainder of this chapter will examine banking practices, first with a view to improving their efficiency, and second from the standpoint of increased small farmer access. We leave to other chapters the questions of whether loan rates high enough to cover costs can be attained, and whether in the end some form of subsidy must be used in improving the position of small farmers. We would hope, however, that costs could be squeezed down enough to avoid the need for subsidizing the lending operation per se, even if auxiliary services will

require subsidy. And we would also hope that possibilities might be opened for interesting private commercial banks in the small farmer field—those banks that will "take the extra trouble and find the right employees for the job." Some countries may prefer, on principle, to give that job to public institutions; but for others it would be advantageous, and saving of public resources, to be able to induce private institutions to participate profitably on more than a token basis. To the extent that existing institutions can be so mobilized, the costs and delays involved in creating new or special-purpose institutions could be much reduced.

*Particular Practices*

The banking practices to be reviewed include: application forms, and the information they require; security requirements—collateral, cosigners; procedures for loan approval; and personnel practices, including the qualifications of employees, recruiting methods, orientation and training within a credit organization, and methods of promotion and rewarding or punishing employees. Many prevailing practices were called in question in Chapter 6 from the standpoint of a detached analysis of "bureaucratic culture"; here we shall consider their instrumental value from the bank's standpoint in maintaining and improving a banking operation.

*Application forms* are widely regarded with hostility by small farmers, especially when they are illiterate and cannot be sure what is said about them in writing. But it is obvious that the easy relations of borrowers with village moneylenders, who already know or can easily find the information they may need about the farmers who apply for loans, are not readily transferable to larger credit institutions. This is partly a matter of size of the areas covered by a lending official: loan officers cannot know as much as they need to about farmers in a number of different villages unless they ask, and then keep the information on file in writing for future reference. A loan officer could eventually build up a substantial body of such knowledge if—like the moneylender—he stayed in the same place for a long time; but a credit institution would be greatly inhibited in its capabilities if it could not transfer its loan officers, and if it required long periods of "apprenticeship" under an older resident officer before an officer new to an area had developed his individual store of information. Further, the loan officer who does not know a farmer is much easier to deceive than a resident moneylender, so he must try to get information that can be checked from other records—for example, registered land titles indicating a farmer's ownership, or tax records certified by a stamp or official signature; and the history of a farmer's assets and financial habits. In addition, credit agencies concerned with increasing agricultural productivity need to know much more about a farmer's operations to decide what is appropriate for his needs than would a moneylender who is indifferent to the uses of his credit.

Thus there are reasons why application forms are needed, and why their contents have become so troublesome to the loan applicants. The question that needs to be raised is: how much information is necessary rather than desirable, that is, what uses are actually made of the particular kinds of data required in application forms? Application forms usually originate in an urban environment; most banking experience has been with loans to business firms rather than individuals, and with larger farmers having bank accounts, registered titles, etc., more than small farmers. It is common practice to find the same forms that have been useful and appropriate elsewhere used in small farm credit. In some

cases farm credit agencies have even used without change (except translation) the application forms of banks in Europe or the United States (Nisbet). The kinds of information customarily required from business firms are more elaborate than what is obtainable from small farmers. The necessity for long, complicated forms, using terminology unfamiliar to such farmers, is questionable; if farmers do not understand the questions asked, the answers will not be worth much. In a number of countries, small farmer credit agencies have found that they could reduce their forms from four or more pages to one or two pages without losing any information that they needed in small farmer lending (Nisbet). Such revisions should certainly be encouraged, with the actual use of informational items as the criterion.

A major reason for the elaboration of informational requirements is, as noted earlier, the effort to judge creditworthiness of loan applicants; and anxiety on the subject of defaults is understandable. But the question of whether repayment probabilities, as found in actual practice, are related to the kinds of data the farmers must supply is not often examined. Are the farmers with bank accounts any more reliable in repayment than those who have none? Does the statistical record in fact support this view? Are farmers with good tax records any more reliable? The list of items should be taken one by one and compared with a bank's experience in an open-minded way, so that the predictive value of each one can be assessed. Of course there may be other reasons for keeping information on file, even if it has little or no bearing on defaults. But these reasons, too, should be looked at in a hard-headed manner. Does it really matter whether a bank knows X,Y, or Z, bearing in mind the cost of keeping the unnecessary records? And if so, why is it important? At the end of this examination, it is likely that a number of items in an application form may turn out to be unnecessary. It is also possible, of course, that a critical look at record keeping may reveal a use for additional kinds of information. If the institution has a mixed clientele of borrowers, it may be appropriate to use a long form for large borrowers and a simplified form for small farmers.

*Security.* It is not uncommon that farmers are required to own property in order to qualify for a loan, and the kind of property which is pertinent is usually land. Such land may be involved in the loan as collateral, i.e., as security for repayment, which means that the lending agency has the right to take possession of the land in event of default. Even if the agency does not make collateral a condition for lending, it may have a formal or informal requirement that borrowers be property owners, and that they be able to prove it by a registered land title; property owners are considered more reliable clients.

The use of loan collateral provides a valuable insurance for urban banks against failure to collect debts. If a merchant assigns some portion of his inventory as collateral, the bank can if necessary take possession of these goods and sell them without difficulty to another merchant in the same business. Financial assets like notes or bonds can be similarly taken over by a bank, and will serve as a source of cash income sooner or later; they are suitable as bank assets in the interim. But there is some question whether agricultural land is equally valuable to a bank. Typically there is not an active market in the sale of land in developing countries, so that banks may find themselves in possession of pieces of land that they cannot dispose of easily and may have to hold for some time. They may find potential buyers scarce, or of questionable solvency. Thus, regardless of the value of a plot of land as an agricultural asset, it may well be

a very poor asset for a bank, especially when small parcels of land are located in remote areas without connecting roads.

In addition, the act of taking possession of small farmer lands involves some very arduous and unpopular measures. The debtor's relatives and neighbors would be understandably hostile, and the courts and local police are often unsympathetic. Legal procedures do not operate automatically, and can be costly in one way or another. Politicians may or may not side with the bank, etc., etc. It appears that, in practice, the enforcement of actions implied by the use of land as loan collateral is quite rare in a good many countries, so that the insurance value of such collateral is almost nil. Yet collateral remains an important ingredient in the agricultural banking practices of many areas; it may be that the threat of dispossession is thought to be a strong spur to debt repayment, frightening the poor farmer even when the threat is more empty than he realizes. Whether or not such a belief is justified, the possibility of dispossession—realistic or not—contributes to acute hostility and distrust between lenders and borrowers. If a small farmer fears that a credit institution might take away his land he can hardly look on it as *his* institution, as a source of advice and help that he can trust for solving his problems. His survival is more nearly at stake than is that of a merchant in danger of inventory loss.

As noted earlier, this collateral requirement excludes numerous small farmers from a credit program when they are tenants, or when they do not have clear titles to their land. Since it is also a questionable form of repayment insurance, and tends to alienate farmers in any case, the use of land for collateral is clearly out of place for a credit institution that positively wants to build up a small farmer clientele. This indicates that security arrangements with borrowers should either use crops as collateral, or rely on devices such as co-signers or on group responsibility for repayment (see below).

*Loan approval procedures.* One of the major complaints of farmers against lending institutions is that they have to wait for some time in a state of uncertainty until their loans are approved, and that the money may arrive too late for the use for which it is intended. Bank officials may say that farmers should apply earlier; but for the farmer, this may be no guarantee of good results when the timing is erratic and he is kept is suspense for unpredictable time periods for no reason that he can see. The reasons affecting the timing of a loan disbursement have to do with loan approval procedures and the internal flow of papers in a bank: sometimes with higher level approvals of tranches of loan funds moving to local bank branches; with the number of clearances needed for approval; with the echelon and location of the officer who can make a final decision; and with the elaboration of particulars that must be in order in a loan application.

We have noted that application forms often require the processing of more information than is necessary, and elimination of this could speed decision making. The approval decision involves responsibility as well as information, and it is here that more significant reform might be considered. As in other matters, it is the hazard of default that is the basic cause of bank practices that farmers resent, and of course the hazard is real. Credit institutions must operate with little or no personal knowledge of borrowers, and no sure-fire devices for predicting defaults. A moneylender can make quick decisions from his personal knowledge, and he cannot shift the risk: when he guesses wrong his income

suffers, and nobody else can be made responsible. Credit institutions are organized with all employees on steady salaries unaffected by defaults, so the negative impact of wrong decisions must be somehow administered through formal procedures. But since the methods of screening out probable defaulters don't work very well, the individual employee has an incentive to evade the onus of a wrong decision. Since the onus cannot be made to disappear entirely, the tendency is to defuse the responsibility by elaborating the formal criteria for borrower selection. Another tendency is to require multiple clearances for a loan approval to spread responsibility; and in some institutions, final decisions are passed up to higher levels of the organization far more frequently than would be efficient in routine decision making. All of these tendencies make for delays and uncertainty for the farmer in obtaining loan approval.

The result appears to be generally undesirable: lending costs are increased, and service to the farmers is impaired. If the objective of a credit program is to expand its service to small farmers, the time-consuming use of too much manpower is a considerable impediment on the supply side, as is the poor service on the demand side. To the extent that approval procedures actually do reduce defaults, they would have justification as preserving the lender's capital. But where they do not seem to be effective, there is no intra-agency incentive for their simplification; instead, there is an incentive for their further elaboration, irrespective of their value in achieving better repayment rates.

What is suggested here is a new look at the problem from the point of view that a greater *delegation of approval authority* may be desirable. This would mean giving the loan officer who was in contact with applicants full, or more nearly full, responsibility for approval decisions and also for the results. This would, as a minimum, speed the decision-making process. It would also increase the loan officer's incentive to make the right guesses, since he could not evade the responsibility for results. Initially, such a change would make him more cautious, and some officers might simply approve very few loans. But others would be motivated to learn more about their clients, and to develop their skills in discrimination. To prevent an overly negative result, the credit agency's criteria for judging officer performance could stress the positive side—that is, it could combine a measure on the plus side for the value of loans extended and repaid, which should be rewarded, along with the minus element of demerits for loans defaulted.

There are, of course, several dangers. Unsupervised selection of borrowers could lead to corruption; such a temptation is not absent when the officer concerned needs the concurrence of other officers, but the temptation would be increased. There is no certain remedy for this problem; but with attentive supervision, and some supervision of the supervisors, it may be manageable. If nobody can be trusted, then it hardly matters what procedures are used as they can always be evaded. Another danger is that loan officers will go off on individual tangents in their approval policies, and thus distort or confuse the application of credit agency policies. Conformity to agency policies is, after all, one purpose of requiring multiple clearances. But the agency's purposes may be better served by giving more attention to the training and indoctrination of loan officers, plus some supervision and spot checking, than by reliance on mechanical clearance requirements. A third danger is that the delegation of authority to the lowest levels will mean that the younger and least experienced

officers will be making the decisions, whereas a sharing of responsibilities allows for a blending of the opinions of more experienced officers with those of younger men who are learning their business as they go about it. The counter-argument would be that young men who are given authority and judged on individual performance will become better officers than those who never had to face the responsibility, and they will develop faster.

A more fundamental reform in approval procedures offering more significant cost reduction is to delegate the selection of individual borrowers to persons outside of the credit agency by *group lending.* Loans can be extended to a group of farmers for distribution among its members by decisions taken within the group. The group as a whole would be responsible for repayment; individual defaulters would be under pressure from other members to pay up if the group was not to lose its borrowing capacity. Where a cooperative or other suitable farmers' association did not exist, simple loan-receiving groups could be sponsored by the credit agency. Further discussion of farmers' associations will appear in a later chapter; here we will merely point out the cost-reducing aspects of this procedure.

A loan to a group of farmers can be dealt with by a credit agency as a unit, with considerable reduction in staff time and in administrative costs as compared with loans to each of the same farmers individually. Information about individual farmers would not have to be obtained via application forms, nor processed and stored in the same detailed way, because members of a local group would have the same kind of personal information about one another that a moneylender has about his clients. It seems probable that defaults would be reduced, because members and group leaders could make a knowledgeable selection of borrowers and could bring the kind of social pressure on their delinquents that the "outsiders" in the credit agency cannot. Many people think of this as an important answer to the default problem. But the statistical record is not clear: some agencies have found better repayment records from group loans while others have not, though it is not obvious why this is so (see discussion of group responsibility in Chapter 14, "Farmers' Organizations"). Nevertheless, there is some probability that group lending could be so managed that defaults would be less, in addition to the economies of scale that are certain.

In sum, the delegation of loan approvals, whether to lower loan officers in a bank or to outside groups, involves some dangers for the lending agency. In an environment of distrust such as can be found with respect to money handling in most developing countries, the people in charge of loan funds tend to want to maximize their control and to resist the idea of delegating authority. But there are gains: faster loan approvals for clients, closer contact and better acquaintance of lenders with borrowers, some possible reduction in defaults, and lower administrative costs. For a credit agency that is living quietly in its groove, the dangers may seem greater than the gains; but for an expansion-minded agency, the latter may be more compelling.

### *Personnel Policies*

One obvious way to reduce credit program costs is to limit the range of services supplied to farmers within the program. Oher chapters, however, will deal with the pros and cons of auxiliary services and how they should be paid

for. Whatever the range of functions to be undertaken by a credit agency, the selection and motivations of its employees will be important. These functions may be performed in part by paraprofessionals, but at least some jobs must be held by qualified professionals, and their duties may conflict with the role expectations of many educated people. There is a basic problem here in relating the college or high school graduate to the kinds and quality of work that it is desirable for him to do with small farmers in rural areas—whether as loan officer, technical expert or some combination of the two.

In Chapter 6, focusing on the cultural gap between credit agency employees and small farmers, it was noted that an emphasis on formal education qualifications for selection and promotion can lead to communications problems in dealing with small farmers. The nature of an employee's attitude toward farmers, and to living in rural areas, is involved. Yet the skills are needed, and a frequent response to the difficulty of recruiting effective personnel for such jobs is to "upgrade" the positions, i.e., to set higher educational requirements. This may, however, be self-defeating if it means a greater probability of discontent with rural life and high turnover, combined with either higher salaries that raise costs or with an inability to raise salaries for low status rural occupations that leads to their being sought by the least able among the degree holders. On the other hand, the kind of forced compromise that leads institutions to gradually lower qualifications in order to keep the jobs filled, and to hire employees they do not want very much and are reluctant to promote, also leads to problems.

There is no general panacea for this situation, familiar to many institutions, and certainly the methods that would work best in one country or institution will not be the same as those that could be most effective in other conditions and cultures. What may be suggested is that credit institutions, public or private, take a critical look at their personnel practices with certain considerations in mind. First, how is effective performance judged? And is such effectiveness rewarded by promotion or otherwise? Second, are recruitment methods and selection criteria actually geared to the probabilities of finding effective people as defined? Third, are there ways of developing greater effectiveness of performance in the personnel already hired?

The key to new thinking in this area is the definition of effective performance: answers to the other questions, and selection of more appropriate personnel methods, will hinge on this definition. Without a clear notion of effectiveness, it is easier to follow custom with selection by educational level and promotion by seniority. This is especially true of public institutions, which may be required to conform to civil service regulations designed to minimize political influences or improper favoritism. Private banks may be freer to follow their own policies; but such policies often reflect the compulsions of urban banking—with rural branches as the step-children, the place where the less able are shunted off to until they can maneuver their way back to town. What is needed is a positive and well defined image of the job of small farmer credit, one which can serve as the basis for seeking personnel policies other than political favoritism or conformity to regulations.

The following may serve as a definition of what the small farmer credit job ought to be. A good credit officer should not only understand banking and some rudiments of its relation to agricultural production processes, but he should understand his small farmer clientele and be able to deal with them to their and

the bank's advantage. He must be concerned with holding down defaults, but even more he must be concerned with the success of his loans in boosting his clients' output. This is supposed to be the credit agency's business, and it should be his: their prosperity is also the bank's—in the longer run and also in the short-term repayment record. He must be curious about the actual production, and about the people who make it possible and the problems they meet. He must get out in the field to satisfy this curiosity and build up his store of information, and his bank must not only enable him to do this but positively encourage the effort—perhaps punish those who don't try. Much time spent at the desk might mean faster processing of papers but not better loans, or loan results. This image may appear idealistic or oversimplified; there are no doubt other qualities of personality and skill that should also be sought, and these would perhaps vary in different cultural situations. But something along these general lines seems useful and not infeasible.

This description has de-emphasized formal education, not because it is not useful but because of communications and morale problems. More stress should be given to willingness to learn on the job. For institutions that can afford it, pertinent courses to be taken by promising officers in mid-career might be arranged. The attitudinal elements may in some degree be encouraged by well designed orientation courses, but the main stimulus must be imparted by the attitudes of the institution's supervisory personnel and its formal and informal rewards and punishments. Incentives for good performance may be considered: annual salary increments, prerequisites of various kinds, and a consistent promotion policy based on actual performance. Daniel Goodman, in his paper on organizational structure and administrative procedures for credit institutions (Spring Review Vol. VI, article 7), offers some useful suggestions for such incentives as part of a systematic organization plan. Selection of people most likely to respond to the right stimuli cannot be reduced to any formula, but such attributes as an interest in the job and its contents, and a rural background, should be helpful. Rural employees, after all, cannot be paid the best salaries.

*Village Agents*

A reform proposal more radical than the preceding ones was presented by Thomas Stickley at the Ankara workshop; it is mentioned briefly in his joint Spring Review paper with Raja Mouracade and Yusuf Kashshu (Vol. IX, article 5, p. 8) and discussed in more detail by Marvin Miracle (Vol. XIX, pp. 227-30). It is that a small farmer credit agency employ a number of lending agents resident in rural villages, working on a small salary augmented by commissions. The purpose would be to bring to institutional credit the advantages of the village moneylender: low administrative costs, ready access to and personal knowledge of farmers, and a greater ability to collect debts. Credit agency funds would be extended to these agents under conditions to be established by branch managers, who would try to achieve agency purposes by means of incentives and control over the input of funds. The incentives would vary, depending on what one thought important: for example, if reduction of defaults were stressed, the agent's commissions, and an increase or decrease in his loan funds, would be made conditional on his default record.

The idea stirred controversy in the workshops, as might be expected. Some felt it would only be a gift to the despised moneylender under a new label, while others saw considerable merit in it. Certainly it could expand the reach of a small farmer credit program, but at the expense of any strong supervision of loan terms, borrower selection, or loan uses. A number of variations are possible: input dealers, like fertilizer merchants, might be selected as agents to help ensure loan repayments. Complicated incentive structures can be devised (on paper) to achieve a weighted mixture of objectives. But there is a large problem of enforcing controls for any sort of purpose in this kind of relationship. Further, an underlying question in many minds was: what would happen to the small farmer under the conditions described? Is there any assurance that he would not be badly exploited, with no real gain in his output?

The method has been tried in a few countries, with results that are not entirely reassuring. The best experience appears to have been that in Malaysia, as described by Liong King Wai at the Manila workshop. Bank Pertanian, a public agricultural bank, decided to experiment with the use of local agents, mostly traders, for selecting borrowers and collecting debts in the extension of loans for defined agricultural inputs. Control was exercised by a well organized system for defining farmers' input needs by feeding data into a computer, which then printed coupons for the appropriate inputs that were given to farmers in lieu of cash. Farmers presented these coupons to the agents and obtained inputs: the fixed prices of inputs were well known to farmers, as was the interest rate, and the trader-agents could not deceive them or demand more money than the 12 percent commission to which they were entitled. The agent had to repay the bank whether or not he collected from the farmers. The system worked well enough on a small scale, Wai reported, and without complaints from farmers, so the number of agents was gradually increased. But there were not many traders eager to take on the agent job, and there seemed to be a ceiling of 50 or so clients that could be handled by a single agent. One may note that few credit agencies are as tightly organized in their control methods as that Malaysian bank.

A 1972 study by Millard Long (Spring Review Vol. XV, article 3) reviewed the Malaysian program and a similar one in Indonesia, reaching more negative conclusions. Concerning Malaysia, he noted that in 1971 the arrears in repayment from the private agents amounted to 20 percent, but that all of this originated with only two of the 36 agents employed in that year. (Wai, speaking in 1973, did not mention it; presumably the two delinquent agents were discontinued.) In Indonesia, Long found a 19 percent delinquency rate for the small farmer program as a whole—the private agent component was not separately reported. Mr. K. Kuiper, who had been in Indonesia when the experiment with private agents began, told the Nairobi workshop that these agents were getting over 90 percent repayment from their farmers, but had repaid on average less than 70 percent of their debts to the government bank in the first year. Their relationship with the bank concerned was much looser than that in Malaysia: they were using bank funds for their own business purposes, he said, and the bank was unable to prevent this although it intended to try to impose stricter controls in the following year. In both Malaysia and Indonesia, Long reported, administrative lending costs were 20-25 percent, more than the interest rates charged by the banks. Whether the banks will be able to reduce such costs

by using private agents was not clear. In the Malaysian case, agents were allowed a commission equal to that given to other intermediate lenders to farmer groups, and they were not getting large enough incomes as agents to make the job very attractive.

The results of these two experiences are not conclusive. The more tightly controlled agents in Malaysia were apparently doing the job properly but were not reducing the bank's costs; the more loosely controlled agents in Indonesia were distorting the bank's purposes in some degree, and perhaps exploiting the farmers; in neither case was the repayment element secured. But in both countries the experiment was quite new and was thought sufficiently useful to be continued with the intention of overcoming the difficulties encountered. Programs carefully designed for conditions in other countries may indicate whether village agents can be so managed as to produce results which will live up to the promise that the idea has for its proponents.

*Mobile Branches and Rural Banks*

If banking institutions are to engage in more small farmer lending, they will need a larger number of small rural branches. Short of employing village agents, efforts to accommodate small farmers have included experiments with local contact points such as mobile bank branches in motor vans that move about the countryside in the seasons when loans are to be extended and repaid. This facilitates contact with scattered villages at a lower cost than that of establishing permanent units in an equally widespread number of localities. It does not make possible the better acquaintance with clients that would be desirable, and that resident small branch units or village agents ought to supply. It does, however, combine the widespread contacts with a greater degree of control over the specific lending operations. It is worth further exploration; so far there has been too little documentation on the results of using mobile branches in such countries as India and Indonesia or in Africa to justify conclusions on their effectiveness.

Another solution is to create small rural banks as separate institutions. This has been done for several years in the Philippines: 539 rural banks, permitted to lend only to clients within a restricted area, had been established as of 1972 (Orlando Sacay: Vol. XIII, article 1, pp. 5-6). Capital supplied by local merchants and landlords has been matched 100 percent by government capital in the founding and expansion of rural banks, and a preferential rediscount rate is extended to them by the central bank. About 90 percent of their loans in 1971 were channelled to agriculture; administrative costs averaged 4.9 percent in that year, the cost of money was 2.9 percent, and repayment was good in that only 2 percent of outstanding loans were under litigation as of 1972. At that time 81 percent of loans were secured by real estate collateral. Thus, these rural banks seem to have proved themselves as viable financial institutions, mobilizing rural capital and directing it into agriculture. Whether they have been lending to small farmers or chiefly to large property owners is another question; the extent of loans covered by collateral indicates that they were not lending much to tenants. The average size of their loans was somewhat larger than that of a Philippine government bank specializing in small farmer credit, but well below that of the two other state banks active in agricultural lending.

The government of South Vietnam began to take up the rural bank idea from the Philippine model. Some of these banks were conducting aggressive campaigns to attract small savings deposits to augment their lending capital, with some success. As of April 1975 they were too new, and too few, for their results to be judged, but at least they had shown a promising growth rate. Neither the Philippines nor South Vietnam are countries with high levels of rural or national per capita income, yet these rural banks have shown a capability for attracting local capital and savings and for managing institutions that could support agriculture without direct subsidy (indirect subsidy is implied by the concessional terms on which they obtain capital). These rural banks in the Philippines are probably doing more for the middle or larger farmers than for the small ones; but the rural bank idea does have possibilities that merit experimentation in other countries.

*Planned Stimulation of the Financial Sector*

Another approach to small farmer credit which deserves attention is the conscious effort to influence existing banks, and especially private banks, to direct more of their lending to small farmers. The weapons in a government's arsenal that may be used for this purpose include: preferential rediscount rates, taxes, concessional capital, and various regulatory devices such as portfolio requirements. For example, the rediscounting of a bank's commercial paper may be authorized by central banks at more favorable rates where its loans satisfy some criterion with respect to borrowers—i.e., some definition of a target group of small farmers. Similarly, banks may be required to maintain a minimum fraction of their portfolio in loans to the defined target group, with fines for non-conformity. Taxation policies could be designed to reward the banks which lent more to small farmers. Alternatively, concessional or interest-free capital could be supplied on a matching basis in proportion to an institution's small farmer loans (as with the Philippine rural banks, but more flexibly). Bank charter approvals, disapprovals, and suspensions would be another weapon—a heavy artillery piece to be employed sparingly. All these could be used together in various combinations, and with several gradations of reward or disincentive to match the degree of a bank's contribution to small farmer credit.

Some of these devices have been tried, however, and generally the results have not been impressive. Experience with portfolio share requirements in Latin America, for example, suggests that banks will do what is required and no more; indeed, they may simply "redefine" existing loans to fit the required categories. Preferential rediscount rates as applied in several Asian and Latin American countries indicate that this is not a very powerful weapon by itself, though it can at the margin make possible some small farmer loans that would not otherwise have been made. In Africa, where expatriate banking is usual in the commercial field, the result of government pressure to expand small farmer loans has usually been limited to public relations gestures. Usually these methods have been used singly, and gently, with little crusading zeal by the government; there has not been a strong drive using several different weapons and stiff requirements. An exception may be India, where efforts in the late 1960s to induce banks to increase their rural lending were thought to have failed, and a major nationalization of many commercial banks was undertaken in 1969

followed by directives to increase rural loans. In this case, however, a number of political and other considerations were involved; it is difficult to assess either the causes or consequences of this attempt, or its lessons for other countries, simply as a small farmer credit phenomenon. The results will be of interest as they evolve, but it is too early to attempt a judgment.

More fundamental than the degree of government impetus in redirecting credit is the general unprofitability of small farmer lending, which has caused banks to resist any pressures to move them in this direction. If interest rates were high enough to yield profit, the results of redirection efforts could be different. The attitudes of bank personnel toward small farmers would no doubt continue to generate resistances, but these should be more readily overcome after a few pioneers discover that new profitable business can be found. It is therefore necessary to adjust interest rate policies to make profitability more probable before attempting any major effort at redirection (this was apparently not done in India).

Even if this were done, there are still dangers. Not only can profitability be more difficult to achieve than the planners may think, but the working of the administered incentive system may go astray. If banking policies become too shifting and unstable, and regulations are so intricate as to require complex administrative interpretation, the main result may be a highly politicized struggle for favors among the banks rather than a delicately tuned set of economic responses. This could either curtail total credit, or bring about a general evasion of rules sustained by bribery. And in any case there is a genuine danger of misallocations of resources from even the best administered system of preferences when the productive realities of small farmer lending fail to live up to their promise as projected by economic planners.

For all these reasons, efforts to stimulate or compel a redirection of credit must be viewed with circumspection. The case for making such an attempt is as follows: Because of pervasive upper limits on loan interest rates, the rather limited results of past efforts cannot be regarded as conclusive evidence of the non-responsiveness of private sector or public institutions. There has not been a well orchestrated program of stimulation, with strong incentives and a reasonable interest rate permitted. If this were done in a steady fashion which banks could regard as offering them a stable, reliable prospect for profit in the small farmer field, then they would surely take more interest than they have shown so far in exploring the relevant problems. Given a positive desire to expand their contacts with small farmers, at least a few credit institutions would start looking into innovative methods for attracting new borrowers, and for eliciting small farmer loyalty to their organization and its purposes. Many of the suggestions above regarding personnel policies, delegation of authority, dealing with farmer groups, etc., would become more meaningful than before.

*Small Farmer Access*

Up to this point the possible reforms in banking practices have been discussed from the bank's point of view, and with cost reduction and profitability or internal efficiency as the principal criteria. Now we may look at the reform possibilities more from the point of view of increasing small farmer access to institutional credit, a difference of emphasis rather than direction. As noted earlier, a wider access to more borrowers should make possible economies of

scale and thus assist cost reduction and profitability—assuming that defaults do not rise (the subject of the next chapter). First we shall review briefly the reform ideas already described with the access criterion in mind, and then go on to a more experimental approach.

Simplification of application forms will contribute to small farmer access to banks, as will the establishment of faster, more predictable loan approval procedures. The latter is the more significant, since many farmers simply don't try to apply for loans at banks which have a reputation of seldom getting the money out when it is needed. Delegation of loan approval to lower levels in a bank could help by speeding approvals, and contribute something to the communication of farmers with bank officers. Personnel policies that supply incentives for loan officers to learn more about borrowers and their farm problems could be even more significant if the incentives lead to genuine interest and action on their part. All these changes would seem to be in the right direction; nevertheless, there are limits to what can be obtained from internal reforms within the bank itself. The underlying reason for this is that the "bureaucratic culture," as discussed in Chapter 6, can only be expected to bend within limits to accommodate the "village cultures" of borrowers. The cultural gap between them is usually so great that significant changes may be unlikely without the intervention of cultural intermediaries to assist communication. This hypothesis is debatable, but it is the assumption prevailing in the remainder of this chapter.

The value of farmers' organizations should be looked at not only as a means of facilitating lower-cost group lending but also as a way of providing local leaders who can communicate effectively with their fellow villagers and at the same time learn how to talk with bank officials. To do this will be part of their job, and it is far more probable that one or a few such leaders can learn how banks work and convey this knowledge to their membership than that all farmer-borrowers could acquire such understanding individually. At the same time these village leaders should be much better able to bring to bank officials' attention such local farmer problems as are pertinent to the credit relationship than could the individual farmers; this too is part of the leader's job. Obviously, this overall relationship is anything but perfect; too much experience of this kind of interaction among leaders with their members and with their banks has been disappointing, from one side or the other, to suggest that this device will automatically take care of all of the difficulties that arise. But the question must be asked: would a given situation have been any better without the intermediary? Secondly, could the relationship be improved if there was a will to do this? A village leader may seem to cause trouble for a bank, or for his members; but he is the obvious party for either side to blame when trouble occurs, whereas the difficulty may have been inherent in the borrower-lender realities to begin with. Banks should try to take a more positive approach, which means finding ways for the intermediary to help them in dealing with unwelcome realities outside the bank, not just pressing him into taking the bank's side of all the issues that arise.

Another possible intermediary is the village bank agent. He may be ineffective in this role when he feels no obligation to represent village interests to the bank, but only tries to deal with the bank in his own interest—which may not be the bank's either. At the same time he does know his home environment better than any bank official can, and he may be able to act more flexibly than could

the leader of a formal village organization. We need not rule out the possibility of an evolution of such agents in ways that would enable them to play useful intermediary roles which could help to expand small farmer access to institutional credit.

*An unconventional alternative.* The farmers' organization leaders and the village agents seem to represent the leading possibilities for the intermediary function, and neither is wholly satisfactory. For that reason it will be useful to examine a third alternative, one which has been tried only in somewhat artificial conditions but which has generated a body of experience that is unusual and no longer negligible in scope. This experience is that of the Pan American Development Foundation, which has been working in a number of Latin American countries over the past decade.[1]

The Foundation, working initially with private funds donated in the United States and later with capital provided by AID, adopted the following approach: First, it concluded that a relatively neglected area which held promise of greater activation for development was the private sector. Secondly, it felt that the private financial institutions were unable to perform the developmental functions that were necessary because so many of the people who could become productive and creditworthy were unable to qualify for bank loans. Accordingly, it set out to find ways of moving credit to just such people without any kind of government intervention, first using its own funds and later developing various working relationships with the private banks. The Foundation's other welfare activities do not concern us here, but its experiments with the lending relationship are of interest.

Beginning in 1966, National Development Foundations (NDFs) were organized in one country after another. As of 1974 there were 21 NDFs in various stages of operation of which 12 managed a total loan capital of over $6 million; the largest and oldest NDF had over $2 million. Funds were accumulated by soliciting private contributions within the country where each NDF is located, to be matched by foreign contributions. The NDFs are directed by nationals of their countries, all of them highly educated members of the professional elite and rather young—mostly in their 30s. The Foundation's policies have stressed local autonomy and flexibility. North American money and ideas have been, of course, the basis for the founding of NDFs, and an initial selection of their board members by foreigners was inevitable, along with some foreign supervision. But the Foundation's directors intended to create institutions which would become as indigenous as possible, and they believe they have succeeded. An NDF is not a "normal" part of any country's economic system, to be sure, but this is a price to be paid for the capability of making innovative experiments which a more normal institution would not undertake.

The NDFs' lending policies are as follows: only borrowers who cannot get bank loans are considered. Interest rates are those charged by the local banks, most of them in the 10-12 percent range with some as low as 8 percent a year. Most loans are medium term, and are intended to finance community projects. Group loans are most common, though individual borrowers are not excluded; joint responsibility for repayment is formalized by signatures to a contract, but collateral is not required. As of December 1972, the average size of loan was $841; when divided by the number of borrowers, the average was $72. Not all loans are extended in rural areas, nor for

agricultural purposes, but the majority of borrowers are small farmers. Perhaps the most important requirement is that loans are to be used for projects which have been determined to be a felt need of the community after extensive discussion with groups and individuals in the locality. Supervision of loan uses takes the form of inspection visits by NDF personnel approximately once a month.

One feature of the NDF operation is a very low rate of temporary delinquency, about 5 percent overall, and a default rate of two percent. This result is obtained from total credits in the millions of dollars, in 12 countries over several years, with installment payments by 50,000-100,000 borrowers per year. Such a favorable repayment rate contrasts strongly with the experience of government programs for small farmers in the same countries. Foundation staff attribute this result partly to the community pressures on delinquents generated by joint responsibility for group loans—but this is not unique to the NDFs. They also believe it results from the communities' interest in paying for investments that they really cared about, i.e., from the NDF policy of financing only felt needs. For example, Goijberg cited a fishing village in Chile where the same people repaid promptly an NDF loan for a truck, but defaulted on a government loan for 12 motors for their fishing boats. Both investments were productive; but the truck had been selected by the villagers after hard debate, while the motors were seen as public largesse at election time. In light of this repayment record, it is of interest to see how borrowers and their desired projects are selected by NDFs.

Since the Pan American Development Foundation stresses local autonomy and experimentation, there is quite a bit of diversity in practice within countries and among them. But a general pattern has emerged which, though not present in all NDF loans, does represent a model for a new type of credit and cultural intermediary that has proven its value in a specialized way. NDFs hire individuals whose job it is to find community groups with projects which they are concerned with carrying out to a degree that indicates they would be suitable clients. These men are called *promotores* (we will use the Spanish word here, because the English word promoter may suggest a kind of salesmanship that would be inappropriate). A *promotor* spends most of his time following leads and engaging in long explanations and discussions to ascertain the sincerity of purpose and the reliability of potential clients. He performs other routine loan agent duties, and inspects projects after loans are extended, but primarily he identifies clients and looks into the feasibility of their project proposals, seeking technical advice from others as needed. When the NDFs select people for the *promotor* job, they look for intelligence, initiative, communications skills, etc., and they stress "motivation." By this they mean primarily a desire of the individual to serve his people, and also 100 percent honesty. Such virtues are not unrewarded. Previous occupations of current *promotores* were, in largest numbers, school teachers, and secondly government community workers in departments like cooperatives and community development. When they are hired as *promotores* they get a salary two or three times the level of a teacher's, a car to drive, an active life and considerable prestige. Most seem to look on the job as a desirable career; a few have gone on into politics or elsewhere.

What can be accomplished with these idealistic, though well paid, amateurs who will develop unorthodox skills as they work? Clearly they have enlarged the

access of small farmers and others to institutional credit: they have been able to discover and/or create new bank clients among the poor who are as creditworthy as a bank's previous clients if not more so. This capability has not gone unnoticed by the bankers in some of these Latin American countries. Most significantly, some of them have begun to extend loans to previously ineligible groups for whom the local NDF will sign a guaranty for repayment. This has begun in three countries; and in Mexico, the total guaranteed has reached $1.5 million. This guarantee function, if more widely used, can greatly extend the reach of NDF capital, and with good repayment prospects large reserves will not need to be kept in liquid form to support the guarantees. In other ways the NDF investigations and informal endorsements have been useful to potential borrowers, and also to banks. This development is rather new, and a bit ad hoc, but highly satisfying to the PADF which never thought of itself as a development finance agency but more as a catalyst for bringing people together and introducing new attitudes (thus bridging the cultural gap, a phrase the Foundation would not use). How far the NDF loans have been used to increase production is hard to tell, since this is not a strict NDF loan criterion and the documentation is variegated. At least the loans have resulted in new activities for which there was an effective demand at current bank interest rates, and which by social cost/benefit accounting might compare favorably with results of many other bank loans if the data were known. Some of these activities have represented novel and ingenious ways of using local resources, if one may judge from anecdotal evidence. More typically, they have financed irrigation pumps, fertilizer, and purchases of land or tractors.

Having noted that the NDF *promotor* method can improve small farmer (and other) access to institutional credit without generating defaults, we must now ask whether it is a financially viable operation, and whether it offers anything of wider usefulness in developing countries. The interest rates paid by borrowers seem to cover orthodox lending costs but not the special services of *promotores* and the NDF headquarters, which require outside "subsidies" ranging from 3 to 6 percent of annual NDF loan values. This is an appreciable but not extravagant cost, and the NDF operations ought to be self-supporting if an interest rate of perhaps 18 percent a year were charged. This idea has been proposed to the Foundation from time to time, and rejected for an "image" consideration: it seemed unsuitable for an NDF to charge more to the poor than the rich when it depends on soliciting private donations in a "do-good" welfare context. This dependence on donations also limits the amounts of loan capital which can be obtained. The NDF in the Dominican Republic, which has built up a sizeable fund, is the only one that has become free of dependence on regular inputs of foreign money; it has routinized the financial donations within its country by making donors members of a "club," paying monthly dues. As a general proposition, however, local donors in some developing countries might not remain wholly altruistic if they were to give substantial sums; thus, the maintenance of high standards of disinterestedness in NDF activities could conceivably set limits on their potential donations. In any case, a reliance on private donations within developing countries is hardly a viable form of development finance beyond the pilot project state.

Organizations like NDFs might be made self-supporting with higher interest rates, high enough to cover not only operating costs but also a low interest

payment to enable governments or foreign aid donors to consider providing them with loan capital. If so, would the NDF method have any prospect of wide application as a development tool? Foundation staff stress the importance of slow, careful growth, of being certain of the motivations of each NDF director and *promotor,* of ensuring that borrowers don't get money too easily or for purposes to which they will be indifferent. Without this kind of care and caution, one may assume, their performance could not have been maintained at the levels demonstrated in the past. The Foundation's success has not been just another case of a project working well with one unusual personality; nor is it necessarily tied to a flow of U.S. donations in perpetuity. But it does seem to require a rather special spirit and motivation that may be rare, and NDF performance may be vulnerable to backsliding if the attentive supervision is slackened. (The Foundation's principle of working entirely outside of governments is relevant here.) However, it is possible that an idealistic spirit may be found in conjunction with good personal capabilities among reasonably adequate numbers of educated young people in developing countries, and that their idealism would be better sustained in a *promotor* job combining service to their people with a good salary than in most other occupations open to them. Supervision to maintain standards of performance seems more problematical, and it may be difficult to imagine a significant scale of deployment of *promotores* without government involvement. Thus, a basic problem for replication is that of ensuring the kind of standards that would be desirable while working under conditions found in the more usual bureaucracies, whether they are public or private.

Perhaps the *promotor* function need not be combined with that of loan officer in a lending institution, but could be performed in a specialized organization which will provide guarantees for bank loans to client groups that it has investigated and prepared for action and is willing to certify. For this service it would charge the bank a fee, and its clients would pay correspondingly higher interest than would other borrowers whose eligibility for credit needed no certification. The certifying body could also supervise loan uses, which would be a useful discipline for checking the accuracy of its pre-loan judgments and for maintaining repayments. The certifying body would need only some working and reserve capital, not loan capital of its own. Such a system may have the potential for building the NDF catalytic function into a self-supporting operation. The certifying organization could grow as slowly or fast as it could recruit and perform according to standards for which it was responsible. While the system would become more vulnerable to abuse and perhaps bribery as it grew larger, there would be, in addition to internal controls, an external discipline arising from the banks' continued willingness to accept and pay for its services.

Such loan-guaranteeing organizations would take on different colorations if used in different countries, and with different kinds of personnel, and their specific policies are likely to diverge from those followed by the existing NDFs. Despite this unpredictability, the self-sustaining organization of the *promotor* function, broadly conceived, represents an alternative that may be considered along with the establishment of farmers organizations or village bank agents as ways of filling the role of cultural intermediary in the credit relationship.

*NOTES*

[1]Information was supplied by the PADF staff–Sy Rotter, Norman Goijberg and William Blaisdell–and its 1973 annual report. Mr. Goijberg, a Chilean, replaced Mr. Rotter as PADF Executive Director in 1974, having previously headed its office in Chile.

# 11 *The Default Question*

As one looks at banking practices and the possibilities for reform, one comes up again and again to a hard rock wall that cannot be circumvented: the default question. The most successful methods of broadening small farmer access to credit, the strongest array of incentives to lending institutions to provide such credit, and the most enlightened policies within these institutions, will be of no avail if the borrowers fail to repay loans on a large scale. We must distinguish between short run delays in repayment, or temporary delinquencies, and the long run delays which end in default, i.e., eventual non-repayment. Annual rates of overall delinquency of 20 to 30 percent or more appear to be common, though not universal, in small farmer lending; how much of this delinquency ends in default is not well reported. High rates of delinquency have been tolerated, however reluctantly, as long as small farmer credit was seen as a restricted, welfare-oriented activity, a minor side-show in the overall credit picture. One might say that default was a kind of educational cost, or rationalize it as a form of income transfer to the poor. But if small farmer credit is to be seriously undertaken and regarded as an important contribution to national development, then a resignation to the inevitability of non-repayment is clearly out of place.

Default is not only a major impediment to credit programs but is essentially unjust. The great majority of farmers who do repay are subsidizing the minority of defaulters, and there is no reason to believe that the latter are any more likely to be poor or in other ways more deserving than the former. In a number of countries, the Spring Review surveys revealed, it is the larger farmers who create the principal default problem. This was found to be the case in Colombia (Tinnermeier), Bolivia (Royden), Bangladesh (Solaiman *et al.*), Costa Rica (Gonzalez-Vega), Ethiopia (Holmberg), Sri Lanka (Gunatilleke *et al.*), and elsewhere. Not only is there no good evidence that the poor farmers generally account for most of the defaults but, since formal agricultural credit tends to gravitate toward the upper parts of the farm income spectrum, non-repayment of institutional debts is an improbable way of reaching the poor farmers in any income transfer. There are, of course, genuinely poor farmers who cannot repay

debts on time after a bad harvest. But a generalized tolerance of non-repayment does not necessarily help such people, while it does reward the unscrupulous farmers of all income levels at the expense of the better behaved majority.

Another undesirable feature of defaulting is that it tends to spread. A frequently observed tendency in Spring Review credit programs is for repayment to be relatively good when a program starts, and then to fall and to reach levels that mean trouble for the lending agency. In part this is explainable as a function of a program's growth rate: if the main sanction against defaulters is the loss of a borrowing privilege, there is an economic incentive to repay a given loan in a new and growing program in hopes of getting a larger loan the next year. But if the loan funds are not expanding, or if the average borrower cannot expect to get any more in the following year than the amount he already owes, this sanction is weakened and default becomes more attractive. The attraction is greater when a credit program is perceived by farmers as temporary. There is a vicious cycle here, since it is the impact of defaults as much as any other factor that causes so many farm credit programs to be curtailed, reorganized or ended, i.e., to become more unstable than other sources of credit.

*Magnitude of the Problem*

A major difficulty in measuring defaults is the way non-repayment is handled in the accounts of credit institutions. In the statistics issued by lending agencies the line between default and delinquency is either ignored or is drawn in different ways. Partly this results from an unavoidable uncertainty as to which loans will eventually be repaid in full, and if so when. For some purposes it is not only easier but also correct to treat all debts alike. Most of the data which can be used consist of values for payments which are overdue on a particular date. Usually there is no way of knowing how long they have been overdue; in cases where there is a breakdown by due dates, one often finds that rather short run delinquencies of one to six months make up the largest part of the total.

Another cause for variability in the statistics stems from different ways of handling longer-term debts that have passed beyond the stage of delinquency, however defined. Some credit institutions will simply keep them on the books as accounts receivable for an indefinite period; others will write them off as bad debts, eliminating them from the asset/liability account. The relatively high values for cumulative arrears found in most institutions suggest that the latter procedure is rather infrequent. Further complications arise when an agency engages in refinancing a farmer's debts with a new loan, which may or may not involve forgiveness of some of his indebtedness. And in addition to these factors making inter-institutional comparisons somewhat unreliable, there is probably an element of inefficient record keeping when dealing with a host of small debts that are individually insignificant.

Table 11 represents the best collection of data on delinquency available at the time of writing, and it is unsatisfactory in many ways. Column 1 presents the value of overdue payments as a percentage of the loans outstanding on a given date, i.e., the ratio of arrears to portfolio. These are the most reliable figures in the table, as they are obtainable from normal accounting data, but they are the least revealing of the nature of the problem. They show the extent to

which a credit agency has allowed assorted delinquencies to accumulate without writing them off; but the value of loans outstanding is not the best base for comparison as it has an erratic relation to the value of current new lending, and the two together cannot tell us how much of what is lent gets lost in defaults. Nevertheless the ratio is a general indicator of the tendency to let overdue debts pile up, and the high values in column 1 show that this tendency is common. The median value for this series is about 30 percent; few institutions have kept it below 10 percent. But we do not know how old these debts are, or how fast they are accumulating (or being reduced). The dates in column 2 give some indication of the periods of debt accumulation involved, but they are rather unreliable (single dates seem to mean only a lack of information rather than a one-year period of accumulation; and in other cases the reporting on the subject is imprecise).

In an effort to get a better look at the current incidence of delinquency, "annual arrears rates" are shown in columns 3 and 4. Column 3 provides the World Bank's values for percentages unpaid at the end of a year out of the total amounts falling due during that year. The amounts due would in all cases include the new short term loans made in the year which were due for repayment before it ended; and in most cases they would also include the debts which had been built up from previous years' lending that were unpaid at the beginning of the year. (In some cases old debts were not included in the denominator, only the year's new loans; in other cases the reporting on this point is unclear. The presence of medium term loans falling due in the year would complicate matters further.) So we do not have an unambiguous measure for the annual incidence of delinquency, since the cumulative element is still present, but we are coming closer to it than in column 1. And the results are hardly reassuring: the median value for non-payment of amounts due in one year is about 30 percent. And there are many high values—in one-third of the cases they are 50 percent or more.

Column 4 represents the author's effort to amplify the World Bank's information on arrears rates in various ways, using Spring Review reports. In some cases annual values for arrears rates were reported for several years, and the range of these values was substituted for the single-year values of the Bank's series. In other cases it was possible to distinguish brief from longer lasting delinquencies: for example, in 1971 the unpaid debts for CADU in Ethiopia were 49 percent on the due dates, but only 10 percent were still unpaid by the end of the fiscal year a few months later; the latter is a more useful value, and was substituted for the former. Similarly, the 15 percent overdue in March 1973 for BNDA in the Ivory Coast fell to 8 percent after a month. Unfortunately there was not much of this kind of information to use. In other instances, items that did not appear in the Bank's series were added. In the column 4 series, the median value for arrears rates is about 20 percent—less than the 30 percent median of column 3 but not an overwhelming improvement.

Lastly, column 6 of Table 11 presents a few cases from Spring Review papers where estimates are reported on the incidence of hard core defaults, that is, the percentages of loans which had been defined as uncollectible debts. This is the kind of information we would need to determine the actual losses from default in small farmer lending, but there is very little of it. In the five cases where specific numbers are reported, they are all below 5 percent. One may speculate

Table 11: Measures of Delinquency in Selected Institutions
(in percentages)

| Africa | Institution | Ratio of arrears to portfolio[a] (1) | Dates[b] (2) | Annual Arrears Rates[c]: Bank series (3) | Annual Arrears Rates[c]: Additions (4) | Annual Arrears Rates[c]: Dates[d] (5) | Uncollectible debts[e] (6) |
|---|---|---|---|---|---|---|---|
| Ethiopia | CADU | | | | 7 to 10 | 1970-71 | |
| Ghana | ADB | | | | 33 | 1969-71 | |
| Ivory Coast | BNDA | 0[f] | | | 8 | 1973 | 1 to 2[f] |
| Kenya | GMR | 25 | 1971 | | 0 to 22 | 1963-71 | 4.4 |
| | AFE | 51 | 1971 | 36 | | | |
| Malawi | Lilongwe Project | | n.a. | 2 | | | |
| Morocco | SOCAP | | 1968-72 | 50 | | | |
| | CLCA | | | | 5 | "recent" | |
| Niger | CNCA | 11 | 1971-72 | 29 | | | |
| Nigeria | WNACC | 52 | 1969-72 | | 49 | 1964-71 | |
| Sudan | Cooperatives | | 1968-72 | 26 | | | |
| Tanzania | NDCA | 28 | 1970-73 | 50 | | | |
| Tunisia | Credit Unions | | 1970 | 50 | | | |
| | BNT | 66 | 1971 | | under 10 | to 1971 | |
| Uganda | Coop. Credit | 10 | 1965-70 | | | | |
| **Asia** | | | | | | | |
| Afghanistan | ADBA | 37 | 1970-72 | 77 | | | |
| Bangladesh | ADB | 43 | 1969-73 | 76 | | | |
| | IRDP | | n.a. | 40 | | | |
| India | PLDB | 34 | 1971 | 7 | | | |
| | Cooperatives | 33[g] | 1969 | | | | |
| Iran | ACBI | | 1971-72 | 44 | | | |
| Jordan | ACC | 41 | 1968-70 | | 15 to 38 | 1967-71 | |
| Malaysia | BPM | 6 | 1970-72 | 21 | | | |
| Philippines | Rural banks | 20 | 1969-72 | 18 | | | |
| So. Korea | NACF | 7 | 1968-72 | | 9 to 13 | 1965-71 | |
| So. Vietnam | Rural banks | | 1970-72 | 5 | | | |
| Sri Lanka | New Credit Scheme | 50 | 1970 | | 40 to 50 | 1969-73 | |
| Thailand | BAAC | 35[g] | | | 5 to 50 | 1967-71 | 4 |
| Turkey | TRAB | 29 | 1968-70 | 43 | | | |
| **Latin America** | | | | | | | |
| Bolivia | Agricultural Bank | 1 | 1970 | | 51[h] | 1964-71 | |
| Chile | INDAP | 16 | 1970 | 60(est.) | | | |
| Colombia | Caja Agraria | 1 to 19[g] | 1968-71 | | | | |
| | INCORA | 4 | 1970-71 | 16 | | | 1 to 2 |
| Costa Rica | BNCR, BCR | 35 | 1970 | | 15[h] | "recent" | under 1[j] |
| El Salvador | ABC | 37 | 1971 | | 4 to 29 | 1962-70 | |
| Honduras | BNF | 10 | 1971 | 18 | 7[i] | | |
| Jamaica | ADB | 31 | 1970-72 | 10 | | | |
| Peru | Plan Costa | 33 | 1971 | | | | |
| | BFA | 30 | 1970-72 | | | | |

Sources: Columns 1 and 3 -- Bank Policy on Agricultural Credit, World Bank, 1974, Annex Table 12, except as noted. For columns 4 and 6 -- Spring Review reports.

[a]Percentage of arrears in loans outstanding on given date.

[b]Dates for columns 1 and 3: periods of cumulative delinquencies as measured in terminal years. Single years indicate year of measurement.

[c]Percentages unpaid out of amounts falling due during a year. Usually amounts due will include delinquencies from previous years' lending.

[d]Dates for column 4: years in which range of values occurred.

[e]Statements on losses from defaulted debt.

[f]Defaults covered by insurance, written off annually.

[g]Spring Review data on ratios not covered in Bank series.

[h]Average for percent of loans rescheduled each year.

[i]Of the 18 percent unpaid (in column 3) only 7 per cent was overdue for more than 90 days.

[j]Defaults for Juntas Rurales (rural branches of the BNCR for small loans) during 1960-69, as a percentage of income rather than loans.

Institutional Initials in Table 11

| | |
|---|---|
| Ethiopia | CADU: Chilalo Agricultural Development Unit |
| Ghana | ADB: Agricultural Development Bank; Maize Project loans |
| Ivory Coast | BNDA: Banque Nationale pour le Development Agricole; Prêt de soudure loans |
| Kenya | GMR: Guaranteed Minimum Return Scheme |
| Kenya | AFC: Agricultural Finance Corporation |
| Morocco | SOCAP: Societe de Credit Agricole et de Prevoyance |
| Morocco | CLCA: Caisse Locale de Credit Agricole |
| Niger | CNCA: Caisse Nationale de Credit Agricole |
| Nigeria | WNACC: Western Nigeria Agricultural Credit Corporation |
| Sudan | ABS: Agricultural Bank of Sudan |
| Tanzania | NDCA: National Development Credit Agency |
| Tunisia | BNT: Banque Nationale de Tunisie |
| Afghanistan | ADBA: Agricultural Development Bank of Afghanistan |
| Bangladesh | ADB: Agricultural Development Bank |
| Bangladesh | IRDP: Integrated Rural Development Program |
| India | PLDP: Primary Land Development Bank |
| Iran | ACBI: Agricultural Cooperative Bank of Iran |
| Jordan | ACC: Agricultural Credit Corporation |
| Malaysia | BPM: Bank Pertanian Malaysia |
| Pakistan | ADB: Agricultural Development Bank |
| So. Korea | NACF: National Agricultural Cooperative Federation |
| Thailand | BAAC: Bank for Agriculture and Agricultural Cooperatives |
| Turkey | TRAB: Turkish Republican Agricultural Bank |
| Chile | INCAP: Instituto de Desarollo Agropecuario |
| Colombia | INCORA: Instituto Colombiano de Reforma Agraria |
| Costa Rica | BNCR, BCR: Banco Nacional de Costa Rica, Banco de Costa Rica |
| El Salvador | ABC: Administracion de Bienestar Campesino |
| Honduras | BNF: Banco Nacional de Fomento; Supervised credit loans |
| Jamaica | ADB: Agricultural Development Bank |
| Peru | BFA: Banco de Fomento Soles Agropecuario |

on why this kind of value is not reported more often—perhaps it might sometimes look too large for comfort.

What are we to make of this mixed bag of figures? We certainly cannot assume that losses from default are commonly below 5 percent; but neither can we assume that they have median or typical values in the 20-30 percent a year range. The arrears rate is a faulty measure which can suggest exaggerated levels of default. To take an arithmetical example: suppose a lending agency failed to collect any repayment on 20 percent of its short term loans each year, and these unpaid sums were added to the amounts due the next year. Over five years of lending the same amounts, the annual arrears rate would rise from 20 to 66 percent, but with no change in borrower behavior—i.e., the failure to repay, and the annual losses, would still be only 20 percent of the amounts loaned. In that example all delinquencies were defaults; let us consider another example in which 90 percent of overdue debts are paid up within a year of their due dates. Suppose that every year half of the borrowers allowed their due dates to pass without completing repayment: arrears rates would then start at a 50 percent level and creep slowly upwards, implying a very bad situation. But in fact the losses to the lender (assuming non-repayment of all loans becoming overdue for one year) could be covered by no more than a 5 percent annual allowance for bad debts. (These examples indicate two ways in which the arrears-rate measure can be misleading, but are not intended as realistic illustrations.)

We must make do with the data at hand, however, and try to draw such conclusions as they will support. Even if the numbers are not strictly comparable, the level of annual arrears rates is high enough to indicate that delinquency is an important problem for many small farmer credit agencies. Those which have been able to keep their annual arrears rates below 20 percent are in the minority, and 20 percent is quite a high level of delinquency for an institution to live with. If there were a rapid turnover of delinquents with few real defaulters, the situation would not be so bad; in such a situation the arrears rates would not be increasing, and losses would be limited. However, we must recognize that there is a tendency for arrears rates to increase over time shown in the cases where multi-year figures are reported. In most such cases in Table 11 the latest year's rates was the largest. Only in El Salvador was a high rate much reduced and held down thereafter. Consistent increases in arrears rates imply a growing default level.

In comparing the arrears rates and ratios of arrears to portfolio among different regions, few generalities emerge. Each region has a few good performers and some very bad ones as well—perhaps Latin America comes out a little ahead and South Asia behind the others. Some credit programs in which cooperatives are the main credit vehicle do not show up very well: in Sudan, Tunisia, India, Iran and Sri Lanka, for example, delinquency by these measures falls in the upper middle brackets. However, it must also be noted that repayment rates for cooperatives in Uganda and South Korea are among the best reported in Table 11.

If it were possible to learn more about defaults as distinct from brief delinquencies, the records of the institutions represented in Table 11 would undoubtedly look better than they now do. And of course there are a number of credit agencies not appearing in the Table. But after allowing for all that, we must recognize the pervasiveness of the delinquency problem and consider its

implications. If small farmer credit is ever to be established on a broad, self-sustaining basis where it is needed, repayment habits need to be improved in many of the countries concerned.

*Analysis of Causes for Non-repayment*

The choice among remedies for default problems hinges on what are considered the most important causes. One general cause for high default rates is that too many credit programs are judged on the basis of loans extended, irrespective of repayment records. When the political decision is made to do something immediately for small farmers by a credit program but the politicians don't give the activity close attention once it has been started, the program directors may feel under pressure to push the loans out in sufficient volume to show that they are indeed helping the farmers. If defaults rise after a number of ill-considered loans have been extended, the directors of public credit institutions (whose capital comes from budget appropriations) may think it better to ignore it, and to downplay this in their financial reports, rather than to show themselves deficient in their jobs—which may depend more on political favor than on economic results in the program. In such cases they evidently feel more short-run vulnerability to the possibility of being noticed as failing to help farmers than to any accusations of financial mismanagement, and they may be right in such an assessment.

The cure for this condition is easier to describe than to apply. Politicians who wish to help small farmers ought to concern themselves more with the economic results of the programs they have promoted. This means giving attention to complicated detail and to situations that may be ambiguous and difficult to publicize as success stories. It may be easier to boast about having promoted an agency that gave a certain value of loans in the last year to show that one is the farmers' friend and powerful patron. Program directors, of course, should try to interest and educate their political patron in their economic problems, even if it puts them in a less favorable light. But the main responsibility goes back to the politicians, for it is their attitudes and actions that create the incentives and disincentives in the administrators over whom they have power.

*Ability vs. the will to repay.* Moving from the political level to that of credit institutions which must deal with repayment, one finds two main schools of thought: some believe the chief cause of default is that small farmers cannot repay due to inadequate incomes, while others lay stress on their unwillingness to do so. A strong statement of the first position appears in Chapter 4, where the principal remedy for default is seen as the provision of credit closely tied to new technology that will enable the farmer to increase his productivity and income enough to exceed his repayment costs. The importance of this factor is argued on the grounds that, of the credit programs studied in the Spring Review, only a half dozen clearly provided such profitable new technology, and these were also programs with high levels of loan repayment. This argument has force, but within a narrow limitation imposed by lack of information: we do not know that the majority of programs failed to increase productivity, but only that the data on this subject are lacking. And we do know that the few high productivity programs are not the only ones with high repayment levels: The BNDA in the Ivory Coast is an example of a good repayment record with no attention to technology or loan uses; nor did gains in productivity always bring high repayment rates, as for example in Sri Lanka.

We can accept the notion that new technology should make an important contribution to repayment *potential*, but it need not be the only influence at work, even in the high productivity programs. For example, the quality of expert guidance and interest that were brought to bear in the most successful credit programs probably had their effect on farmers' attitudes, supplementing the effects of new technical knowledge. If ability to pay were the only factor involved, defaults would always be higher among poor farmers; and they would increase only when incomes fell. But we cannot accept a mechanical relationship between productivity/income and repayment rates as a general explanation of defaults in view of the extensive reports on defaulting by the richer farmers. Clearly these are farmers who could repay but who don't wish to. Nor is there any reason to blame the tendency for defaults to increase over time in many programs on a progressive decline in productivities or incomes; this cannot be documented, but the idea is improbable. We must face up to the reasons why so many farmers do not wish to repay their loans when they might be able to do so.

If default were a function of poverty, defaulters would be easy to identify; but when the will to repay is involved, the identification becomes trickier and more mysterious. In the preceding chapter it was indicated that the basis for predicting small farmer defaulters is not too well understood by bankers and loan officers, as shown by their inability to eliminate them. Methods for effecting improvement in a loan officer's performance would include better ways of selecting individual borrowers, or managing the selection process when it is delegated to local agents or farmers' associations. This assumes that the basic problem is one of discriminating among farmers, with some being default-liable by nature and others less so, as estimated from external indicators.

It may be, however, that the basic problem is not one of borrower selection but of how to encourage the right motivations in the farmers, and how to prevent the growth of negative ones. The selection process can contribute to this motivation by the influence of example: the farmers will draw their own conclusions when they see a credit institution favoring some kinds of people and excluding others. But this approach does not much change the conditions that bear on motivation. These conditions are not usually thought to be the loan officer's or the credit agency's business, yet they do in the end have their impact on the agency's profit and loss statements. Borrower selection is a necessary activity, but so also is a consideration of what may turn a repaying farmer into a defaulter and an example to his neighbors.

### *Motives for Delinquency and Default*

When embarking on a classification of motives it is useful to distinguish stages in the default process, as they point to different kinds of cause and cure. First, there is the farmer who does not pay up on time for minor reasons, but who will do so when he remembers or finds it convenient—within a month or two. Next would come the farmer who consciously delays repayment and holds his crop for a better sale price, even though he has agreed to pay earlier in line with the lender's requirement. Then there is the farmer who is short of money when his crop is sold and cannot repay in full, but intends to do so when he can; this could take another year, or perhaps more if he encounters another low valued harvest.

None of these kinds of farmer present a new or mysterious problem to credit officers. Farmer number one may need a reminder, so that his delinquency will not hang on. Farmer number two can be dealt with either by adjusting the required date for repayment to allow for better prices, or by applying interest charges to his period of delinquency; this could be raised to a penalty level as appropriate to credit agency objectives—say, after two or three months. Neither of these farmers is a threat to credit agency finances. The third farmer, who would repay but cannot, is a familiar figure. If only a few of these turn up each year, such a delinquency risk should certainly be covered in the credit agency's normal cost and interest rate calculations. If a significant number of these delinquents tends to build up in years of poor harvest but not in normal or good years, and if the delinquents do not become permanent defaulters, then the agency should consider putting this hazard into its cost structure and planning to build up contingency funds to meet these occasional waves of delinquency without loss. But if the problem is more continuous, the agency probably should not encourage these farmers to take on such large debts—unless there is a reliable new technology for them to use with the credit.

However, the difficulty lies in distinguishing the poor farmer with good intentions from the kind of delinquent who becomes a real defaulter. Among the latter, there are those who may think they intend repayment but keep finding it difficult, and finally give up. These farmers might well respond to timely pressures from the lender's side, not mere reminders but purposeful visits to the farms for exhortation and reference to the benefits of staying in the program in good standing. These visits will add to lender costs but should be worth that much in results, even when the result is partial payment with promises of more to follow. Then there are farmers whose intention to default is stronger, and who may eventually respond to repeated pressures that cost the credit agency more than it gets back in payments. These pressures may nevertheless be worthwhile to stem a potential tide of growing defaults by others. Beyond this point there are farmers who feel all along that they need not repay and who cannot be talked out of it, whatever they may say to the debt collector when he visits.

What kind of reasons are there for an intention to default, or for a farmer sliding from one category to the next and finally becoming a hard core defaulter? The absence or erosion of an economic incentive to repay in order to get a larger loan next year has been mentioned. We have also referred to a widespread notion that farmers feel little obligation to repay loans from government institutions as opposed to private lenders. This stems from the electioneering promises of politicians in some cases, but more generally from the diffuse quality of traditional obligations in patron-client relations which allow social "debts" to be discharged in various ways. Another element here is the social distance, or long standing hostility, between small farmers and the local representatives of their government in some areas. Against this background, small farmers would not expect to identify themselves *with* a public credit program; any government-sponsored institution would be approached with distrust at best, and with a desire to outwit the credit agency to their own advantage at worst. As for private banks, a small farmer may be no more likely to identify with them, but would not expect them to ignore debt obligations as readily as a public lender.

There is also another kind of defaulter, the rich farmer who sees a credit program as an opening for manipulation to his advantage. If he is in a position such that he can default with impunity and then get another loan by exerting influence, he will be the most difficult customer for a credit agency to deal with. Such a manipulator is more likely to achieve his invulnerability by a dominant position in a cooperative or other intermediate group than in individual borrowing from a credit institution. He may be able to milk a credit institution for a series of uncollectible direct loans, given enough political connections, but this would require a bit of artistry—a mixture of repayments, part payments, and bribes or other favors administered over time. These things can be done; and their existence supplies another reason why the small-farmer neighbors of such a successful evader of obligations may be reluctant to repay their loans.

Another point to bear in mind is that defaulting, or prolonged delinquency, can be stimulated by imitation. Farmer A sees farmer B getting away with it, and begins to think—why shouldn't I? Then others will follow suit, and if the trend goes on long enough the credit institution's standing will become damaged in the farm community to a point where recovery is difficult. It is this dimension which makes analysis of individual defaulter characteristics a fallible guide to borrower selection by lenders: the same farmer who is likely to repay one year may be less likely another year. This, in turn, makes for either a general suspicion of all borrowers by loan officers, or an over-generalized resignation to the anticipating of defaults—one doesn't know who will be next. If the loan officer must nevertheless keep his loans moving out in response to pressures on a credit program to show that kind of result, defaults are actually encouraged.

One last point: while focusing attention on defaulters, we must remember that they are in the minority in almost all credit programs. Credit programs could hardly remain in existence if they were not. In stating generalized reasons for default such as poverty, social distance, lack of economic incentive to repay, etc., we are speaking of forces which are also at work for the repaying majority of farmers—in other words, they are forces that are not universally victorious. They represent problems to tackle, but not impenetrable barriers to credit programs. It is true, of course, that institutional credit reaches a small fraction of farmers in most developing countries, so that if more borrowers were reached the pro-default forces might find more scope. Still, the experience with farmers who have had institutional loans provides evidence that the prospect is not hopeless.

*Analysis of Remedies*

The listing of possible causes for default could be elaborated in further detail, but enough has been said to indicate a basic and very practical dilemma for lending institutions. Some of the causes point to a strongly enforced and consistently "hard" policy by lenders as a means of collecting debts, and of maintaining farmers' respect for their obligations and for the institution with which they are dealing. Other causes for default, which might be described as resulting from an alienation between lenders and borrowers, seem to imply the need for some kind of "soft" and friendly approach to borrowers, so that they will identify themselves with rather than against the lending institution. Ideally, one would wish to start with a good relationship,

including good repayment habits, and then go on to improve relations by means of "soft" policies that would tie the farmers closer to the credit agency. But in practice it is hard to find situations in which the initial relations could be other than distant, and where the wrong kind of initial "softness" might soon lead to wrong expectations by borrowers and a consequent need to apply some "hard" tactics to keep up payments. Some initial firmness seems advisable to build respect for repayment obligations.

It appears from the statistical record that credit programs in general should give a good deal more attention to debt collections, which implies a greater use of pressure on the debtors. But it is not obvious that an escalation of "hardness" in the creditor's approach to a point that alienates farmers will be most effective; this may work in the short run, but in a longer run strategy some "softness" will also be needed. It is not easy for lenders to blend hard and soft tactics. Skilled practitioners can successfully apply an effective mixture of the two, but this requires a close acquaintance with individual borrowers. We may review briefly the array of conventional tactics available for dealing with individual delinquents.

The most universal response to delinquency is to deny the borrower the right to any further credit until his debts are paid. Interest charges for the period of delinquency, augmented by penalty rates or fines, may be applied. Efforts to try to collect delinquent debts can be made by various personal approaches, directly to the farmer himself and also to his co-signer to the loan contract when dual signatures are required. Personal contacts can be undertaken in increasingly severe and forceful ways. If any sort of collateral has been required, whether in the form of a lien on a farmer's crop or other movable property or on a portion of his land, then the threat of forfeiting such properties enters into any personal contacts with the delinquent farmer. Such threats can also be carried into action (if local law enforcement officials will cooperate). If the credit agency is involved in other activities affecting the farmer, these can be managed to the disadvantage of delinquents--for example, if the agency supplies inputs or administers advantageous marketing arrangements. The credit agency might also try to bring indirect influences to bear by persuading people of importance to the farmer (political patrons, landlords, village elders, social group leaders, etc.) to put pressure on debtors to pay up. All these constitute weapons in the creditor's arsenal when he engages in a "hard" approach.

For a lending institution wishing to employ "soft" tactics, whether because it believes the farmers really cannot pay or for reasons of general policy (including indifference), the following accommodations to delinquency are usual. Personal approaches can take the form of friendly, sympathetic consultation, with concessions offered. Concessions may also be granted unilaterally if creditors think they are justified by borrower hardship. Concessions include an expressed willingness to wait for various time periods until the borrower is better able to make payments, and a failure to charge interest or an interest reduction for the period of delinquency. Payments overdue for a longer period can be refinanced with a new loan on more favorable terms. Such a new loan could cover all or some of the farmer's old debts, or it could do that and add a new installment of credit—presumably where the latter would be of value to a well regarded farmer. Repayment dates could be rescheduled as part of a general

policy; or this policy could be formalized by setting due dates followed by a permissible grace period when needed (as opposed to an informal willingness to wait for individual debtors to pay). Finally, old debts could be forgiven and wiped off the creditor's books as bad debts. Such forgiveness might be accompanied by revival of a debtor's ability to get new loans.

The application of "soft" tactics is often more slipshod than is indicated in this description; for example, debts may simply be ignored in practice without treating them as bad debts. Records on borrowers may be poorly kept, and concessions may be applied erratically as the lending institution feels under greater or lesser pressure to make collections, or as loan officers change. This would also be true of the application of the "hard" tactics; personal pressure on borrowers, and the application of penalties, may be quite variable. So one of the variables to be considered, in addition to relative hardness or softness, is the level of consistency with which policies are applied. Discrimination among debtors may be advisable as a response to individual circumstances, even if the result is inconsistency in applying institutional rules. But the impact of an inconsistently hard policy on farmer expectations and motivation may be not unlike that of a generally soft policy, in that farmers who don't know quite what to expect may be tempted to try out a bit of delinquency.

Security arrangements for protecting lenders from loss are, of course, one tactical element. In some situations the requirement that one or more persons must, along with the borrower, sign a document that involves them in repayment obligations may be a very effective way of reducing defaults. For example, this was found to be true when introduced in Morocco (as reported to the Abidjan workshop). In other cases a more tangible form of security seems advisable: we have noted earlier that collateral in land is not very appropriate in small farmer loans, and a portion of the borrower's crop ought to be a more suitable form of collateral. In India, a crop loan system in which the crop is made the security for the loan is considered successful.[1] An alternative device which has proved useful in some situations is to require, as a condition for granting a loan, that the borrower's crop be sold at least up to a minimum value to a designated buyer who will then repay the lending agency after deducting the loan repayment from his payment to the borrower. This can be very effective where, as in Uganda or Kenya, state marketing boards exercise a monopoly right to buy certain export crops and are associated with the credit agency. The device has also been used when lending agencies have to select private crop buyers as debt collectors, as in Western Nigeria (Abidjan workshop). This means that the buyer must be a reliable party in the transaction if it is to work well; buyers whose business comes to depend on a credit agency's patronage have an incentive to become reliable debt collectors.

*Delegation of collection.* If debt collection is delegated along with borrower selection to farmer organizations, or to village agents, much of the choice among collection tactics is also delegated. Resident villagers will, of course, be more informal in their treatment of fellow villagers who owe money than a credit institution can be, while the institution retains its more formal relation with the intermediary. Informality does not imply greater softness: personal pressures on delinquents are facilitated by propinquity, and if the intermediary group leader is under relatively hard pressure from the lending institution the end result

can well be stronger pressure on the delinquent farmers. A great deal depends on how the intermediary sees his role: he may take sides either with his fellow villagers, or with their creditor; or he may play a double game for his own benefit—hard on the farmer but evasive vis-à-vis the lending institution. Community pressures from the farmers on the intermediary will help to shape his role; he and the farmers, for better or worse, must go on living closely together, while institutions come and go at a distance.

Seen in these terms, the prospects for debt collection after delegation via intermediaries may look rather indefinite, but a few things can be inferred. It is probable that a lending institution can more easily administer a hard policy, or a moderately hard and consistent policy, when dealing with a smaller number of intermediaries than with a large number of scattered, variegated farmers. The demands on loan officers to discriminate wisely are much reduced, and depend less on acquaintance with numerous individual personalities; impersonal criteria may be more readily applied. Furthermore, the farmers are less likely to see the results of bank policies as directed at them personally. On the other hand, the danger of whole villages, with their local intermediary included, deciding to hold out against a creditor is present; and if this happens, the default could be larger than with individual loans. Even without such a confrontation, there may be a good deal of evasiveness and efforts to confuse the responsibility for non-repayments. When such complications threaten, the loan officer may find it advisable to try to enlist indirect pressures from influential people on his side, as described above. The same sort of treatment may also be needed, and even more needed, for dealing with the intermediary who plays a double game. To succeed in such an effort requires "political" skills and information that are not normally included in the loan officer's job description, and some will be more successful than others in managing these relationships.

*The repayment climate.* In addition to considering lending agency tactics in dealing with delinquents, we must also speak of an agency's strategy for creating a general climate favoring repayment. The establishment of a positive climate for loan repayment has two major components: economic and social. On the economic side, the importance of technology and the improvement of farm productivity and income stand out. Although we have argued that productivity and income do not go far in explaining the behavior of individual delinquents, the influence of a prospect for increased income obtained from a credit program with a profitable technological offering is nevertheless very important for whole groups of farmers. If there is such a favorable prospect it can not only raise incomes to enable repayment, but will enter into the reactions of farmers by giving them a stake in the success of a credit program, and a respect for the institution that administers it. The loss of access to new loans for delinquents will have more force if farmers can see gains from the continued use of credits and a value in the credit agency's technical advice. Where advantageous new technology is not at hand, and if it cannot be found, then a credit program will be more vulnerable to default.

On the social side of the repayment climate, there is a connection between a good relationship of borrowers with their lending agency and the propensity for them to keep up their loan repayments. Good will is partly the result of a

favorable economic prospect, and also of the quality of the pertinent human relationships; conversely, good relationships can be important in bringing new technologies into income-creating application. The social and economic aspects need not be in conflict. Without attempting here to define the elements and causes of a good relationship in any detail, it may be briefly stated that it implies that farmers can identify with a credit program, that they can feel it to be theirs.

In the preceding chapter on reforms in banking practices, various suggestions were made from the lender's point of view that would have a bearing on good relationships with borrowers. If loan officers were encouraged by personnel policies to take more field trips and learn more about farmers' problems, one could hope for a more positive response from the farmers' side; this is not guaranteed (i.e., it might generate antagonism), but is more probable than not. Bank policies that reduced delays and red tape in processing loan applications would also have this result. Thus, some of the reforms that could assist in reducing lenders' administrative costs, including delegation, could also bring a dividend in good will. And reforms designed to increase the reach of credit institutions by attracting more small farmers should have this result. Farmers' organizations, when well managed, can contribute to better relations between borrowers and lenders; and the use of *promotores* should certainly have this effect.

Some readers may feel that this talk about good will and improved relations has a superficial, Pollyanna quality reminiscent of advertising claims, or that if it is taken seriously it would represent a sentimental approach that is out of place where large sums of money are being handled, and especially in developing countries where such capital is scarce. The bulk of the evidence, after all, seems to show that small farmers are not to be trusted, so that a lender needs to take a number of unpopular precautions when entrusting his money to them. But this evidence must be interpreted in terms of farmer motivation. The "hard" fact is that many small farmer credit programs lose a lot of money because too many farmers are insufficiently motivated to repay their loans, and that tough banker's tactics are inadequate by themselves for preserving capital and simultaneously accomplishing program purposes. Caution and suspicion, the prevalent attitudes toward transfers of money in poor countries, only result in fewer loans; yet pushing out loans in disregard of defaults only invites bankruptcy, or program diversion toward rich farmers. There is no substitute for the will to repay. And the will to repay is embedded in a complex of conditions and relationships in which the farmers' outlook can and should be taken into account by the lending organization.

*To summarize:* the treatment of delinquents is a tricky, uncertain business in which hard and soft tactics must be tried out by particular credit agencies to find the most effective mixture. It would seem that greater attentiveness to the subject is needed to reduce prevailing rates of delinquency; even though we do not know how much loss from default is implied, delinquency has a tendency to spread and default is likely to follow if efforts are not made to prevent it. Generally, it would seem that greater persistence and hardness in collection tactics are needed, and greater consistency in their application. But this cannot be stated dogmatically: for example, some may feel that a selective consideration of individual delinquents' problems will produce better results

than a generalized application of rules. And the discussion of a positive climate favoring repayment points to other variables that need to be considered. Many Spring Review participants stated that they found default a problem but didn't really know the cause. More research is needed to bring together lessons from experience in different countries, and to develop a better analysis of the subject which could produce more cogent guidelines to action. In the meantime, it does appear that many small farmer credit agencies could substantially improve their debt collection by giving higher priority to the attempt, first trying to ascertain the main causes for delinquency in their particular situation, and then applying remedies that seem to fit the causes.

*Medium-Term Debts*

The preceding was written with the short-term debtor in mind. The collection of debt installments on a loan running over, say, five years presents a somewhat different problem to creditors. The projection of a farmer's state of mind and ability to pay over a period of several years is more chancy, and greater precautions are usual. More information on the farmer and his assets and technical capabilities is understandably required, and security provisions in the form of collateral are more common. The use of land as collateral for a large debt may be valued for its impact on the farmer's attitude toward repayment. Supervision of the farmer's activities is more important, especially technical supervision when the asset purchased with the medium-term credit is unfamiliar to the farmers. In short, we are in a more customary relationship of lender to borrower, in which the usual banking practices appear pertinent.

Nevertheless, some of the reformist ideas suggested above may still be useful. The will to repay, and the longer-term approach to lender-borrower relations, are just as important if not more so. But we must look again to see whether the delegation of authority to intermediaries is as promising an idea as it seemed to be in short-term lending. A reliance on village agents of one sort or another seems out of place unless these are more reliable and controllable than is generally probable. Keeping accurate repayment records for individual borrowers is essential. The selection of borrowers for larger sums of money and longer periods requires a greater technical discrimination by lending agencies, and a more certain avoidance of the local favoritism that might be tolerated in smaller-scale, short-term loans. The same considerations apply to record keeping and borrower selection in loans through farmers' associations; if medium-term group lending is undertaken, more supervision and tighter controls would clearly be necessary.

The best case for group loans of several years duration would be when some kind of communal improvement is envisaged, such as a large storage building or an irrigation facility to be shared by a whole village or several villages. This form of loan often holds out possibilities for more significant gains in agricultural productivity than those achievable with the usual short-term loans, and makes possible the kind of improvements that are better attained by village-wide or larger area planning than by *ad hoc* loans to individual creditworthy farmers. It is also a type of credit activity which the moneylender, and informal lenders generally, are usually incapable of undertaking, and where the larger credit institution has a strong comparative advantage. The technical planning and supervision that would result in optimal use of relatively large inputs of scarce financial resources are, of course, more demanding than in small-scale sub-annual credits. This alone

would explain why such credit operations are unusual, and why they are not attempted even where their net economic pay-off could well exceed that of using the same amount of resources in a larger number of smaller short-term loans. Perhaps there is also a political incentive to spread the resources of a credit program more widely and flexibly than would be possible if these were concentrated in larger projects. But there is another reason which is undoubtedly influential: the risk of non-repayment looks, and probably is, more serious. Larger sums of capital are tied up inflexibly for a longer time, and if the default habit should start to spread within a small group of farmers the capital would become more vulnerable.

Organizing the repayments for credits allocated among a group of farmers whose individual benefits from a project may vary, and ensuring that these are kept up over a period of years in which bad crop weather may intervene, is certainly a more complex task than the usual kind of debt collection. Where a farmers' association of proven capability and financial responsibility is already in existence, it can be of very great assistance. Most often there is no such organization, or if there is one its capacities and reliability may be considered dubious by the credit institution. On the other hand, the fact that a project with appreciable benefits to farmers is being undertaken is in itself a strong stimulus to participants to organize and work together, to acquire new skills, and to feel a stake in its success that could result in a much stronger will to keep up their debt payment installments than they would feel in repaying short-term loans.

If the income-producing results of the project appear within a year or two, beneficiaries will be able to make payments without new hardships. If there is a longer gestation period, the credit institution should consider whether the farmers' income level is so low that a grace period for debt obligations ought to be applied to coincide with the delay in productivity gains—tying up loan capital without return during this grace period. The timing and size of repayment installments should be carefully planned, whatever the timing of the project's pay-off, so as to strike a balance between the danger of overburdening farmers by a short period of amortization which could induce delinquency, and the danger that with a long amortization period the farmers will eventally lose interest in making payments after the novelty of the project is forgotten and its benefits are taken for granted. The contingency of poor harvests should be considered as well. All of these calculations and educated guesses present a complicated task; but if repayment schedules are well thought out, and if the projects are technically sound, then the institutions that take them on will be doing the job they ought to be doing in small farmer credit.

The effort to reduce default risk can include more than well-conceived repayment schedules and technically sound projects. Methods that will give farmers a stronger identification with projects can be appropriate where they can reinforce (but not substitute for) the usual income incentive. Extensive consultation with farmers in the project design phase, and attention to their expressed desires, should make the project more fully "theirs." In addition, a program savings component could add to the stake that farmers would see in the success of a project. If they had specific, identifiable sums of their own money tied up in the program as a result of required savings deposits they were making in the process of repayment, however small the individual amounts might be, they would surely feel less inclination to jeopardize the project by defaulting, as noted in Bolivia

(Royden) and in Guatemala (Fledderjohn). A relation between defaults and savings deposit values could be built into the program; delinquents and their neighbors could be reminded of this when appropriate.

*Insurance and Quasi-Insurance*

Insurance against the hazards of default would be an attractive idea to lenders. It is rare, but not unknown: the *prêt de soudure* loans of the BNDA in the Ivory Coast are covered by government insurance. In 1969-72 their annual losses were only between 1 and 2 percent of loans (Table 11), a record which makes insurance seem less risky than for many other credit agencies which would have to pay high premiums on the basis of their records. The idea of such insurance seems unlikely to be adopted widely, if only because default is a rather arbitrary and unpredictable variable for actuarial purposes.

To the extent that non-repayment of credits is a result of farmers' inability to make payments after a poor harvest caused by weather, that risk is more predictable and thus insurable. Crop insurance applied to particular crops, with the farmers paying premiums calculated on the basis of a history of weather observations, is available in developed countries. The premiums tend to be rather high, and the insurance companies narrowly specify the nature of the farmer's loss that can be covered and compensate a defined fraction of such loss—usually 75 percent or less. Even with these precautions, it is usually necessary for a government-sponsored organization to offer reinsurance to cover a portion of the insurance company's losses, often at a low concessional premium, before the private companies will enter the field. In developing countries, crop insurance hardly exists. When it does it chiefly serves the large plantations, typically those that are foreign-owned and produce an important export crop; the financial resources behind the insurer are also likely to be foreign-owned. There are exceptions, for example in parts of Mexico where smaller farmers have obtained crop insurance, but these cases are few.

The question arises whether crop insurance is a device that could be more widely applied in developing countries, and whether it could help small farmers. The idea has not so far aroused wide interest. At the Nairobi workshop, the only time during the Spring Review when crop insurance was given much attention, the opinions expressed were negative. It was thought that the premiums would have to be very costly, and that the administrative costs of verifying the claims and dealing with the deceptions of a large number of small farmers would be prohibitive. There is, however, at least one economist who has espoused the cause of crop insurance—Bernard Oury of the World Bank, whose ideas are reflected here.[2] He suggests that crop insurance could, under the right conditions, form an integral part of farm credit programs by significantly improving the creditworthiness of farmers, with insurance policies serving as collateral for loans. The opportunity for mounting such a program would, of course, be limited to countries where sufficient financial and institutional structures and skills could be found; but he does not find the general problems insuperable. The idea, after all, is relatively new: not until 1938 did the U.S. and Japan pass the first crop insurance laws and initiate state-operated multirisk schemes of the type that have since expanded rapidly to many developed countries.

Government planning and financial participation is inevitable. Any scheme, to be eligible for financing, would need to be carefully designed and should be

undertaken only after experience had been built up for some years under small pilot projects with one or a few major crops to establish an actuarial base. Every insured farmer must report each year the number and location of hectares planted to the insured crop or crops, and keep appropriate records to prove the amount of his harvest and any shortfalls below the guaranteed yield. An adjuster —a retired farmer or agricultural officer, or a village committee member—would have to verify the yield and cause of loss, and help the farmer prepare his claim. The pilot project personnel would have to study weather and productivity data to set the guaranteed yield level, calculate and readjust costs and premiums, and engage in extensive education of farmers and farmer association leaders as well as train a nucleus of experts for potential future expansion of program coverage.

All of this is very demanding, both for farmers and for experts in the program, and a sound scheme would require quite a number of years' experience before it could be expanded. In the developed countries, crop insurance has usually been offered to farmers on a voluntary basis, and with several options available to them for values of the idemnity per quintal (or bushel) at corresponding variations in cost. Oury suggests that, in developing countries, it would be more advisable to establish compulsory crop insurance schemes for large groups with single options, and with a wide spread of risks among crops and areas. These features would make possible faster adoption and lower premiums; even so, nonsubsidized crop insurance would not be cheap. All in all, we may conclude that crop insurance is no panacea, but that it is capable of making a significant contribution to a more secure extension of agricultural credit in those countries where the right sort of scheme could be established.

Is there any other way to accomplish some of the same results without mounting the elaborate apparatus required by a crop insurance scheme? The proposal offered here, in a tentative spirit, would incorporate a quasi-insurance element into a farm credit program without attempting to issue individual insurance policies. The chief ingredient is a loan repayment obligation that would vary for all borrowers in a given year by a percentage factor determined by the weather. It would first be necessary to review the weather and yield records in order to devise an equitable formula for incorporating dates and quantities of rainfall, and other pertinent measures, and using them to derive an inferred impact on production expressed as a percentage of the normal yield. Norms would presumably be based on past averages, extrapolating from trends—if any—caused by changing practices. In years of unfavorable weather, borrowers would repay a smaller percentage of their debt; with favorable weather they would repay more. Repayment rates would be set at levels that would enable a credit agency to build up reserves in normal and good years sufficient to cover the contingency of bad years; an initial reserve fund would be necessary when the scheme began.

In this form, the determination of repayment obligations would be made from objective meteorological records that could not easily be juggled. But the relation of weather to some crops may be too erratic to use in this way; or the credit agency may wish to apply the principle to borrowers growing a mixture of crops with different weather responses and seasons. An alternative would be to hinge the percentage repaid on a sampling of actual yields in the local area—not the yields of borrowers but those of other farmers growing the same crops. Whether meteorology or sampling is used, the percentage changes in repayments

should be smaller than the percentage changes in estimated yields, since poor harvests normally produce some increase in crop prices. Indeed, price elasticities might be used in devising the formula.

This approach ought to appeal to farmers as being more just than a fixed repayment obligation, once the unfamiliar concept was well understood. Normally it is the poor farmer who takes all of the weather risk, unless he can translate it into defaults that do him no harm. Perhaps there is a kind of informal acceptance of default losses in bad years on the part of some credit agencies; but this method of dealing with weather problems does not provide for contingency reserves, nor does it provide for justice among borrowers. Overt, formalized acceptance by creditors of a portion of the weather risk would surely make for better relations between borrowers and lenders, and should yield a dividend in better repayment habits. The amount of variation in required repayments is subject to adjustment: even a token variation would be a good will gesture, while a wider variation—adopted after some experience and reserve build-up—could represent good economics as well as good borrower relations.

No doubt this suggestion will appear heretical and disturbing to many credit agencies. The level of repayments due will be kept in a state of uncertainty at the time loans are extended, lasting until harvests are either predicted from weather or estimated from sampling. With an uncertain value for accounts receivable, accounting procedures could be upset; and the sacrosanct quality of debt obligations resulting from good weather may be questioned. A further complication arises where interest rates are fixed by law, since the variation in repayment levels could be interpreted as a variation in interest due on the amounts loaned. Certainly a good deal of planning would be needed for the period of transition when the new system is installed. But the idea should not be dismissed out of hand without considering its virtues; it should be easier to operate than a full-fledged crop insurance scheme with individual policies, reinsurance in tiers, etc. Perhaps the best way to give it an initial try would be to apply the variation principle to the annual installments due for repayment of medium-term loans, leaving the eventual debt obligations fixed but with the rate of repayment varying with weather conditions. Given favorable weather, the lender would build up reserves against bad weather and achieve a faster amortization; given bad weather, the opposite would occur, but this risk could be weighed against the risk of higher delinquency and default rates under the usual system.

*Review of Proposals in Chapters 10 and 11*

In the preceding chapter the practices of credit agencies were subjected to examination, and it seemed possible that many could effect improvements in their application forms, loan approval procedures, and personnel and supervisory policies. These reforms could reduce costs, but not often by large amounts; they could improve the quality of bank relations with clients, but would not in themselves do much to increase accessibility to small farmers. More extensive changes in cost levels and in small farmer accessibility would result from delegation of some banking functions to intermediaries—whether to farmer organizations or to village bank agents. Farmer organizations look to be the more promising of these two alternatives, though the use of village agents may well have more possibilities than have yet been explored. The encouragement of small farmer lending by providing incentives to private lending institutions—via rediscount preferences,

portfolio minima, preferential tax rates, capital matching, etc.—seems likely to have more potential than it has shown so far provided that banks are allowed to charge higher interest rates. Finally, the use of a *promotor* to prepare non-eligible farmer groups for handling loans could increase their access to credit.

The suggestions made in this chapter for reducing default rates were the following: less pressure from politicians to expand loans regardless of consequences; stronger pursuit of delinquents by credit agencies to collect debts ("hard" tactics); devices to give farmers more will to repay by developing better relationships with credit agency personnel and by incorporating a savings program; greater stress on new technology, using credit for designated inputs; and weather insurance or quasi-insurance. The last two items affect chiefly the small farmer's ability to repay loans, while the others have more bearing on his willingness to pay.

These two lists include some very different kinds of proposals, difficult to evaluate in a comprehensive way. Judgments that would be appropriate in one country, or credit program situation, may be quite inappropriate in others. For example, where defaults are a major problem and a larger cost element than administrative costs, the reduction of default would be given much higher priority than in another situation where the opposite was true. Further, the existence of two or more objectives make the evaluation process more complex.

In Table 12, the plus and minus signs are an attempt to summarize concisely the author's views on the probable contributions of these proposals with respect to different objectives. A single plus indicates a positive contribution of the proposal as named at the left, to the purpose shown at the top of the column. Two plus signs means a larger positive contribution; a minus sign means a negative effect; zero means little or no effect; question marks indicate uncertainty. By looking down a column, one can see where the double pluses point to the most significant contributions to a given purpose; and by looking across a row, one can see pros and cons for a given proposal—in one man's opinion. Clearly, these are not evaluations for all times and places—readers are invited to fill out their own tables with the plus and minus notations they find appropriate. The device is most useful to the extent that it leads readers to think of the reasons for making particular judgments, and then to see how these stand up in the two-way comparisons with their other judgments.

Given that these various proposals are to be judged and applied in a variety of local conditions, are there any summary conclusions that would have a bearing on the prospects for success in small farmer credit? There are some general points: it appears that defaults are a greater cause for high costs in small farmer lending than are administrative costs in many programs, though not in all cases. It also appears probable that greater cost reductions can be achieved within the default category: there is more scope for change, and there is no such irreducible floor as there is with administrative costs. On the whole, it does seem possible for small farmer credit programs to bring down their lending costs by following one or more of the suggestions offered, and that for some the reductions could be substantial.

On the question of accessibility of credit institutions to small farmers, the prospect seems much more uncertain—not necessarily unfavorable, but an elusive question to deal with. The most potentially significant contributors seem to be: group lending, village agents, and generalized incentive measures. Group lending

Table 12: Evaluation of Proposals in Chapters 10 and 11 for Achieving Specified Purposes

| Proposals | Default reduction | Administrative cost reduction[a] | Increased small farmer access | Other purposes[b] |
|---|---|---|---|---|
| 1. Group lending to farmer organizations | + | ++ | ++ | ++ |
| 2. Stress on new technology | ++ | - | (?)[c] | ++ |
| 3. Stress on debt collection | ++ | - | (?) | + |
| 4. Administered incentives for banks to lend to farmers | (-?) | (+?) | ++ | ++ |
| 5. Village bank agents | (+?) | (+?) | ++ | (-?) |
| 6. Improved bank practices (reforms) | + | + | + | + |
| 7. Savings component in program | + | 0 | 0 | ++ |
| 8. Rural banks | + | (?) | + | + |
| 9. Weather insurance | + | - | + | + |
| 10. Promotores | + | - | ++ | + |

[a]The evaluations of cost impact shown here are for the short run only. A longer run effect of proposals which added to small farmer access (as noted) could well be a reduced administrative cost level due to scale economies.

[b]The other purposes on which proposals are evaluated have to do with estimated usefulness in rural development generally.

[c]Some technologies favor the larger farmers; but technologies appropriate to small farms should be used.

is not new; it can be expanded, though the expansion is not free of risk to the lender. It is a device associated with decreased lending costs, and with the formation of farmers' organizations which can make other kinds of developmental contributions as well. If small farmer access means bridging the cultural gap, none of the three methods noted will produce facile answers or quick solutions. Farmers' organizations can serve as cultural middlemen, but they may fail to carry weight in one direction or the other, or they may develop their own inefficiencies or leadership problems. To substitute village bank agents as the middlemen is to shift the weight of influence in the direction of the lenders; and their motivation becomes an important question. If some kind of middleman function needs to be performed, the *promotor* function may be the best for increasing access, though it may not be easy to replicate on a large scale.

## *NOTES*

[1]Mohinder Singh, *Cooperatives in Asia,* New York: Praeger Publishers, 1970.

[2]Bernard Oury, "Crop Insurance, Creditworthiness and Development," *Finance and Development* (International Monetary Fund and International Bank for Reconstruction and Development) 7, no. 3(September 1970): 37-42.

# 12 *Savings*

Savings are important for small farmer credit in several ways. First and most directly, rural savings are a potential source of loan capital, one that has usually been neglected in the design of farm credit programs. Second, the incorporation of a savings component in a credit program can help to tie farmers to the program, fostering feelings of identification with its institutions and a stake in its success. Third, the stimulation of savings habits can make an important contribution to development generally—especially in rural areas where the mobilization of savings capacity seldom rises to anything like its potential, and where the increase in both real and financial capital is an acute developmental need.

Before issuing a blanket endorsement of institutional savings for all purposes, however, a few distinctions are in order. We have noted that most agricultural capital formation in developing countries is informal, in that it originates either in direct investments by the farmers or in savings transfers to farmers through informal lending. Informal lending, however, is in large part directed to providing consumption needs or short-term working capital rather than fixed investment. Thus, the amounts and rates of capital formation are only loosely related to the amounts of rural funds moving in informal loans, or to savings totals. Whether more savings go into farmer reserves (hoards of cash, jewelry, etc.), into real investments in land, livestock, etc., or into loan funds used to accommodate the consumption or working capital needs of other rural residents, is conjectural. All of these uses serve the needs of small farmers and other rural residents, but their developmental value varies. It is customary to identify development with fixed capital formation; there is no general consensus on what proportion of an area's savings ought to be devoted to farmer reserves or to working capital. Savings can also go into loans for consumption purposes, or for speculative activities of dubious or even negative developmental value.

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The principal contributors to this chapter were Dale Adams and his associates at Ohio State University. The section on analysis of savings by small farmers was extracted from their Spring Review paper, and the reports on savings in Taiwan were done under Adams' direction. Richard Roberts of FAO was another contributor, both to the literature and the Spring Review discussions.

Transfer of savings from informal to formal or institutional channels, reflected in the growth of financial deposits, does not in itself increase the total value of savings but does influence their uses. Most typically, rural hoards are displaced by bank accounts; these tend to move through the banking system toward urban commercial borrowers, who are more likely to use them for working than for fixed capital. Or savings accounts may go into government bonds, financing indirectly a mixture of current and capital expenditures with the former predominant. The relative probability of fixed capital formation resulting from urban as against rural saving is unknown. Economists frequently identify growth in financial savings as an increase in "savings" without consideration of the displacement of informal savings; they may then assume a concurrent increase in "investment" —true in a Keynesian definition but hardly identical with fixed capital formation. However, one may question whether developmental gains are achieved when savings are moved out of informal rural channels into urban working capital and public services. It could be argued that this shift contributes to income disparities; this, in turn, may contribute to a further increase in financial savings, and these to more urban working capital, and so on. Out of this cumulative process there will be gains in urban fixed capital formation which are more readily recorded in national accounts than the informal capital formation that might have resulted if the same funds had remained in informal channels in the countryside. However, it is very difficult to compare the two alternatives, either in probable financial value or in an adjusted social valuation where income equalization is given a weight.

In light of these considerations, a discussion of rural savings requires a statement of desired objectives. First, it may be asserted that increased saving (as opposed to consumption) has a positive value, whatever may be the disposition of the savings in question. A net increase in savings opens the possibility for a net increase in capital formation—among others—while a decrease in savings would probably reduce capital formation; increased saving also enhances the economic choices available to the individual saver. A second objective is the increase in real capital formation. This normally unquestioned aim may be more controversially narrowed by stating that, for the purposes of this book, the objective should be increase in the real capital of small farmers. A third objective, based on the first two, is to establish financial institutions such that : (1) they stimulate more rural saving than would have occurred with informal options only; and (2) they find more effective ways of financing small farmers' capital formation. When these two conditions are met, we can unequivocally favor the increase in institutional savings; but without them the case is not clear. The underlying assumption here is that it is possible to reshape formal institutions so that they will serve small farmer development, but that little or nothing can be done to reshape the informal markets to serve the purpose any better than they now do. It seems worthwhile to insist on these distinctions, for they are not usually made in discussion of savings.

The rest of this chapter will survey the ways in which institutional savings can be increased. There are different schools of thought on this subject. In the Spring Review sessions there was a contrast in views between those who emphasized the role of higher interest rates as a magnet for savings, and those who deprecated the potential effect of interest rates on farmer behavior and stressed the importance of institutional considerations. The former asserted that higher

interest rates could do far more to induce savings than was generally realized and were optimistic regarding the small farmer's savings capacity. The latter group of institutionalists included both pessimists, who saw little possibility of increase in small farmer savings to levels that would be of much interest, and those who shared the more optimistic outlook of the interest rate partisans but felt that methods of organizing savings institutions, security of funds and small farmer trust in an institution were more important than the level of interest rates. By and large, the optimists of both kinds were the more vocal.

In general terms, it is difficult to prove a case for either optimism or pessimism. Credit institutions have generally found it hard to attract savings deposits from small farmers, and in most countries such savings are meager. But the optimist will reply that there are some success stories, impressive in the light of the poverty of the depositors, and that in any case few institutions have tried very hard to mobilize such savings deposits, or have used the "right" methods. In what follows, we shall assume that the optimists are basically right, for there is evidence to support this view. We shall assume that interest rates are an important factor, but not the only one that affects the development of a saving habit in small farmers. We may note that those who would stress the positive attraction of high interest for increasing savings deposits are thinking of saving as a purely voluntary act. Those who stress other factors may be relying on some element of compulsion to make farmers change their habits, though not necessarily. Certainly the consideration of how much reliance should be placed on compulsion, though alien to the Western economics tradition, is not out of place here. Another dimension to be considered is that of savings organized by a local farmers' group, as opposed to individual savings deposits.

*Analysis of Saving by Small Farmers*

*Rural savings assumptions.* Development economists carry a good deal of inapplicable intellectual baggage with them when they come to analyze rural savings in developing countries. Part of this stems from the way "traditional economists" view agriculture and rural residents. The assumption that rural people have little voluntary savings capacity, for example, has been an article of faith among Marxian as well as Western economists. Low incomes and/or lack of economic sophistication among rural residents are often cited as proof. The reciprocal assumption, that only the industrialist or the state has a significant marginal propensity to save, has provided the foundation upon which most development strategies were built during the past two decades.

Economists are further handicapped in their analysis of rural savings behavior by the incomplete, and to some extent inappropriate, theoretical tools at their disposal. Several examples of these shortcomings might illustrate the seriousness of this problem. Most consumer analysis to date, for example, has assumed that consumption and investment decisions were made by separate decision-making units. However, rural consumption behavior can only be explained by analyzing the "firm-household" as it simultaneously makes consumption, investment, and savings decisions—that is, a family farm must be treated as both a producing firm and a consuming household. In many economic studies savings are considered to be a passive residual left after immediate consumption needs are satisfied. This is only partly true, however; after basic survival needs are met, family consumption levels depend on a number of different factors. Limited research results suggest

that when rural incomes are increasing, the availability of attractive rates of return to various types of savings-investment activities may result in family trade-offs between savings and consumption.[1] Government policies which significantly affect the rates of return to various types of savings may, as a result, play an important part in determining the amounts saved.

*The rural firm-household decision-making process* is complex and includes economic as well as non-economic dimensions. On the economic side, consumption analysis initially focussed on the relationship between current income and consumption. Later Dusenberry, Modigliani, Friedman, Ando, Brumberg, Watts, and others extended consumption analysis by suggesting that the relative income position of the family, permanent income, previous consumption experience, and relative and desired wealth levels were also important determinants of consumption.[2] These studies largely assumed that decisions to consume and save-invest were independently made. Furthermore, traditional consumption analysis assumes a stable bundle of consumption goods and relatively modest rates of economic growth.

Several modifications must be made in traditional consumption analysis to make it appropriate for a diagnosis of rural firm-household decisions in developing countries. The first major addition is including rates of return to on-farm investment alternatives in the consumption function. This assumes that high rates of return to investments in fixed farm capital and/or operating expenses will encourage the farm family to defer consumption. The reverse is also true. In addition, family consumption may be affected by the rates of return offered savers through various financial savings instruments, and/or off-farm investment opportunities. In rural areas experiencing rapid change, much more attention must be paid to the impact on consumption decisions of alteration in production investment incentives as well as rapidly changing consumption opportunities. A high-yielding rice or wheat variety, for example, may make on-farm investment very attractive in one time period, while the increasing availability of radios, bicycles or motor bikes, and sewing machines may make consumption relatively more attractive in another time period.

As already suggested, the decision to invest is intimately related to the consumption and production decisions at the firm-household level. Four types of investment-savings alternatives may be available to the farm family. The first and probably the most important alternative is to invest in the on-farm production process. In large measure, the farm production activities supply the firm-household with resource-use possibilities. They provide the economic incentives which stimulate the on-farm capital formation process. They also partially provide the signals which indicate the forms of savings which are the most economically desirable, and they grind out the additional product which can provide part of the resources necessary to make further investments. On-farm investments can take three general forms: (a) Investment of family labor in activities which directly enhance the capital stock of the farm: e.g., land clearing, building irrigation ditches, putting up fences, and digging wells; (b) an expansion in operating capital which allows farmers to call upon productive capacity owned by others. This may be done through the use of the farmers' own discretionary liquid assets, or through use of additional credit. (c) The farmer may also purchase with owned or borrowed funds various forms of fixed capital which provide productive services over various time periods.

A second set of investment alternatives open to the farm family is through rural capital markets. In these markets a farmer may seek a financial rate of return on his savings. This includes deposits in banks, savings and loan associations, postal savings, credit unions, farmers' associations, and cooperatives. It also includes private loans made to other individuals, and participation in rotating credit associations. A third form of investment activity faced by farmers is off-farm business investments. This may include putting money into local retail stores, investments in urban property, and investments in various types of marketing activities. The fourth set of investment activities related to formation of human capital within the household. This includes investments made in furthering the formal education of the operator and his family. It also includes time and resources spent in child rearing in the home, and investments in improving family health.

Economic analysis of rural savings behavior is further limited by unrealistic assumptions about the similarities among rural firm-households. Too often, economic analysis focuses on averages which mask very heterogeneous units. On the consumption-savings side, for example, one should not expect to find all families with identical time preferences for consumption. In part this may be due to the age structure of the family, to the level of wealth already at the family's disposal, to the family's liquidity preferences, and to the consumption-investment alternatives which face the family. A 65-year-old farm owner may apply a much higher discount against future income-consumption than a 25-year-old operator who is just starting to build his assets. Likewise, a farm family with access to electricity may find purchase of electrical appliances a very attractive alternative to savings, while a family without electricity may not be able to enjoy these items and prefer to invest-save major parts of additional income.

Similarly, on the production-investment side firm-households may face very different investment alternatives. For example, one unit may have the opportunity to invest in tubewells, drainage facilities, or soil nutrients which promise very high rates of return. At the same time, other units may be mired in a low-return-to-investment trap. Some farms may need very lumpy, indivisible inputs which require liquid capital beyond the capability of the "firm" to finance internally; others may find highly divisible investment possibilities which can be more than met by internal liquid capital.

The picture is made even more complicated when attention is paid to income sources and income flows among rural firm-households. Some households derive most of their income from a number of different jobs or enterprises, while others depend on just one or two sources. Some households may have fairly steady income flows throughout the year, while others get most of their income in one or two lumps. This income, investment, production, and consumption heterogeneity is a major justification for a well-integrated capital market in rural areas—a market that can, at the proper times and places, respond rapidly to sharply different financial needs. This heterogeneity is also a reason why some farm families may vigorously respond to incentives to save in a financial form at the same time that other farmers are eager to pay high rates of interest on credit for very profitable investment possibilities.

*Rural savings research.* Only detailed empirical research can shed light on the extent to which rural savings capacities exist in developing countries. Aside from

Japan, there seem to be only two countries where such research has been carried out: Zambia and Taiwan. Results from this research suggest that significant savings capacity does exist.

Roberts[3] found, in a 3-year study of 239 rural families in Zambia, a surprisingly high savings capacity. His study showed that farmers in the sample, on the average, saved more than 30 percent of their income over a two-year period. At the same time, a sample of rural villagers with other occupations had average propensities to save which were almost identical to the farmer sample. He concluded from his analysis that the volume of cash reserves within many of these households was greater than could be productively applied to on-farm investments. Surprisingly large cash resources have appeared elsewhere. In early 1973, for example, Uganda required all old currency to be exchanged for a new issue; policy makers were overwhelmed by the amount of currency which appeared for exchange in rural areas.

In a study of farmer savings in Taiwan, Ong[4] argues that attractive rates of return to on-farm investments, plus incentive interest rates on financial savings (see Table 14 below) played a key role in inducing substantial rural savings over the 1960-1970 period. Her analysis of a large number of farm account records showed a negative relationship between consumption and various rates of return to firm-household investments. That is, as rates of return to investment increased, current consumption decreased. She also found that over the 1960-1970 period farmers' marginal propensities to save ranged from one-third to two-thirds of increases in income. The average propensities to save were about one-fifth of income over the same period. Her analysis, as well as later research by Chin, also hints that Taiwanese farmers may have followed "U" shaped average propensity to consume (APC) schedules over the past two decades. In the early 1950s the APC may have been quite high, but gradually dropped during the next 10-15 years. In the late 1960s the APCs have increased, though they are probably still at a lower level than in the early 1950s. Initially, farmers were apparently slow to increase consumption patterns despite increases in income. Strong rates of return to on-farm investment and attractive rates of interest on voluntary financial savings deposits provided additional incentives for rural families to hold back consumption. In the latter part of the 1960s, as more alluring consumption items were available for purchase in the rural areas, the rates of return to on-farm investment may have become relatively less attractive.

Table 13 supplies some of the results from the Taiwan samples of farms where detailed farm accounts are available, comparing 1960 values with those in 1970. It is the best case study on record covering the evolution of saving habits among small farmers in a developing country. Farmer participation in the study was voluntary; and weekly records were obtained, so that farmers did not have to recall data over a whole year—as is usual in such studies. The table gives averages for the whole sample, and also averages for farms of different sizes. It will be noted that incomes increased in larger proportions on the smaller farms, and that percentages of income saved were larger on the bigger farms; all these percentages were increasing rapidly until the set-back in 1969 caused by bad crop weather. Of the different forms of savings, cash holdings and savings deposits grew most rapidly. It was the small farmers whose cash holdings were most noticeably larger in 1970 as compared to 1960 (increased monetization of both production and consumption), while the bigger farmers increased their savings

deposits in larger proportions. (None of these farms were large by comparison with acreages in many countries.)

Table 13: Small Farmer Savings Behavior in Taiwan Sample 1960-1970

| | Average, all farmers in sample | Averages by farm size in hectares | | | | |
|---|---|---|---|---|---|---|
| Number of farms covered | | 0-.5 | .51-1.0 | 1.01-1.5 | 1.51-2.0 | over 2.0 |
| 1960 | 95 | 5 | 33 | 21 | 20 | 16 |
| 1970 | 404 | 38 | 115 | 98 | 68 | 85 |
| Family incomes in U.S. dollars at 1970 prices | | | | | | |
| 1960 | 1021 | 517 | 727 | 954 | 1214 | 1634 |
| 1970 | 1281 | 875 | 1064 | 1141 | 1307 | 1843 |
| Percent of income saved | | | | | | |
| 1960 | 18 | 15[a] | | 16[a] | | 28 |
| 1965 | 24 | 18 | | 26 | | 30 |
| 1968 | 28 | 23 | | 27 | | 34 |
| 1969[b] | 12 | 7 | | 10 | | 19 |
| 1970 | 20 | 13 | | 23 | | 24 |
| Forms of saving: changes shown by 1970/1960 ratios | | | | | | |
| Cash holdings (104)[c] | 3.0 | 9.0 | 5.8 | 2.5 | 3.4 | 1.7 |
| Savings deposits (266)[c] | 2.7 | 0.4 | 1.7 | 2.5 | 2.9 | 4.7 |
| Stored products (228)[c] | 1.2 | 2.9 | 1.2 | 1.3 | 0.9 | 1.2 |
| Growing crops (211)[c] | 1.8 | 0.7 | 2.4 | 1.8 | 1.3 | 2.0 |
| Livestock, poultry (220)[c] | 1.0 | 0.7 | 1.0 | 1.1 | 0.8 | 1.0 |
| Value of land owned (6, 202)[c] | 1.7 | 1.8 | 2.0 | 1.5 | 0.4 | 1.9 |
| Value of buildings (768)[c] | 1.1 | 1.1 | 1.4 | 1.0 | 0.6 | 1.4 |
| Value of farm machinery (241)[c] | 2.0 | 1.5 | 1.1 | 3.3 | 3.2 | 2.1 |
| Total liquid assetts (1,082)[c] | 1.5 | 0.9 | 1.5 | 1.6 | 1.2 | 1.6 |
| Total fixed assetts (7,293)[c] | 1.56 | 1.76 | 1.80 | 1.44 | 1.32 | 1.63 |

Source: Adams, Chen and Hsu, Spring Review Vol. XI, article 2, tables 12, 13, 14, and 26-35.

[a]For percentages of income saved, the farm-size grouping is: 0 to 1.0 hectares, 1.01 to 2.0 and over 2.0.

[b]In 1969 bad crop weather had a serious impact on savings.

[c]Values for average farm in 1970 in U.S. dollars. (in parentheses)

The above cited savings data strongly suggest that voluntary savings capacities do exist in developing countries. They also suggest that aggressive programs to mobilize these savings could energize rural capital markets. If one accepts the idea that significant voluntary savings capacity exists in rural areas, then why have rural capital markets not mobilized more voluntary savings? We noted the importance of informal savings for agricultural capital formation; but formal savings institutions have attracted very limited funds from small farmers. Only in a handful of cases do rural savings, voluntary or involuntary, play a significant role in the supply of institutional credit for agriculture. In major part this is due

to the administered low interest rates which are typically applied to the formal portions of rural capital markets. This loan rate usually places a low ceiling on rates which can be offered for savings deposits if the credit agency is to cover its lending costs.

One might conclude that such interest rate policies have resulted in a self-fulfilling prophecy: typically, rural savings are assumed not to exist, and deposit policies are then set so that farmers are not induced to deposit savings. As a result, credit agencies find it more profitable to draw money from the central bank, etc., rather than go through the costs of handling a trickle of deposits. The overall lack of savings mobilization may hinder a lending agency from earning a profit and/or remaining financially solvent. This, plus the generally limited supplies of funds, may sharply restrict loan expansion and the realization of economies of scale by lending agencies. In Taiwan, however, surpluses generated from credit-savings activities have provided a solid financial foundation on which other service activities of Farmers Associations were built (Adams *et al.*). Might this also be true in other countries under appropriate interest rate policies? This question will be explored below.

*Required Savings in Credit Programs: Cooperatives*

"Required savings" refers to savings deposits by farmers that are required as a condition of their participation in some type of credit program. This term is used in preference to the more common "forced" savings, which seems inappropriate where participation in a credit program is voluntary. The term does not exclude the truly forced savings that would be found where farmer participation in an organization that requires savings deposits has been made mandatory in some way. But this is unusual; generally the mandatory organizations do not require savings (in communist countries individual farmer savings are not featured), and where farmers' membership in an organization does involve savings it is not often mandatory. Exceptions are found in Nepal in the early 1960s,[5] and more recently in the Philippines, when the beneficiaries of land reform were required to deposit a given percentage of their rice harvests with a cooperative; at one time the government of Sri Lanka had seriously discussed and nearly implemented a similar scheme. The compulsory savings plans that some large plantations arrange for their workers might be regarded as forced saving, even though the worker is free to leave his job. Some might suppose that forced saving is found in the farmers' organizations of South Korea and Taiwan, which are virtually universal in membership and have fostered very large farmer savings plans; but here the savings are essentially voluntary, though much influenced by government arrangements.

By far the most common form of required saving is that associated with cooperative organizations, whether they are simple credit unions or more elaborate in their activities. A credit union specializes in savings and loans within a local membership group, and while it may have received some initial funds from the outside its capital is chiefly dependent on members' savings; other types of cooperative, however, are usually more dependent on outside capital. In either type of cooperative, initial deposits are required to establish membership shares. In addition, further deposits may be required, either on a regular basis through time or as a fraction of any loans that a member may get with a portion of the repayment obligation being designated for deposit. Cooperatives may also try to

elicit further voluntary deposits.

This description would apply to most cooperative organizations in which there is a savings component. Such a pattern is found, for example, in Uganda (Frederickson), Thailand (Ingle), Tunisia (Johnson), and Ecuador (Keeler, Hayes, *et al.*), as well as in the credit unions of Latin America and Africa. A few programs have added interesting twists: in Kenya, a few cooperatives deposit part of the proceeds of members' crop sales into bank savings accounts;[6] even though members are free to remove these deposits from the bank, such deposits have come to exceed by a large amount the total credit granted by the same cooperatives. In Bangladesh, the members of cooperatives under the Comilla program must maintain a minimum flow of small savings deposits every week to remain eligible for other development activities (Solaiman and Huq, Stepanek). There have been a few fairly substantial accumulations of funds in these programs. In the somewhat unorthodox case of Bangladesh, the accumulated value of deposits for shares plus weekly savings in the three major *thana* groupings of cooperatives in Comilla district from 1961/62 to 1970/71 was about $450,000 (Rs. 2,166,000). But for the most part the required demands on small farmers have been modest, and the responses as well, so that the amounts of capital raised by making this type of requirement for cooperative members do not in most cases add up to very significant lending funds.

The low rates of interest paid on deposits have been cited by some observers as the main cause of the disinterest of most farmers in depositing any more than they must to remain in good standing. An argument can be made that, if higher interest were charged on cooperative loans, the resulting higher income would support both higher interest on deposits and larger dividends; the farmers would then have more incentive to increase their savings and to give them to the cooperative, which could then invest more profitably, etc. In short, higher interest rates all around would by themselves elicit more savings, and minimum deposit requirements either would not be necessary or could be more readily increased.

The skeptic would reply that it is not so easy to change farmers' habits, especially when it comes to trusting one's hard-earned money to some party whom one may not be sure of. Promises of high interest, however alluring, could hardly be enough to bring money out of farmers' hoards. Would the money be safe? Would it be available to spend in case of need? Such questions would have to be answered first, and confidence would have to be built slowly. One bad experience could negate a number of satisfactory ones. Further, the question of cultural compatability of a farmer's savings in this particular form with the other aims and roles in his life is important; the desire to gain more money in the form of interest payments may be only one of many considerations in his mind and far from the leading one.

Given these hurdles, some would argue that the best way to induce a small farmer to save is: (1) to have his money go to an organization of his fellow farmers from the same area, people he knows and can keep an eye on; (2) to ensure that the farmer has some say in the running of this organization; (3) to require that all its members must contribute, so that the unfamiliar risk can be shared and become customary. These elements would be found in a cooperative savings program as it ought to operate (many do not), and they have a clear logic behind them.

Other kinds of logic may be brought to bear on a savings program. Some

would argue that a small farmer is unlikely to have much confidence in an organization of poor and ignorant people like himself but would feel confidence in a rich and prestigious bank. If so, an organization for making deposits in a bank—as in the Kenya program noted above—would be indicated. Others would argue that the savings requirements attempted in credit programs up to now have been much too timid, and that their potential for capital accumulation has hardly been touched. For example, Philip Church (Vol. XIX, article 19) proposes a scheme that would require 10 percent of all loans to be placed on deposit (in addition to a 10 percent interest charge—i.e., 20 percent of loan values would be added to repayment obligations) for a period of four years per farmer. During that period the farmer could not take out his money; at the end of it he would "graduate" from the program with a nest egg of savings to use as collateral with other lenders, having made it possible for the credit program to build up its assets and move additional farmers through a similar four-year period of saving. (The question of "graduation" will be discussed elsewhere). Given a large enough number of participants on these terms, a substantial and solvent program with expanding capabilities would be feasible, along with a growing body of newly prosperous "graduates." Church's hypothetical numbers are impressive.

All these varieties of logic rest on assumptions regarding small farmer behavior that have not been conclusively tested in practice. The few successes in required savings accumulation do not point to a common cause: they do not indicate, for example, that high interest rates were influential, for their rates were not consistently higher than others. The case for raising interest rests—more appropriately—with successes in voluntary savings programs. The response to the Comilla program in Bangladesh, particularly striking because of the very low incomes of the farmers involved ($40-50 per year) could be taken to mean either that the insistence on very frequent requirements for small deposits has a large potential, untried in other programs, or that the exceptional methods used to fine-tune the whole Comilla program to local farmers' initiative is the secret of eliciting responses in many fields, including the acceptance by farmers of a burdensome deposit requirement. The idea that localized cooperative organizations will, as a general proposition, be able to inspire farmers' confidence and elicit substantial savings from them does not seem to be supported by experience. Perhaps these groups have not yet established the right conditions in their organizations; or perhaps it has never occurred to their leaders or advisers that it was important to try to set demanding savings goals, or indeed that they could expect to succeed in them if they tried. At the same time, it must also be noted that no attempt to mount a large-scale, impersonal and non-localized program with ambitious savings requirements (like those envisaged by Church) has yet been made. So the potential for capital accumulation by organizational savings requirements has neither been proved nor disproved by experience.

*Credit unions.* A brief look at the results of efforts to organize small farmer credit unions is in order, since these are cooperatives in which the major emphasis is given to mobilization of savings. Much of this experience is found in Latin America; more recently the effort to start credit unions has been extended to Africa.

On the one hand, programs sponsored by U.S. advisors have been initiated in ten Central American and Andean countries and joined in the COLAC (the Latin American Association of Credit Union Federations). These have not been pro-

jected for rapid or large-scale organization; instead, a gradual, grass roots growth has been the policy. They have been supervised by experienced experts and supported by outside funds, and the higher level infrastructure of national and regional federation has been provided. As of 1972 COLAC organizations had accumulated $152 million in savings deposits, of which about one-third came from small farmers. On the other hand, there have been a number of localized credit union experiments by a variety of voluntary agencies, notably by Catholic priests, among poor and isolated farmer groups with little or no outside inputs other than the devoted services of non-specialists. In both kinds of endeavor there have been gratifying responses—not universally, but often enough to provide concrete evidence that genuinely poor farmers in many areas can make savings when they are given the right leadership and organization.

Credit unions, however, have not been of great interest to most of the agricultural economists and others who are concerned with small farmer credit programs. The main reason is that, by and large, they have not been very productive of agricultural innovation or expansion. There are exceptions, but the accomplishments have been localized and modest. Credit unions have generally been seen by their sponsors as providing the farmers with reserves to meet their own emergency needs, enabling them to stay out of debt to moneylenders. Farmer motivations for saving have been precautionary rather than adventurous; loans were expected to cover consumption more often than to buy production inputs. Given this image, accumulations of savings have been modest relative to the requirements of agricultural capital, however meaningful they may be to farmers who did not have such reserves before.

This historical fact does not preclude the possibility of establishing fruitful relationships between credit unions and production-oriented credit programs. Some of the COLAC leaders have begun to think more about technical assistance and production loans, as Ney Lopez indicated in the Quito workshop, and in pursuing this line they will have some advantages over the usual Latin American farm credit program. A well-functioning credit union operates very cheaply, relying on local volunteer labor, and it has established an atmosphere of mutual trust. Repayment records are very good, and farmers are able to see the credit union as their own organization—their ally in a hostile world. Some of these qualities could be jeopardized by a more adventurous loan policy, or by a concern with technological matters that would require external expertise and raise costs. Nevertheless, the production-oriented, government-sponsored programs would do well to observe the lessons that could be learned from the credit union experience: it might not be advisable for them to "invade" an existing credit union movement, but at least they could consider how better to establish nuclei in the villages they deal with that would have some of the qualities the better credit unions possess. Ideally, the two types of organization could do business with one another, having a due respect for the preservation of the different virtues that both have to offer to small farmers—that is, a comprehensive credit program could also sponsor credit unions or borrow from existing ones if repayments were insured or reliably guaranteed.

*Voluntary Savings Institutions*

There is no sharp line to be drawn between voluntary and required institutional savings: many organizations that have savings requirements also try to get

additional voluntary savings, and the latter are sometimes far more important; and savings requirements, to be effective, must induce a voluntary positive response. But it is convenient to separate the discussion of the cooperative type of organization that does make some demands on its members from the kind of banks that cannot do so. Commercial and savings banks, postal savings branches, small rural banks (as in the Philippines and South Vietnam), and public credit programs that have a voluntary savings window are generally more distant from the small farmer than cooperatives and credit unions. If they wish to attract his savings a more impersonal appeal, one addressed to individual self-interest, is in order. The lure of high interest payments is perhaps more necessary for such banks than for farmers' cooperatives, though it can of course be useful in a savings mobilization effort in either setting.

We have noted that most banks do not actively seek out small rural deposits, though these are accepted when offered at the prescribed minimum values, which tend to be high for poor farmers. Many countries have organized savings deposits at post offices, and in a number there are commercial or savings banks with rural deposit facilities. All these are primarily urban-based institutions, however, with rural branches of which not too much is expected. The relatively low interest paid on deposits in almost all cases is unlikely to elicit a large volume of deposits in the absence of particular efforts to bring them in. In some cases commercial banks in Africa have started rural savings drives for public relations reasons (see Roberts, Vol. XV, article 2, p. 3) with mixed results; when successful, the depositors were mainly the large farmers. No great successes in small farmer deposit attraction were reported in the Spring Review, except in the case of rural banks in South Vietnam; although now inoperative, their methods are of some interest.

A localized rural bank that depends for expansion of its loan capital on voluntary local deposits is necessarily in a different position from the usual urban-based bank. The banks in South Vietnam, though not dependent on local deposits to come into operation, were particularly interested in increasing their small depositors (rural and urban) in order to expand their operations. Some of the means they used in aggressively seeking to attract savings deposits may be useful elsewhere (Nguyen An Nhon, Vol. XI, article 3). They paid relatively favorable interest rates for savings deposits: 17 percent, with 17-24 percent for time deposits of 1-12 months; and while the rate of inflation has also been high, these deposit rates are unusual. They sent their employees into nearby villages to make door-to-door visits soliciting deposits, and this included a special effort to get savings started among school children. Female clerks, often chosen for good looks, were instructed to welcome visitors to the bank and urge them to open savings accounts. A lottery with high pay-off levels (about one in three each year) was organized: in return for accepting a lower rate of interest the depositor is given a lottery ticket, and the value of his payment if he wins is proportional to the amount of his savings deposits.

In other countries various devices (other than interest rates) have been used to encourage savings deposits. In the Philippines and Uganda, insurance on deposits eliminates savers' risk of bank failure. In several countries with high rates of inflation, including Brazil and Chile, the value of savings deposits is adjusted in accordance with changes in price levels. Uganda, Costa Rica, and Bangladesh among others have used mobile units to collect rural savings deposits. A life in-

surance feature, with beneficiaries receiving some multiple of the savings of the insured on deposit at the time of death, is supplied by some credit programs, e.g., in Bangladesh and the credit unions of Latin America. In Colombia, depositors are eligible for educational scholarships which are drawn daily from lists of savers in the Agricultural Bank. Some countries offer tax concessions on income from savings deposits, e.g., Taiwan, South Vietnam. And a number of countries besides South Vietnam, such as France, El Salvador, Iran, and India, have lotteries in conjunction with savings accounts. Generally speaking, use of these devices has been the result of government decisions that the encouragement of savings was desirable, rather than an expression of private initiative as seems to be the case in South Vietnam.

The most active effort by commercial banks to collect small rural savings, aside from the token collections of some banks in Africa and elsewhere for public relations purposes, appears to have taken place in India. For the last 10-20 years a few south Indian banks have had "pigmy" (*nityandhi*) deposits of small amounts, collected more or less weekly by agents on commission (based on the value of collections) going from door to door in rural areas. These have been judged successful and expanded slowly. Since the motive for deposit is not interest but the accumulation of saving on a semi-contractual basis, the interest and commission costs are low; in existing schemes, total costs come to less than 5 percent.[7] Rural banking has acquired a new interest in India since the 1969 nationalization of 14 large commercial banks having a total of 4,134 branches (compared to 1,319 branches in the comparable non-nationalized private banks). One major purpose of nationalization was to bring about an increase in the rural activities of these banks without loss of their commercial character, i.e., they were not intended to become special-purpose state enterprises or get subsidies. Initially, at least, a certain competitive expansion occurred among both the nationalized and private banks: by the end of 1972, the former had increased the number of their branches by 89 percent, but the latter also showed an 84 percent increase; and total deposits of both had grown by nearly 100 percent from June 1969 to June 1973.[8] Such rates of increase were well above those in preceding years; not all new branches were rural, nor were new deposits concentrated in the new branches, but the overall impetus evidently had a positive effect which was not entirely predictable.

The rate of expansion has slowed, as might be expected, but some new ideas are circulating on how small deposits might be attracted. Mr. V. V. Bhatt, of the Reserve Bank of India, has proposed an innovative approach to the small depositors by tailoring deposit schemes to particular services corresponding to their motivations to save.[9] For example, a housing deposit scheme could induce a person to start saving early, say at age 23-24, to ensure his capability of owning a house by age 34-35 with a mortgage loan at slightly reduced interest. Similarly, Bhatt suggests the possibility of education deposits for children, or marriage deposits (for dowries); special deposits for acquiring investments such as a pumpset, or durable consumer goods like radios or bicycles; and deposits leading to old age annuities—all these on a small scale and with flexible semi-contractual arrangements to combine savings with benefits including credits. Other proposals would have more of an insurance character—medical deposits, or a modified form of crop insurance (e.g., by supplying loan facilities or payments when a district's agricultural output fell to a defined level, with values tied to amounts

deposited by individuals). Mr. Bhatt (currently at the World Bank) states that several of these tailored schemes have begun to be tried in India, though not to his knowledge in banks of other developing countries. Certainly this demand-oriented approach to savings attraction deserves further exploration, but it will require considerable initiative by the banks and a determined and imaginative effort to devise schemes that will produce responses.

*Taiwan and South Korea*

There are many things in these two countries that are unusual, and that resemble most the institutions of Japan; both countries were, of course, Japanese colonies up to World War II. One thing these three countries share is a nation-wide network of farmers' organizations with nearly universal farmer participation; another is the extent to which small farmers have been induced to make savings deposits in these organizations. Since the three countries also share the effects of thorough post-war land reforms, almost all farms are small. In addition, the three have all experienced rapid post-war industrial growth (starting only in the mid-1960s in South Korea), so the farmers have been building up their savings in an environment of generalized economic expansion. Agricultural output has also increased in all cases, and from relatively limited areas of arable land. This has not resulted from spectacular gains in yields or new technological breakthroughs; rather, the effects of advantageous diversification efforts in each country, along with continual improvements in application of an already high-yielding rice technology, were responsible. Behind this result lies the pre-war establishment of infrastructure in extension, education, etc, by the Japanese administration in the home country and in the two colonies.

The Korean farmers' organizations, usually called cooperatives, were officially sponsored beginning in 1907 and united in a national federation in 1933 (Morrow and White). After various reorganizations, a 1961 act created a new National Agricultural Cooperative Federation (NACF) which not only manages the cooperatives but extends agricultural and other credits, and provides services in fertilizer and tool distribution, along with storage, marketing and processing of farm products. Cooperative members must own a $3 share to be eligible for NACF loans, and some 36 percent of farmers have savings deposits. As of 1971, total deposits amounted to $291 million, which was 51 percent of the total capital of NACF; deposits by farmers came to $69 million, nearly 30 percent of its agricultural loan funds. In addition, $16.6 million had accumulated (in only two years) in locally administered farmers' mutual savings accounts, sponsored by NCAF. Per capita farm income was about $135 per year at that time; farmer savings deposits have been growing faster than agricultural output or income.

While savings are part of a Korean tradition, they also resulted because the many branches of NACF have followed a savings promotion program to obtain additional loan funds. One of the key elements was the interest rate policy: in 1965, the NACF in conjunction with other banking institutions raised their loan and deposit rates from prior low levels to quite high ones, as part of an anti-inflation move. At their peak, deposit rates were 30 percent a year (while loan rates were 26 percent, requiring a subsidy). They dropped slowly as inflation moderated; by January 1972 the rate on one-year deposits was down to 16.8 percent, the loan rate to 19 percent. The NACF has also used a certain amount

of indirect compulsion in its efforts to build up savings deposits. This varies by time and place: the NACF directs its provincial offices to attain annual targets, which are divided up among the local cooperatives who then handle the matter in different ways. Some may only have urged members to deposit, while others required savings by members in order for them to get loans or services; and others required portions of loan repayments to be deposited. There are no figures on how much of the savings total was required and how much purely voluntary.

It should also be noted that NACF programs have stressed productivity in lending: most loans are tied to production plans. In 1971 some 51 percent of agricultural loans were for over one year—i.e., medium or long term. These aspects, together with the savings deposits, tie farmers to their local cooperatives; loan repayment rates have been quite good (91.4% in 1971). The NACF activity, with its many services, has been a solvent operation, and clearly a major contributor to the overall gains in farm output and yields over the last decade.

Taiwan has a comprehensive system of institutional credit for agriculture, not so centralized as in South Korea, but similar to the latter in that much of this credit is handled by the local farmers' organizations spread throughout the countryside (Adams, Chen and Hsu). These too were started by the government in the 1900s, and are now multi-service cooperatives with a three-level structure. Although quite similar to the Korean organizations, they are usually called Farmers Associations (FAs) rather than cooperatives. They accept savings deposits and extend loans; as of 1970, the FA deposits had accumulated to a value of $124.3 million, thus exceeding the FA loan balance of $115 million. Of this total, 31 percent was deposited by regular members of the FAs who were full-time farmers, and 69 percent by associate (non-farmer) members; about one-third of the membership are associate members living in the same areas.

Relatively high interest rates played a role in inducing savings, as in Korea, and they too have gradually decreased as the rate of inflation dropped. As the figures in Table 14 show, the incentive to deposit was more or less maintained with these policies—certainly this was true for the longer-term deposits.

Table 14: Interest Rates Paid on Savings Deposits in Taiwan, 1953-71
(Annual percentages)

| | 3 month deposits | | 1-2 year deposits | | Inflation: |
|---|---|---|---|---|---|
| | Nominal rate | Real rate | Nominal rate | Real rate | Annual increase in wholesale price index |
| 1953 | 16.2 | 0.2 | - | - | 16 |
| 1956 | 10.8 | 4.8 | - | - | 6 |
| 1959 | 9.0 | -2.0 | 19.0 | 8.0 | 11 |
| 1962 | 7.2 | 1.2 | 14.8 | 8.8 | 6 |
| 1966 | 6.0 | 4.0 | 10.1 | 8.1 | 2 |
| 1969 | 6.5 | 4.5 | 9.7 | 7.7 | 2 |
| 1971 | 6.2 | 6.2 | 9.3 | 9.3 | 0 |

Source: Adams, Chen and Hsu, Spring Review Vol. XI, article 2, p. 19.

There do not appear to have been any compulsory deposit requirements in Taiwan, though there may well have been strong community pressures of an informal kind. As in Korea, savings deposits were moved into the farmers' local organizations which were supported by a strong, officially controlled upper structure. These organizations operated at a modest profit, and were the source of credit and profitable technical assistance that were in fact conducive to a steady growth in agricultural output and income. Thus, farmers could feel confidence in these organizations, one symptom of which has been a low delinquency rate.

There is much to admire in the experience of these two countries, and it ought to supply policy guidance that could be of value to other developing countries. Among other things, they have proved that small farmer and other rural savings can produce significant agricultural capital. There is not full agreement on what was the key to success, however. The enthusiast for cooperatives would stress the virtues of these organizations; one who emphasizes economic incentives would point to the higher interest rates and the productivity of credit uses; the man dedicated to the role of technology could find plenty to prove his thesis; and the believer in government activism would attribute much of the success to intelligent, active planning and intervention by the state. Some would cite the importance of land reform, or education, and so on. Others may wish to emphasize the traditionally hard working, frugal qualities of many East Asians, and the implied cultural factors. What does seem clear is that a number of good policies were used together, so that they reinforced one another in positive ways.

Even if we cannot prove that one policy (or tradition) was necessarily more important than another, it does seem possible to see in these two experiences examples of good policy making in the design of institutions in the rural capital market. Certainly these institutions did induce more small farmer saving than could have occurred without them: the propinquity of deposit facilities, the favorable interest rates, and the positive attitude toward saving conveyed through the FA and cooperative structures, were among the main reasons. And certainly the institutions were well geared to allocating capital to profitably productive uses by the small farmers. Whether there was a net flow of funds into or away from rural areas (the latter is more probable in Taiwan at least), the structure as a whole has brought more and more credit to farmers under favorable conditions.

*Informal Savings Organizations*

In addition to the kinds of formal savings institutions organized from above, which have been discussed up to this point, there are indigenous informal groups whose activities involve savings. The question of whether such groups could become the nuclei of credit organizations which could then contribute to smallholder agriculture was raised in the Spring Review. For the most part the answer seemed to be in the negative, in the sense that such indigenous, localized organizations could not be transformed by the injection of public funds and external directives without losing the social solidarity that had made them function. However, it was thought that small farmer participation in such organizations could establish habits and attitudes that would contribute to the success of these farmers' participation in more formal credit institutions at a later date.

There appear to be two main varieties of such organizations, one of which

could be described as informal credit unions. In a variety of ways, local groups establish reserves to take care of emergencies. It is likely that the existence of such activities could contribute to the formation of more formalized credit unions; but the difficulties of meshing the credit union approach with that of a production-oriented credit agency, as described above, would appear to exist even more strongly with the indigenous variety.

A second type of indigenous organization in the credit field is the rotating credit society. In its simplest form, a group of people meet regularly to make fixed contributions of money or goods, and the total collected at each meeting is distributed to one of the members; eventually all members get their turn to receive the meeting's collection. Recipients may be selected by drawing lots, or in some cases by making their competitive bids based on the value to them of getting the money at once rather than waiting. The society offers the allure and excitement of gambling, along with the feature of a savings accumulation to be used as the recipient sees fit. The meetings are also enjoyable social occasions, which is an important part of their appeal.

Clifford Geertz[10] describes how these rotating credit groups operate in Indonesia, Japan, parts of China, Vietnam, the Cameroons, Ghana, and parts of Nigeria. Spring Review papers discuss their operation in Taiwan (Adams *et al.*) and the Dominican Republic (Norvell and Wehrly). In the big cities of Asia these can become very large and complex affairs, involving big sums of money and fine calculations of interest; entrepreneurs may start them by collecting members; and individuals may be simultaneously involved in a number of them. In Africa, the tendency is toward the development of more complex leadership patterns and internal organization, with consequent increases in administrative costs.

In Geertz's view, these societies are significant for the development of traditionalist societies where individual saving has not had a place in the motives and behavior patterns of more than a few members of the elite. The Western-style financial institutions rouse suspicions by their impersonality, complexity, and a "foreignness" in their modes of operation; yet more savings accumulation is needed than can be supplied by government fiscal measures alone. The rotating credit society is a device which can mobilize traditional social relationships to fulfill non-traditional economic functions. It is an intermediate institution, arising in peasant culture to harmonize agrarian social structure with modernist commercial patterns of behavior, a bridge between peasant and trader attitudes toward money. In this respect its function is similar to that performed—ideally—by farmer cooperatives in bridging the cultural gap.

In principle, a rotating credit society could transform itself into a more conventional credit agency if the members' contributions were not fully distributed to members or managers but were allowed to accumulate, and were then used either for loans or for community investments. In practice, this is rare, though in some cases the period of rotation can extend over a number of years. In a few instances rotations may be consciously delayed over several contributory meetings before distribution, as in Liberia[11] or Nigeria (Roberts).

Perhaps the most impressive case of the elaboration of indigenous credit organizations to serve a multiplicity of functions is found in the study of *Ke* societies in South Korea, prepared for the Economic Planning Board in 1969 by Kang C. Kyu (Spring Review Vol. XV, article 9). *Ke* societies include both a short-lived type, in which funds are collected periodically for lending at interest

and redistributed (with profits) after one or a few years; and a variety of longer lasting organizations, of which a few date back to the 19th century. Some of the latter are largely designed to cover social or ceremonial expenditures by members; others are intended to finance community facilities, or capital improvements (e.g., irrigation). All require an entrance fee; most lend money at interest rates largely in the range of 40-100 percent annually, with loans going chiefly but not entirely to the members. Methods of collecting contributions—in cash, goods or labor—vary with the expenditures to be financed; only the short-lived variety collect regular cash amounts at short intervals. Some make occasional or regular distributions of profits to members; others do not. It is noteworthy that these *Ke* societies coexist with the highly developed government-sponsored Korean cooperatives; in Kyu's study, there appeared to be an inverse relation between the success of the cooperatives' credit activities in particular villages and the local participation in *Ke* societies, with the latter often possessing much larger assets. We may also note that in Taiwan, the FAs coexist with *huis*—lively and expanding rotating credit societies (unlike the *Ke* societies in their fast rotations).

All this is suggestive of small farmer savings capacities far greater than has been assumed, and of the existence of rural savings in forms that escape official notice and the calculation of national accounts. No doubt there is a good deal more of this kind of activity that could be discovered by research than has yet found its way into print. Whether the design of small farmer credit programs could profit from this kind of information is another question. As a practical matter, perhaps not—until some innovative ideas on the subject are developed. But we may at least conclude that the environment for incorporating a conventional savings component into farm credit programs is more favorable than it has been considered in the past.

## *NOTES*

[1]See, for example: Marcia Min-Ron Lee Ong, "Changes in Farm Level Savings and Consumption in Taiwan 1960-70," Ph.D. dissertation, Ohio State University, 1972; Chyan Tuan, "Mobilization of Rural Savings in Taiwan—Farmers' Choice among Financial Assets," Ph.D. dissertation, Ohio State University, 1973; Colin Wright, "Some Evidence on the Interest Elasticity of Consumption," *American Economic Review*, September 1967, pp. 850-855.

[2]For a review of consumption-savings theory see: Michael K. Evans, *Macro-economic Activity: Theory, Forecasting and Control* (New York: Harper and Row, 1969); Erwin Friend and Paul Taubman, "The Aggregate Propensity to Save: Some Concepts and their Application to International Data," *Review of Economics and Statistics*, May 1966, pp. 113-123; Raymond Mikesell and James E. Zinser, "The Nature of the Savings Function in Developing Countries: A Survey of the Theoretical and Empirical Literature," *Journal of Economic Literature*, March 1973, pp. 1-26; Daniel B. Suits, "Savings out of Different Types of Income," *Brookings Papers on Economic Activity* 2(1971): 383-407.

[3]R. A. J. Roberts, "The Role of Money in the Development of Farming in the Mumbwa and Katete Areas of Zambia," Ph.D. dissertation, University of Nottingham, England, 1972.

[4]Ong, "Changes in Farm Level Savings and Consumption in Taiwan," op. cit.

[5]Quentin W. Lindsey, "Budabari Panchayat: The Second Year After Reform," *Land Reform in Nepal* (Katmandu: Government of Nepal Land Reform Department, 1966).

[6]J. D. Von Pischke, "A Description of the Cooperative Production Credit Scheme," unpublished working paper no. 80, Institute for Development Studies, University of Nairobi, Kenya, 1972.

[7]V. V. Bhatt, *Structure of Financial Institutions* (Bombay: K. K. Vora, Vora and Co., 1972), pp. 65-66.

[8]1973 Report of the Reserve Bank of India.

[9]Bhatt, *Structure of Financial Institutions,* Chapter 4.

[10]Clifford Geertz, "The Rotating Credit Association: a Middle Rung in Development," *Economic Development and Cultural Change* 10, no. 3 (April 1962): pp. 241-262.

[11]H. Dieter Siebel, "Indigenous Economic Cooperation and its Developmental Function in Liberia," *Cooperative Information* (International Labor Office, Geneva) 3(1970): 7-53.

# Part 4
# Related Institutions and Policies

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# 13 *Marketing*

Three major institutional and policy areas outside of the financial institutions dealt with in the preceding five chapters have an important bearing on small farmer credit: marketing, farmers' organizations, and technical services. Concerning marketing, the timely supply of agricultural inputs, and the extent to which farmers can sell their products at rewarding prices, are both crucial to the determination of farmer incomes and thus to the success of credit programs. In the Spring Review, however, as in many discussions of small farmer development, marketing problems have tended to be taken up as subsidiary aspects of other specialized areas rather than addressed systematically in their own terms. This chapter will attempt to redress the imbalance somewhat with a relatively brief review of marketing institutions and policy problems. But first a word on why the subject seems not to be given the attention it deserves.

One reason appears to be intellectual: marketing is an amorphous, untidy subject, encompassing such variegated matters as storage, transportation, and the organization, numbers and qualities of sellers and buyers at all stages along the commercial chain on both sides of the farmer. At the same time it does not appear to hold any great mysteries that need to be unraveled; anyone can understand a marketing process without specialized knowledge—or so it is widely assumed. But while esoteric science is not required, the kind of factual information that is necessary to understand what actually happens in the marketing chains, why it happens, and how best to change it, is not easily come by. This is especially true of developing countries, where marketing is carried out rather informally by large numbers of people having a series of very particularistic, intricate and sometimes shifting relationships with one another. Agricultural marketing relationships are found in widely scattered places among relatively humble people, and even in the urban ends of the chain it takes a certain amount of time-consuming search and verification to find how things really are done. So it requires effort, and also money. In the past decade considerably more research has gone into the subject than before, but a great deal remains to be learned.

A second reason for neglect is that this kind of specialized knowledge does not seem to have much status or importance. In most universities the subject has little standing, and marketing specialists do not usually thrive in bureaucracies.

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Reinforcing—if not causing—this condition is an attitude of hostility or disdain for traders as a class. Obviously this varies widely by country, and by class groupings; but it is often typical of government officials, and of various kinds of "intellectuals" who contribute to the political climate. In some societies merchants may be respected and envied when they are rich enough, though not admired; in other countries they may be automatically suspect. Almost never is the small trader given the same moral status as the small farmer, who is generally assumed to be exploited by the trader.

Attitudes have had their impact on policy. Small farmer credit programs are usually guided and staffed by career officials, and created or influenced by intellectuals, rather than dominated by commercial-minded bankers—who may not be concerned with "peasant" problems. Marketing problems can seem unfamiliar to bureaucrats; as a practical consequence such problems are not often the subject of systematic surveys, even when they are causing a failure of credit programs to fulfill their stated objectives. Indeed, one may say that agricultural marketing policies generally, irrespective of credit programs, tend to be vulnerable to superficial or prejudiced opinion, and to sudden and sometimes clumsy changes in regulations to meet short-run conditions that might have been foreseen, or to satisfy new political waves. In this chapter we will argue, not that the low moral standing of traders needs to be totally reversed—though some moderation of prejudices would be helpful—but that the marketing functions do make valuable contributions to the economy in general, and to small farmer development in particular, and that these contributions call for more positive and imaginative policy making.

*Farm Storage*

A survey of the impacts of marketing on small farmer credit results can start with a simple point that is often unnoticed. Crop prices have unusually wide seasonal fluctuations, with the low point at harvest time. Credit institutions, like moneylenders, usually require repayment of their loans at harvest time since the farmer then has the most cash. This is also the farmer's custom—when he intends repayment; both he and the lenders know that it is easier for him at this time. But it is often possible for a farmer to get 20 or 30 percent more value for the same quantity by waiting two or three months after harvest to sell his crop, and still more later on. Such increments to a small farmer's income would frequently exceed the probable gains from available technical innovations, and may be less demanding of skill. So if credit programs are intended to augment the small farmer's income, why should they not encourage rather than inhibit him from holding his crop for a price increase? And would not loans to provide him with storage capacity, where a loan is needed, present an easy way for credit agencies to show quick results of their endeavors?

One answer, of course, is that a delay in repayment after harvest might increase defaulting. It could also be said that any farmer who can afford to wait for his money would have already found a way to store his crop. There are also storage costs—losses from insects, etc.—to be considered along with the cost of tying up capital in buildings and inventory; many farmers would not wish to pay these costs. It is difficult to judge the relative importance of creditors' requirements and other factors. But, if lenders customarily set repayment dates a few months after the harvest, might not a number of farmers—not the richest, not the poorest—be induced to hold their crops longer and to manage their cash re-

serves and consumption accordingly? If so, this would have advantages to both parties—provided, as seems likely, that repayment habits would be no worse (or better) once the transition from earlier to later requirements was over and the latter had become customary. Small farmer bargaining positions vis-à-vis traders would be improved; and to the extent that price swings were reduced and supplies to consumers became more even, the rest of society would share the benefits with the farmer, though some traders would of course find their profit margins lower. These changes might or might not be large, but they ought to be in a desirable direction.

*Availability of Inputs*

It is obvious that if a farmer does not obtain fertilizer when he needs it he will be hampered in increasing his production, and he will not have the expected additional income to help repay any loans he may have made to buy the fertilizer. Almost all credit studies mention this briefly, but the obvious needs to be emphasized because the occurrence is so common: when the inputs necessary to a technical improvement are not available to users, there is an avoidable waste of the resources invested in scientific research, extension programs, and credit agencies. To be sure, the requirements for adequate input supply are demanding in that the ingredients of transport, storage, and import arrangements or domestic production must all be present where needed and made to work together on time. Particularly when an unfamiliar input for a technical innovation is to be moved into dispersed locations on schedule, with demand somewhat uncertain and supply channels not well-established, is there reason to expect difficulties.

When the movement of input supplies is to be increased, the capacities of all the existing physical facilities ought to be surveyed, including roads and vehicles, wholesale and local storage depots. Specific provision should be made for timely additions where bottlenecks can be foreseen. This task is frequently given a low priority, but it is essential for success in any effort to raise agricultural output. Clearly it will contribute to the outcome of an output-oriented credit program.

Organizing and activating the requisite people is a more problematical matter. In a number of countries the provision of inputs like fertilizers and pesticides is handled by one or more state enterprises; elsewhere it may be wholly private, or it may be state operated at the wholesale level with private traders performing the retail distribution; and other mixtures are found. Seeds (when sold to farmers) may be tightly or loosely supervised by the government; tractors are often state-managed, while work animals seldom are; irrigation water has its special organizations; tools are usually local and private, but not always; etc. To condense the subject for a general discussion, we shall speak of fertilizer as a proxy for agricultural inputs generally. It is a significant one, and much of what can be said about it would apply to several others; but it should be understood that different conclusions may apply to some of the less divisible or costlier inputs. Irrigation in particular is a field of its own.

The suggestions below focus more on the activation of people's performance in the marketing chain from initial supplier to farmer than on the form of organization *per se*. But since the proposals involve economic incentives, they seem to imply a private, profit-oriented form of organization. We do not intend to assert a doctrinaire position on private vs. public enterprise, for state enterprises clearly vary widely in their efficiency as do the services of private sectors. It is

possible for state enterprise personnel to be activated by economic incentives, though this is perhaps difficult to arrange and to disperse with reliability throughout scattered branch offices. Responses to economic incentives can be expected from small private traders, but these people may be too limited in resources, or circumscribed in their localized outlook, to readily expand their activities and horizons in response to pertinent economic stimuli. So we are not dealing with certainty in results or with sure-fire reactions in either case.

Let us assume that experiments under appropriate field conditions have established that fertilizer, suitably applied, can significantly increase farm profits but that it is not yet widely used. A credit program tied to fertilizer purchase, with publicity on its benefits, has been launched, and demand is increasing slowly, but the supply is erratic and lagging. A number of farmers are not getting it, yet unused quantities are found in various warehouses. A common response to this situation is to attempt a further stimulus to demand by ordering that fertilizer be sold at low cost to farmers under a maximum fixed price, which will require a subsidy.

Depending on how the subsidy is paid, this may set up negative incentives to suppliers who find little profit in increasing sales to meet the demand. A subsidy to initial producers, with the maximum price applied to their sales but not to subsequent transactions, could overcome this particular problem; but if the benefits of the state subsidy accrue largely to middlemen rather than farmers, the latter may not feel any demand stimulus. The traders may then keep the farmers better supplied; however, many governments would prefer that their subsidy go to the poor farmer than to the middleman. There is a trade-off here, between better service *for* the farmer as against income transfer *to* the farmer by means of price controls limiting the farm level prices. In practice neither of these arrangements may take effect as they were planned, or the demand stimulus to farm purchases may be less effective than anticipated, or temporary. Many miscalculations are possible in this area, including overestimates of the profitability of fertilizer use. If, as is fairly common, the price ceiling is imposed in conjunction with distribution through a state enterprise network where there is no profit incentive, the main result can be a black market in the product. In short, price controls may help, but not always; and the side effects may be quite undesirable.

Another way of looking at the problem is to consider how to activate the fertilizer seller as an aggressive salesman of his product. With or without subsidy, the man who contacts farmers must see a sufficiently profitable selling price to reward his efforts, though not with so large a margin as to guarantee his income with no attempt to expand sales. Price manipulation may be necessary for this purpose, but is not a sufficient stimulus by itself. The publicity and technical information on fertilizer benefits could be directed at the trader or state enterprise seller as well as the farmer. Short courses in fertilizer uses may be appropriate for salesmen. Credits for fertilizer purchase could be extended to small traders. Where local monopolies prevail, credit and other facilities could be channeled to such areas to bring in more competition. If sellers are part of a large organization, public or private, rewards in the form of bonuses and promotions could be strongly based on individual sales performance. All this could be tied in with the aforementioned survey of physical facilities, the expansion of which could also have some stimulative value.

These suggestions all imply the devotion of more of the government's scarce manpower and financial resources to the commercial sector, perhaps by a diversion of them from a farm credit program. Reducing credit to farmers so that it can go instead to traders may be politically unpopular. Such a diversion could be justified by the resulting increases in agricultural output which, if they occur, will directly and more permanently benefit the farmers than would a larger farm credit program made ineffective by input shortages. It is difficult, however, to compare these two approaches and their probabilities since there has been so little experience with any wholehearted effort to dynamize the trading group. But it may be noted that small traders without benefit of government attention have been seen as the chief catalysts in developing new farm practices and products in northeast Thailand, far more important than were the extension agents.[1] Research might well disclose more such cases. And there are some developing countries where large foreign fertilizer-selling firms have undertaken successful technical assistance-cum-credit programs for farmers to build up their sales—in the Philippines, for example. In Central America, some U.S. firms which import farm products have similarly provided technical and capital assistance to local farmers to assure themselves a supply for their own markets. While technical assistance from private input sellers may not be widely available in developing countries, it may be noted that many U.S. farmers have relied on the advice of technically trained salesmen who visited their farms.

Another closely related possibility deserves exploration: credits could be extended to fertilizer (or other input) sellers to be relent to farmers to buy their products. If a package of different inputs was needed, they could be put together by a single seller, and the salesmen could become ancillary (and motivated) extension agents. Alternatively, credit could be supplied to crop buyers or processors for relending to farmers; this has been done very successfully in Costa Rica via coffee processors. These may be regarded as alternative means of mounting a farm credit program by using middlemen rather than cooperatives as intermediary lending agents. Financial resources would be extended to both the farm sector and the commercial sector simultaneously in one set of loans.

*Product Markets*

For most crops promoted in credit programs the market channels for sale and distribution are better established than those for input supply. But there are weaknesses in the marketing chain from the farmers' point of view, other than those related to farm storage. Here, too, a survey of physical facilities, and provision for their expansion to ease foreseeable bottlenecks, is pertinent where an increased flow of products is in prospect. Beyond this, there is the question of price, and of buyers' monopsony power vis-à-vis farmers. Price changes strongly affect the farmer's income and thereby the production incentives that are central to the outcome of farm credit programs.

There is reason to question the widespread image of the farmers as generally "exploited" by the crop buyer. Studies of the share of the final consumer's price that reaches the farmer in developing countries usually show that this share is reasonably large, at least it tends to be larger than in the industrial countries. In part this reflects a greater increment of processing and services (including advertising) obtained by consumers in developed countries, although this difference could be offset by the greater economies of scale in the marketing operation in

these countries. By itself, the percentage of the final price going to middlemen, as opposed to farmers, is not enough to prove whether farmers are being subjected to monopsonistic exploitation, and if so by how much. The middlemen do provide services that need to be rewarded, and conditions vary widely with respect to the amounts of service required and their justifiable rewards. There are often some middlemen whose incomes look unduly large in comparison with those of poor farmers; but it is common to find these men coexisting with large numbers of relatively poor traders whose services are also important.

If we look at the problem instrumentally from the standpoint of success in a small farm credit program, with rural development as the ultimate objective, we then become partisans of the farmer but not necessarily opponents of the trader. Both must have incomes yielding a sufficient incentive to produce and serve well, but the farmer's incentive requires special attention when he is expected to adopt new methods and take unaccustomed risks. For this purpose, a government-guaranteed support price for his crop is a frequently proposed remedy, one which may also provide secure incomes to traders if properly administered. Subsidies, and possibly government stockpiling facilities, will be needed. State procurement organizations are not uncommon in the marketing chain, notably the Marketing Boards for export crops in Africa. However, when these organizations serve other purposes than the encouragement of farm output, for example the provision of budget revenue and the maintenance of an export market, they may often hold farm prices down rather than up.

Most of the points made against price controls and state enterprises in discussing the supply of inputs apply also in crop marketing, but perhaps with less force. Price supports for crops may or may not stimulate increases in farmer output; they are likely to have a stronger impact on farm incomes than low-priced inputs, and the side effects are not so troublesome—to farmers at least. State organizations to buy export crops have historically tended to be relatively efficient; this is less true of government procurement for domestic purposes, however. On the whole, crop marketing is better understood than input marketing and easier to manage well. It is also likely to become more costly as a field for state intervention, and is often more sensitive politically.

While it cannot be said that crop marketing is a neglected subject, one important area is sometimes forgotten in government planning—the demand side. Many farm credit programs are designed to increase output on the basis of production-oriented calculations by ministries of agriculture. But the question of how much additional output can be sold at prices that will continue to be rewarding to farmers who respond to the initial stimulus is less often explored in advance, or used as a guide to production goals. Perhaps it is because one cannot know very clearly how much additional output will be forthcoming, and because the markets for presently non-existent increments of product or for new products are very hard to guess. One cannot measure hypothetical consumer responses, domestic or foreign, with the same assurance that one can test soils or the fertilizer response of plants. Nevertheless the attempt to estimate demand and probable prices should be seriously undertaken, and the results seriously regarded, for if the promoted products will encounter demand weakness the disruptive impact on a credit program is obvious. Money, trained personnel, and high level attention, then, should be devoted to market surveys. And it may also be useful, in some cases, to devote effort and thought to methods of selling new

products, an activity in which Western expertise can sometimes be of value.

*Consumer Goods*

The availability of consumer goods through rural marketing channels will often have its effect on farmer behavior and indirectly on the results of credit programs. Attractive consumer goods in visible presence may be a more eloquent incentive for an effort to accelerate farm profits than are some of the subsidized items just discussed. While production-oriented credit program managers will not overtly encourage farmers to adopt a more extravagant level of consumption, they may recognize that farmers might be more responsive to their appeals to innovate if there were some tangible rewards in sight for the successful adopters. Conceivably, the credit agency might take steps to encourage visits by sales representatives for the most appealing incentive products if it seemed appropriate.

*Farmers' Organizations*

So far this chapter's discussion has treated the farm sector as a unit without distinguishing the peculiar interests of the small farmers. It is they who are at a particular disadvantage in marketing relationships due to their large numbers, scattered locations, lack of financial reserves and closeness to subsistence levels, leading them to take such terms as they are offered with typically few alternatives, if any. Farm storage of crops can help them somewhat, as can the other suggested policies, but even with such help the bargaining position of individual small farmers will still be relatively weak. However, they can form their own organizations to promote their interests. Since farmers' associations will be dealt with at length in the next chapter, we will only note here the importance of their management of operations in the field of marketing.

From a marketing-oriented view, the performance of farmers' organizations must be looked at in a "hard-nosed" way. Do they, in fact, serve the farmer better than the much maligned traders? A great many do not, and the proof is that farmers are often found selling to a trader when their government-sponsored cooperative fails to perform well. Supporters of cooperatives may impose regulations giving the cooperatives a monopoly privilege in crop sales, or other competitive advantages over traders. Farmers may then seek to evade such regulations; and it is a question whether they are thereby sacrificing their long-run interests for short-term individual gain, or whether they have truly discerned where their future interest can be more reliably served. Such an argument is complex, but one answer to the question raised seems defensible: if the pertinent goal is a credit program that can best raise output, then the marketing functions *must* be well performed by someone—regardless of who it is.

If there is reason to think that cooperatives could in the long run serve their members efficiently, then there is a basis for arguing that marketing cooperatives may be treated as an "infant industry." It will take time for small farmers to create viable organizations that will have to operate in unfamiliar ways—sell to or procure from distant markets advantageously, handle large sums of money, etc. Full-time traders have specialized in these activities. Where such an "infant" shows promise of eventual viability (and social value) it may be brought to life and given some protective devices in the early stages. But it will also need discipline and stimulus if it is ever to prove itself outside the "nursery," i.e., to work

efficiently and venture outside its privileged sphere of operations. The continuing presence of alternative marketing channels can contribute to such efficiency so long as the outside competition is not overwhelming, nor yet negligible. In time, the protective devices can be discarded. Sooner or later the farmers' cooperative should stand or fall as a business organization, eliciting the loyalty of its members by the service it gives them. This standard of judgment does not imply hostility to cooperatives; rather, it points to the great importance of their acquiring the skills of marketing as the best cooperatives have done.

*Conclusions*

While this chapter has highlighted rather than completed a survey of marketing considerations, it has served to indicate some areas that merit attention or experimental innovation.

1. Marketing infrastructure can have a very important influence on farm production and incomes, particularly feeder roads, storage facilities, and retail channels for agricultural inputs (and sometimes consumer goods). Investments in these may overcome bottlenecks that could impede the viability of output-oriented credit programs.

2. Credits to marketing organizations can contribute to farm production and profitability; these may be considered as supplementary channels, or as possible substitutes, for the credits to farmers. Innovative methods of stimulation to input suppliers should also be considered in conjunction with other means of promoting agricultural innovation.

3. Support for farmers' storage of crops by relaxation of repayment timing and by loans for building local storage facilities may be given sympathetic consideration.

4. Marketing organizations designed to improve the bargaining position of small farmers, such as cooperatives, should be administered so as to maximize their service to farmers rather than given unconditional protection.

5. The effective demand for increased supplies of farm products should be estimated when their output is to be promoted.

6. The possible contributions from controlled prices for crops and inputs, and some of the attendant hazards, were discussed summarily. Further consideration will be given to these techniques in the chapter on subsidies, which will go into the conditions for their justification.

*NOTES*

[1]Robert Muscat, *Development Strategy in Thailand* (New York: Praeger Publishers, 1966).

# 14 *Farmers' Organizations*

In this chapter we will consider the pros and cons of farmers' organizations in conjunction with credit programs. Most such organizations are called cooperatives, but we will not be limited here to organizations which are so designated by any strict definition of the term. The matter of definition is important in the eyes of some who are associated with the cooperative movement, and who feel that faithful adherence to the traditional principles of operation which would qualify a farmers' organization to be so designated is what makes for success. Most people working today in developing countries, however, do not hold to this strict ideology based on experience in Western countries. It is nevertheless useful to begin with a brief account of the background to this question.

Starting in the mid-19th century in Western Europe, and later in North America and Australasia, cooperatives have been private, self-help organizations. Whether organized by farmers or urban residents, usually in the lower or middle—not the lowest—ranks in society, they have been started by groups who wanted to join forces to protect their particular interests in the face of what they saw as adverse conditions in the surrounding private markets. While they had to run a business-like operation in competition with others, cooperatives differed from the usual business firm in that: capital was contributed in equal shares by all members, who would each have one vote in running the organization; policy

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The largest contributor to this chapter was Thomas Carroll of the Inter-American Development Bank, whose Spring Review paper served as the basis for the section describing how the advantages of group lending may be obtained. Also contributory were papers by Edgar L. Owens and Charles Antholt of AID, and by Jack Dublin of AID who was in addition an active participant in workshop discussions of cooperatives. So also were Joseph Beausoleil of the Cooperative League of the U.S.A. and Percy Avrams of AID, the latter on the structure of cooperative organizations. Materials on the Comilla program were contributed by Akhter Hamid Khan and others at the Spring Review conference, and in papers by M. Solaiman and Azizul Huq of Bangladesh and by Joseph Stepanek and Desaix Myers of AID.

makers were elected and major policies decided by member voting; profits were distributed either in proportion to purchases (consumer coops) or as a return on membership shares. As cooperative activities spread to nearby groups, cooperative federations were formed to supply the primary cooperatives with joint services, operating with the same principles as their member units. This conception of a tightly operating group following strict democratic principles, highly effective in producing solidarity in a struggle to assert the group's interest in a hostile environment, became diffused as the scale and complexity of their operations increased with success. But the ideology has remained a significant influence on the now widespread and often multi-million dollar activities of cooperatives in many Western countries, even if the spirit or letter of these principles is somewhat variable in practice.

In other parts of the world cooperatives have been initiated with this initially Western image in mind. In the process, the deviations from "principle" became even greater. For one thing, these organizations were in many cases sponsored by Westerners—outsiders to the groups whose self-interest was to be asserted. In colonial times—especially in British colonies—this was a Western-based government; in postwar years it would usually be national governments responding to Western advisers or ideas; in other cases Western-based churches or foundations started cooperatives, both before and after political independence. In such circumstances the independent self-help element would take on a very different coloration: irrespective of the sincerity of the sponsor's desire to help, cooperative members could not but sense that something was done for them from above rather than something they themselves did to fight back against their environment. The injection of sponsor's purposes inevitably affected performance. Thus, the results of cooperative organization have been and will be different from those found in Western experience, so that a pragmatic, non-ideological approach is called for.

In addition to farmers' groups organized on Western-style cooperative lines, there are indigenous organizations of farmers (and others) that have much in common with cooperatives but owe nothing to Western inspiration. The farmers' associations of Japan, extended to Korea and Taiwan, are the most important of these. In general, the role of governments vis-à-vis farmers' organizations, whatever their form, is considerably more active and almost certainly more necessary in today's developing countries than in the West. Their methods of internal operation may or may not conform to Western democratic tradition; diverse cultural adaptations must be expected if such organizations are to survive and flourish in a variety of settings. In this chapter the word cooperative will be used very loosely as a shorthand for farmers' groups with the following characteristics.

We are concerned here with farmers' organizations having certain economic functions, excluding those that are largely social or that merely engage in savings for non-productive activity. These functions would include the handling of credits, and they may also include the marketing of crops, purchase of inputs, and joint use or ownership of particular productive facilities. We will not take up the special problem of production cooperatives where land and other means of production are jointly owned (as opposed to joint ownership of one or two items like a tractor, or to joint cultivation of individually owned land). And we will be speaking principally of "formal" organizations which can deal with credit institutions; however informal in origin, they should at least have a poten-

tial for assuming the responsibility of handling loans.

*Summary of Experience*

The global experience in the promotion of rural cooperatives in developing countries has been mixed. There have been a very few successes on a national scale; and a number of pilot projects have been successful, of which some have shown the capability for replication in several regions of a country. In a large number of cases cooperatives continue to exist but produce much less than was expected of them; many of these have been largely taken over by a few rich villagers for their own purposes. Still other cooperatives have clearly failed and ceased to operate. Granted that different standards of judgment will be applied by different observers, the following scorecard may be useful in organizing discussion.

The most generally recognized successes on a national scale are those in Taiwan and South Korea. Many would include the cooperatives of Egypt in this category. In all three countries these cooperatives were a result of strong and continued government promotion, conditioned by land reforms which had produced a predominance of small farms in the vicinity of one hectare each. If the experience of Israel is thought relevant to developing countries, this country could also be listed as a national success story. Of the regional successes, the most interesting in terms of method—though not free of problems—would be the Comilla program in Bangladesh. Other regional successes would include cooperatives in the Punjab and some other parts of India; the *Cotia* organization of Japanese settlers in Brazil; and possibly the organizations of private farmers in Yugoslavia (the usual farm organizations in the communist countries will not be considered here). Cooperatives in Sri Lanka, and those in Uganda, can be described as having had success in some respects and not others, and on a wide national scale. Then there are successful individual projects in a number of countries, too numerous to list. Many of the latter have owed much to the outstanding personal qualities of an individual organizer, and could not be widely replicated with the same level of effectiveness.

This list of successes is hardly definitive; there are other cases which persons acquainted with particular areas would wish to include on their lists. Cooperatives in Ecuador, for example, struggling against difficult odds in a limited number of communities, have displayed some hopeful qualities. Some people have hopes for the Tanzanian experiments; and so on. Nevertheless, a great many of the efforts to promote cooperatives all over the developing world have ended in mediocrity or failure in terms of meeting the objectives of their formation. In the three major countries of the Indian subcontinent for example, where cooperative promotion has been especially extensive, there are thousands of local societies and affiliated organizations whose operations could hardly be described as models worthy of emulation. In most countries of Asia, Africa and Latin America the usual picture is one of low levels of performance with some islands of superiority or partial achievement. During the 1950s there was a considerable interest in development assistance agencies in the promotion of cooperatives as a significant means of attaining rural development in low income countries. But during the 1960s, as experiences accumulated, many became disillusioned. Today, those who continue actively to advocate their promotion are probably a minority, though there may now be a new trend favorable to the idea.

Why should this be so? Expectations were of course too great to be realistic. Was this because of a weakness in the general idea of cooperatives, or because the methods employed were too often inappropriate, or insufficiently attended to? Or, as the true believers would contend, is it that cooperatives simply take a long time to achieve their organic growth so that fast and tidy results should never be anticipated? Or is it a matter of making more careful distinctions among the purposes to be served, and the criteria by which success is judged?

*Obstacles to the Successful Promotion of Cooperatives*

Purposes are clearly important in assessing the results of cooperative promotion, and the purposes of national governments in this endeavor cannot be identified with those of the early non-official founders of coops in England or Scandinavia. Two types of public purpose may be noted: on the one hand, a nationalistic and highly political purpose; and on the other hand, a concern with the uplift of underprivileged sectors or areas—a purpose which is also quite political as well as economic. The two will often be intertwined, but they may be distinguished for discussion as they can lead in different directions. It would be a mistake to ignore political purposes, or treat them as a mere intrusion on the cooperative movement. Cooperatives may be analyzed by economists as economic institutions, which they are, but they could not be brought into existence, still less flourish, without some kind of political support or facilitation.

The nationalistic purpose may be described as "nation building," that is, an effort toward mobilization of national strength by government leaders. National unity in the face of divisive ethnic or tribal groupings, "modernization" of a backward society, and a vehicle for political leaders to reach rural inhabitants are important needs felt by governments. Farmer cooperative organizations were started in many places to serve such political purposes, and the use of these bodies as a vehicle for credit is consistent with a political aim. Economic development was thought to be enhanced, though it was not a central objective in many cases. But without a persistent concern for economic viability and agricultural contribution, the cooperatives could too easily drift into an easy acceptance of what became in extreme cases little more than political handouts of money, once the nation-building impetus had relaxed and the competition of political groups arose. Within the cooperative membership the old patron-client relationships would reassert themselves in the new setting, with prominent persons dominating the local society and obtaining most of the credits. This process would produce the familiar economic weaknesses: undermining of loan repayment obligations, loan allocation with little regard to productive performance, in-group privilege emphasized over service to a wider group or any notion of growth and village improvement. Such are the qualities of a number of cooperative societies in India, for example, and—though oversimplified—this description applies to many cooperative movements.

This kind of result accounts for the prevailing hostility of economists and others to what they see as "political interference" with proper cooperative functioning. It should be remembered, however, that the cooperatives have been promoted with political purposes in view quite as much as the purely economic aims. The evolution described above could be regarded as having served in some degree nationalistic aims such as national unity and the consolidation of political

channels to the countryside. However, the settling into a static patron-client pattern could also be seen as a deterioration by the more idealistic nation-builders who had a more dynamic outcome in mind. So we may next consider the results of a more reformist kind of political impetus—the uplift of backward groups. Here the purpose would be closer to the Western self-help idea, and also closer to but not identical with what the economist would hope to accomplish. Cooperatives formed for this purpose have often been given special privileges to enable their underprivileged membership to compete on favorable terms in the market: low interest loans, with rules to bring about allocation to favored groups; monopolistic rights to supply inputs at low prices, and to market members' produce; special cooperative banks and supply organizations having monopolistic rights; etc. As noted earlier, such "infant industry" arrangements can bring into being activities that would not otherwise exist, but which have a tendency to be inefficient and to be unable to expand beyond their privileged sphere. In time vested interests can grow up within this sphere, and become as resistant to dynamic growth as outside vested interests. Intra-group patron-client relations may come to resemble those found where the initial uplift motive for cooperative promotion was absent, and in other respects the political function of cooperatives could fall into familiar non-dynamic patterns.

Would the interest of the underprivileged group have, nevertheless, been served? In political terms this is possible: they may have acquired a voice and a claim to attention that would otherwise be lacking—at least, the cooperatives could have made some contribution to this result. But frequently the potency of cooperatives of poor farmers to assert group interests will be limited, due to the strength of political-cum-landholding/commercial groups on the outside (or inside the membership), and the inability of local cooperative officials to stand up to them when the central government is indifferent. The Spring Review paper by Carl Gotsch describes this situation in Pakistan, for example (Vol. XX, p. 79). In economic terms the result is also questionable: inefficiencies may be justifiable under the protection of infant industry arrangements if these do not last too long, but they tend to be kept on indefinitely. In both the political and economic spheres some measure of success is possible, but is far from assured; much will depend on the strength of the forces arrayed against the efforts of the cooperative members to assert themselves.,

The discussion so far has relied on conventional political or economic criteria for success from the standpoint of national interest. This raises a problem of values relating to the use of public funds for the promotion of essentially private organizations. The problem is that cooperatives, whether in Western or in developing countries, are traditionally supposed to advance the interest of their member groups. In these terms, success means doing well what their members most want them to do, whether or not this coincides with what governments (or readers of this book) may wish to see happen. Cooperatives which are called failures or mediocrities in the preceding paragraphs could well be highly successful in the eyes of their members. Nevertheless, public standards need to be applied in the allocation of public funds, and in cooperative promotion there is an element of chance. A strong cooperative, for example, may be "successful" in obtaining loan funds and other benefits for its members; but these members may not be the best farmers, or make more productive uses of these resources than would other farmers who are less well organized. Ideally there should be a nationwide,

all-inclusive network of farmer cooperatives, competing for resources on the basis of productivity. But this is very rare, and it takes years to organize even a substantial portion of a country's farmers. Obviously some groups will be helped ahead of others, with sub-optimal results—but this is true of many other forms of public endeavor.

Aside from the politically related obstacles to cooperative success, however defined, there are formidable difficulties to be overcome in the sheer management of such organizations. Skills are required that are unfamiliar to small farmers: bookkeeping and accounting methods, knowledge of distant and often volatile markets, technical knowledge, ability to plan, judgments of creditworthiness and of how to deal with delinquencies, not to mention the skills of managing organizations composed of members who may be faction-ridden, distrustful, potentially dishonest, or just indifferent, ignorant, and set in their ways. Good managers are usually hard to find; and when a good one is developed—with perhaps some training—he may well develop a concurrent ambition to leave his village for wider opportunities elsewhere. These are stubborn and universal problems for any kind of cooperative promotion, however realistic and modest its purposes. Good management is necessary for achieving political as well as economic objectives.

*The Case for Cooperative Organization of Small Farmers*

These difficulties and pitfalls must be borne in mind when considering the potential that cooperatives can offer in rural development. As a minimum, it must be conceded that cooperatives take considerable time to grow into organizations that could be considered successful by any criterion. This is certainly true of large-scale cooperative movements. Particular projects can sometimes show surprisingly fast results under the influence of forceful personalities, but as these projects are duplicated the results become diluted; and sometimes the initially good performance in the pilot project falls off after the strong personality leaves. For this reason alone the cooperatives must be regarded as long-term investments which, at best, are likely to be less directly productive than some other investments in a short-run comparison. But if the skills and experiences embodied in cooperative management, however long the learning period, are those which the rural populations will need in any event if they are to develop, then the cooperative promotion may be viewed as a program in adult education. From this perspective, the productive results of a cooperative program should be compared with those arising from investments in building schools and training teachers, rather than with investments in directly productive activities like fertilizer factories. In such a comparison, the cooperative-promoting investments may well appear more productive—even in the short run—and more pertinent to rural advancement than those in the traditional formal education of children and youths, many of whom will be induced by their degrees to leave the countryside.

This approach raises more questions than can be dealt with adequately here. A poorly functioning cooperative may be a weak, even misdirected form of education. Cooperatives that lose money, give cheap loans chiefly to a few rich men who repay badly, convey no technical information, and market crops ineffectually may provide more bad experiences than good ones. It may be argued that these could nevertheless supply a kind of education in self-help, of a sort that will bear fruit one day when the evolution of external conditions allows the

cooperative to become more effective. This line of thought is conjectural: readers may draw their own conclusions as to whether the installation of a network of farmers' organizations of a variable quality would supply a nation with an asset that will be likely to have a future pay-off.

The positive view of the matter is that cooperatives can provide a better channel for conveying new technology when it becomes available, along with more economical credit management, than would be possible dealing with scattered farmers individually. In addition, if a strong training program for cooperative managers is undertaken the skills imparted to trainees will be useful ones, even under conditions that may be frustrating in the short run to the individuals concerned; one cannot be certain how and when the skills will be used (as with schooling). Beyond these considerations, which might (with difficulty) be expressed in cost/benefit calculus, there are non-measurable social benefits which many observers find in the stronger organization of farm communities for a wide variety of purposes, in the development of rural leadership that would not otherwise emerge, etc. Other observers, thinking of development in more individualistic terms, may be skeptical of such social values and perhaps find an impediment in "premature" organizations that are inefficient in the market and might obstruct progress.

Leaving aside these larger issues, involving basic questions of how society is or should be organized, the case for small farmer cooperatives may be centered on their value in agricultural credit operations—in short, the virtues of *group lending.* Most of the points have been mentioned earlier: economies of scale in loan administration and supervision; intra-group sanctions to improve repayments; a means of mobilizing savings; and the extended capability of a credit agency for reaching small farmers, so that institutional credits need not be focussed on the larger farmers. A further potential gain would be economies and improved service in technical assistance. All these are clearly desirable: in what follows, we will consider how, and in what conditions, these advantages can best be obtained.

*Obtaining the Advantages from Group Lending*

*Homogeneity and social cohesion.* Homogeneity of the members of a credit group is an important factor for the group's success. Generally, a group functions better when the members have relatively equal land holdings, and similar tenure status, than when the group is comprised of very large and very small farmers. When the members have similar income and ownership status they tend to distribute the loans more equitably among themselves. If the gap between members is too large, loans may go disproportionately to the wealthier individuals. The success stories mentioned above in Taiwan, South Korea, Egypt, Sri Lanka and Uganda are found where large landholdings are absent or few. The opposite is true in Pakistan and parts of India, where cooperative leadership and management reportedly tends to fall into the hands of the larger farmers, and where land ownership is an important criterion for extending credit to members (Pakistan—Mahmoud Ali Khan and Dilawar Ali Khan; India—Abraham). Many of the failures of Latin American cooperatives can be ascribed to the domination of larger land owners. Operationally, this means that little may be accomplished by promoting group credit programs in situations where fundamental land reforms are needed.

Taiwan has dealt with rural heterogeneity, as noted earlier, by allowing non-

farmers to become "associate members" of the Farmers' Associations. These non-homogeneous organizations appear to function well because of the mutual interdependence of the two groups: the farmers are more interested in taking out credit (2/3 of the loans), the non-farmers in receiving interest on their savings (2/3 of the deposits). The associate members are prevented from dominating policy by having no votes. This device may be of interest in other countries as a means of getting disparate groups to work together.

A basic requirement for economic success among cooperatives is social cohesion, which may be produced by religious, racial, patriotic or ideological influences. In some cases, farmers' associations have been based on ethnic groups to promote unity. Many of the most successful cooperative groups have been those with very distinct religious, immigrant, or politically radical characteristics; solidarity is reinforced by their difference from the surrounding community. The effect of group pressure is heightened, members feel motivated to follow the group's plans and respond to social sanctions to repay loans. The large Brazilian coop, *Cotia,* was formed by Japanese immigrants, whose cultural homogeneity has been a powerful unifying force despite the range of farm size within the membership. Social cohesion also reduces corruption, as in Bangladesh (Myers) or Taiwan (Adams *et al.*). Reliance on the tribal ties of small villages explains the success of some African attempts to organize groups, as in Uganda (Frederickson) or Tanzania.[1]

*Financial responsibility and group solidarity.* As noted earlier, one of the advantages of a joint credit system is that it relies on the group, rather than on the individual farmer, to meet the provisions of the loan and to make certain that it is repaid. The group decides who is creditworthy and what form of collateral is required. The internal cohesion and solidarity of the group then determines the degree of social pressure among members for proper implementation and repayment. If the credit society is newly formed or without real cohesion, the availability of group loans and the need to develop group practices and responsibility for handling credits may itself gradually contribute to solidarity. Most strong credit groups, however, are based on well-developed relations of mutual aid and cohesion which have existed before the credit program was begun.

To illustrate: among the countries studied for the Spring Review, such group responsibility for credit operates well in Bangladesh and Uganda, although the provisions for lending have been different. The credit cooperatives in Comilla, Bangladesh, operate on a uniform system that allows any farmer who deposits some savings in his local society to borrow up to five times the amount of his combined share and savings deposits, with his plot of land taken as collateral. Group solidarity is reinforced by weekly meetings, and by the practice of extending more credit to those who attend more meetings. Also, the local group is held accountable for loan defaults; this is enforced by withholding funds from defaulting societies. In this way, the loan structure develops or reinforces group solidarity and responsibility (Myers).

In Uganda, credit is extended to farmers who have been active members of cooperative marketing societies for at least three years. The committee of each society decides whether a member is worthy of receiving a loan, and takes as a form of collateral a bond that authorizes the society to deduct the loan and any accrued interest from the proceeds of sale of his produce. In addition, two other members must pledge that they will repay the loan to the society if the borrower

defaults. In this way, the structure of loans forces members of the groups to be responsible for each other (Frederickson).

In contrast, credit groups in India and Ecuador often have not been able to mobilize such solidarity. In India, the requirements for pledging land as collateral have favored the wealthier farmers and reinforced the unequal land tenure pattern. Little group cohesion has developed because the cooperatives were imposed by the government on a highly stratified and often factional village structure (Abraham). In Ecuador, joint responsibility of credit unions has suffered from individualistic practices encouraged by the prevailing local power structure (Keeler). On the other hand, even these latter groups exerted a certain moral pressure on defaulting members.

In cases where little or no group solidarity exists, the sudden imposition of group responsibility for loans may have a negative effect on the farmers' willingness to participate in credit allocation or to be part of a structure in which one individual becomes liable for the default of others. Recent evidence from Peru's reformed coastal sugar estates indicates that ex-plantation workers resent such responsibility, conceived as a hindrance to each individual's progress.[2] In such cases, credit may be extended through the cooperatives on an individual basis until greater solidarity exists. In the Northeast Brazilian tobacco cooperative, *Treze,* credit was first extended to each farm on a crop-loan basis; positive experience with this system has resulted in members' willingness to eventually pool their savings to help purchase equipment for all to use and to assume collective debt for these purchases.[3]

In some rural societies where groups with economic responsibility already exist or are developing, it is possible to reinforce their solidarity through provisions for extending credit, collecting savings, and other financial services. In others, there may be cultural reasons why social sanctions necessary for the functioning of group credit would not be appropriate or acceptable. While it is difficult for governments to create new social cohesion in small groups, the maintenance and survival of these forces of solidarity are profoundly influenced by the prevailing government policies. A favorable official atmosphere can be most valuable to a group credit program, especially in the initial stages of experimentation and search for economic viability. If such overall support is prematurely withdrawn, as in the case of the Mexican collective *ejido* societies, even very promising traits of internal solidarity can be destroyed by external forces.[4]

Group sanctions, however, cannot be regarded as a panacea for curing default and delinquency problems, as was pointed out in the chapter on defaults. The evidence on delinquency indicated in the data of Table 11—which was far from exhaustive in its coverage—shows that a number of small farmer programs relying on cooperative credit have had relatively poor repayment records, while others did well. For group sanctions to produce the good results that they have in the successful instances requires not only solidarity within the group, which seems to be present in some of the high-delinquency groups, but an attitude on the part of group members and their leaders that will support the purposes and operations of their credit program. Many factors enter into such attitudes, of which one may be mentioned.

Experience suggests that group sanctions will work better when members have some equity in a credit program, and their own money is being risked

along with outside loan funds. As noted earlier, cooperative groups handling credit function better when members are required to deposit some savings as part of the working capital. Members thus feel responsibility for the success of the entire group venture and tend to be more interested in the use of funds. The wheat program in Bolivia is an interesting example. Although the program as a whole was not profitable, there was a very low default rate on loans; this was attributed partly to the forced savings of each participant and the resulting commitment to the cooperative (Royden).

*Structure of a cooperative movement.* The operation of local cooperative societies in isolation is necessarily limited. The village-level units have great difficulty remaining solvent, and there are many desirable activities requiring a minimum scale for efficiency. These activities, and some aspects of the operation of village societies, require a level of management expertise which is not always to be found in each village. These considerations point to the establishment of larger units which would necessarily include a substantial number of villages. However, such a unit would be unable to maintain the close, intimate relations with farmers and the social cohesion that are an important strength of the cooperative movement; while a village society could become a self-help organization, the more distant large unit would be acting on the farmers from above. The solution is to form village societies affiliated to larger units, with representatives of each village group participating in the wider organization. The conditions affecting relative sizes of units will of course vary from one area to another, but the following general estimates suggested by Percy Avrams at the Manila workshop are a useful benchmark based on experience.

The lowest level—primary cooperative, or village society—should have about 500-1000 members. In some areas this would mean combining several nearby villages; not all local farmers will join (and villages may be variously defined). The second level unit should probably have at least ten primary societies, and 20 would be preferable; if the activities to be undertaken are more elaborate, still more may be desirable. These units may be called branches; they would correspond to a political unit like a township—one intermediate between the lowest form of local government (village or hamlet) and the county or district level. Branches would have a few (sometimes more) full-time salaried employees, while the local unit would need at most one employee, perhaps part-time or volunteer in the early stages at least. Marketing, technical assistance, input procurement, and financial supervision would be important branch functions; others, as appropriate, would be irrigation facilities, repair shops, etc. Local groups would be responsible for loan allocation (if delegated by the credit agency) and joint repayment obligations, and such planning of village projects as was needed. These suggestions are not guidelines for all circumstances but an indicative description only; marketing and storage may often be more suitably managed by the primary unit, for example. In South Korea, the official policy shifted toward favoring the branch or township organization as the smallest local unit by abolishing village units; but this policy is thought to have reduced access and responsiveness to the problems of the ordinary farmer (Morrow and White).

Generally speaking, cooperative movements start on a modest scale and grow larger, not only in numbers of members but in the elaboration of the activities they can undertake as their skills, experience and financial resources increase. Thus, organizational requirements change through time. This is true for local

and branch levels, and also for whatever activities and organizational forms are attempted at county, provincial, regional or national levels. Certainly there ought to be some kind of national federation to deal with government and exercise overall supervision; but it is probably best not to begin with an elaborate, costly national organization before the movement has attained strength at the local levels. The need for intermediate units between the branches and the national federation depends partly on the size of the country and its farming population, partly on the extent to which supporting services from a regional level are practicable. India, for obvious reasons, has the most elaborate network of specialized cooperative banks at two levels, warehouses and supply organizations, etc. Taiwan, with a smaller but highly organized farm population, provides a variety of services at the intermediate level along with rather extensive technical and managerial staff employed by the township branches.

*Leadership.* Leadership and management at the national and local levels are key elements in success. Experience shows that there is an extremely delicate relationship between the success of local credit groups and the role of their government, especially when they are part of a broader cooperative movement. While government leadership and support are essential in many spheres, excessive dependence on government is detrimental. Innumerable case studies testify that the development of a healthy group credit structure has been frustrated by political interference, institutionalized corruption, and the instability of the political environment. There are, of course, isolated success stories based on independence and the invigorating experience of local self-help. But no really significant group credit movement has prospered anywhere without active government support. The strategy dilemma, therefore, is to achieve the needed support without too much dependence. Some kind of decentralized structure is needed in which the self-reliance of local groups is nurtured and protected.

Under most situations in the developing world it is unlikely that group arrangements for poor peasants can be widely organized without some kind of economic assistance, and some degree of guidance and outside control in the initial phases of economically feeble associations. The countries which have developed the strongest national networks of cooperatives—Japan, Taiwan, Korea, Egypt—all benefited from strong government support on behalf of small farmers. Such public support created an opening wedge for small farmers' associations in the modernization process, and then sustained their new role. Later, however, as cooperative groups in these countries acquired experience and power, the government gradually withdrew from its primary role. The government can thus, at later stages of cooperative development, assume more of a support function rather than actual control.[5] It is interesting to note that, regardless of the original direction in which groups have been promoted (from "above" or from "below"), there seems to be a tendency for convergence as a system matures. The locally initiated groups soon require second-level and national support institutions as linkages into the national power hierarchy; while those created by initially central direction sooner or later tend to acquire more local autonomy and responsibility, as the experience of even some of the communist countries demonstrates.

Turning to local leadership, the group leaders must assume a host of unfamiliar roles: arrange for timely credit supply, supervise its distribution,

coordinate the other services—purchasing, marketing, extension—and see that loan conditions are met and repayment made. Managerial incompetence and lack of motivation can severely hurt an otherwise well-planned national or regional program. Progress of DAPC in Ecuador, for example, was severely limited by the program's dependence on group managers, too many of whom were indifferent, poorly trained and overburdened by too many functions (Keeler). Special training programs in administration and accounting for group leaders have become a feature of all successful group credit schemes.

In addition, leaders must carry out promotional and educational tasks—interesting the members in cooperative organization, and teaching them how to use credit in conjunction with other services. It now seems that a functional specialization of leadership, separating the promotional from the managerial tasks, may be a prerequisite for success. In successful groups, such as the Comilla and Uganda credit societies, the local leaders coordinate only the provision and repayment of credit; Latin American experience also underscores the need to separate functions. Elected village leaders should not be pressed into administrative tasks better performed by trained people at the branch level. On the other hand, local leaders have proved to be exceptionally able to make proper decisions on creditworthiness of individual members and to promote wise use of credit by the group.[6] In general, groups seem to operate best when the local management does not have to administer too many different programs, and when strong second level organizations supervise and support the primary group's activities.

Honest and accountable management takes time to develop, and standards are not the highest in many countries. Where the manager is paid by an outside organization, he is often not held accountable to the group's members or motivated to work on their behalf. Clearly, the salaries of managers, or an increasing part of them, should be paid by the members of the group, and they should receive incentives (e.g., a percentage of the profit) to work on their behalf. However, it may be difficult for new cooperatives to afford the payment of such salaries. In Uganda the government subsidizes the salaries of the secretary/managers for the first three years of operation (Frederickson). Corruption is checked to some extent by making loans in kind and collecting repayment at marketing points. While evidence is scarce, it appears plausible that group credit schemes provide reduced scope for corruption compared to individually managed credits.

*Combining credit with marketing.* One generalization that could be inferred from the Spring Review country experiences is that the credit and marketing functions should be tied together for the successful functioning of farmers' credit groups. When the association through which credit is channeled also has control over marketing, the collection of repayments becomes much easier. On the other hand, if secure marketing channels are not available, the whole purpose of small-farm credit may be defeated. Small farmer groups with access to credit reportedly failed because they could not get access to market outlets in India and Ecuador. In its early stages, the Chilean INDAP program was frustrated by the resistance of private processors and distributors of animal feed and meat products (Nisbet). In Bolivia, the credit program for rice with assured market outlets worked well, but the wheat program failed because the flour millers did not buy up the crop as they had promised (Royden).

It should be noted, however, that in some instances it is thought that the marketing and credit functions should be separated. This idea arises when inefficient credit operations are seen as a threat to an efficiently functioning marketing cooperative, for example in the Kaira union milk cooperatives of Gujarat, India.[7] CECORA, an umbrella cooperative for farmer groups formed under the agrarian reform program in Colombia, now concentrates on supply and marketing, leaving credit to the banking system. The Philippine government is considering such a separation for its cooperatives. On the other hand, if the focus of one's interest is the success of a credit operation rather than marketing per se, then the case for combining the two is stronger.

The failure of group credit arrangements often prompts subsequent expansion into the marketing function, as in post-reform Egypt, where the old weak credit coops were transformed into more successful multi-purpose groups with marketing as the key element. In Turkey, credit society members are now compelled to join marketing societies whenever the members produce crops for which such societies exist (Stickley and Santana). The Uganda scheme represents a successful system in which a monopoly tie-in with marketing exists: all transport and processing of cotton and coffee is done through cooperative unions which get their raw materials from the primary producer societies. Repayment of credit loans can therefore be "deducted at the source" when such societies deliver their joint produce to the processors. Processing unions, in turn, sell to Government Marketing Boards. In such a system, not only are collections simpler, but the capitalization of the basic credit groups is assured through buying commissions and patronage refunds from the unions (Frederickson). Successful examples of integrating marketing and credit are also reported in situations in which state or private processors extended assistance through their client groups, as was the case of the Nigerian Tobacco Company (Goodman).

Some expert opinion points to the wisdom of combining credit not only with crop marketing but with input supply as well. This idea is implemented through cooperative bulk purchasing and retail distribution systems. One great advantage seems to be to facilitate granting credit in kind rather than in cash, a practice many experts endorse. In a highly integrated marketing credit system the higher level cooperative organization can offer important advantages of economies of scale. For example, neither individual farmer nor single cooperatives are able to undertake or finance product testing and promotional activities on the scale needed to open new markets, particularly for specialty exports. Credit, then, becomes relevant in two ways: to support the overall needs of the higher level groups for research, development, processing, packing equipment, etc., and to finance the production of individual members once the scheme is under way.[8] The most permanently effective interaction of the capital and market functions can be observed in multi-purpose groups in Israel, Yugoslavia, and Mexico and in the fully integrated commercial cooperatives of *Cotia,* Brazil.

*Technical services.* With respect to the technical assistance component of credit programs, cooperatives have the advantage of an intimate knowledge of their members' characters and circumstances, as well as the local production possibilities. They can reduce the number of contact points between the agricultural extension agent and the farmers, and help him to gain the confidence of small farmers. Under supervised credit programs, staff experts from the lending institutions can work closely with group leaders and cooperative

managers in formulating the borrowers' credit needs and helping them to acquire technical assistance. This approach is particularly useful in dealing with large groups of poor farmers with limited education and managerial experience. It is a form of participatory education which is expensive in staff time, but less so than would be the provision of equivalent instruction and supervision to individual farmers separately.

Technical assistance in credit cooperatives seems to work well in Uganda (Frederickson). The Assistant Agricultural Officer (Credit) meets with the credit society committee and establishes a complete loan package plan for individual members. Supervision is carried out by the committee of the credit society with only spot checks by the Assistant Agricultural Officer, who is thus able to cover more groups. While this is a very efficient system, its operation depends on the ability of the society committee to perform technical supervision and cannot, therefore, be generalized.

*Traditional values as a base for modern credit institutions.* There has been a great deal of speculation and scholarly work on the possible value of traditional communal arrangements as a base for modern cooperative forms of economic organization. Some feel that such communal systems offer favorable conditions for the introduction of modern cooperative organizational forms, such as credit societies. This was, for example, part of the rationale for the Mexican *ejidos*. Some of the proponents of "African Socialism" have in mind a comparable modernized adaptation of tribal farming and land management. Others, however, think that traditional rural institutions are not appropriate bases for modern market-oriented cooperation. There is little historical evidence that such institutions can be directly converted into modern cooperative enterprises. Many of the traditional communities are not egalitarian or solidaristic: they often have a highly authoritarian structure, and/or traditional feuds or factional divisions, which militate against any kind of group development. Even when traditional communities are cohesive and egalitarian it is difficult for them to take on the formal institutions believed necessary for modern cooperation, such as national auditing and control over managers, without destroying the bonds of mutual trust which are the essence of their functioning.

Nevertheless, it is possible that many traditional features of mutual help, even in money matters, can work to the advantage of the modern cooperative promoters. Indeed, some of the most successful experiences with credit cooperatives like those in Taiwan and South Korea may owe much to earlier forms of social cooperation at the village level. These possibilities indicate the need to design culturally compatible systems, rather than to impose alien models of social organization. The evidence suggests that once the initial difficulties of transition from traditional to modern institutions have been overcome, those new structures which have had a firmer base in traditional arrangements will emerge stronger and more efficient than those imposed on a basis of completely alien concepts.

*To summarize:* the case for organizing small farmers into formal groups as a means of making credit and rural development programs more effective is strong. In the early stages of development, in the transition from subsistence agriculture, informal ad hoc groups may work as well or better. Even at later stages of commercial agriculture when more formal organizations are needed, it is possible to extend credit through simple loan receiving/repayment groups

with no other functions, as in the BNDA program of the Ivory Coast. But farmers can be well served by organizations that take on other functions, of which the multipurpose cooperative is an advanced, sophisticated form. Other types of groups, however, have performed very well in a number of circumstances. It is not necessary in all cases to have farmer groups specialize in handling credit; as long as the marketing, supply, and technical advisory functions can be effectively handled by coops or other groups, credit may be channeled directly to farmers through an appropriate banking system if it is "tuned in" to small farmer lending. Thus, many variations are possible, and useful in various conditions. The apparent dichotomy between a cooperative approach and a banking approach to small farmer credit seems to be a false one. Banks and farmer organizations may instead be complementary: both parties will need each other to function well. Cooperatives can extend the reach of banks to small farmer communities; and bank credit can greatly assist cooperatives to achieve their purposes.

The potential of group credit in helping the poorer strata of peasantry to gain access to incomes has only begun to be realized. Experience proves that farmers with little land and other assets can be reached, and that their small farms can be made economically viable through such group credit and other assistance. By aggregating services for many small farm units, important practical advantages and economies of scale can be realized. Cooperative supply stores, farmer-owned processing and storage facilities, and group "delivery systems" for technological innovations are examples. In all of these, group credit can play a prominent role. In addition, credit has been successfully used for such group facilities as machinery pools, irrigation installations or collectively operated livestock enterprises. The resulting larger operations in which individual members hold shared interest have a better chance of economic survival than their component units.

The case for cooperatives and group lending must, of course, emphasize the potential that can and should be realized rather than the statistical probability of desirable outcomes based on past experience. But this is less negative than it sounds: if the majority of cooperatives have not been "successes," neither have the majority of credit programs. The "successful" credit programs have usually used some kind of group lending, and there is little basis for arguing that success is more probable without group lending. Therefore if the conditions as noted above are favorable, and the methods used are appropriate, then cooperatives can be recommended.

On the opposite side of this coin: if the conditions are not favorable, should cooperatives then be avoided? One of the conditions mentioned, for example, is relative homogeneity of the farmers to be joined in an association. What if there are large disparities in property and income, or other factors unfavorable to social cohesion? Should one wait until these are changed—by land reform, or whatever—which may be unlikely in the foreseeable future? Should one nevertheless go ahead and organize, hoping for the best at a later date? Or would it be better to attempt the organization of a more homogeneous subdivision of the rural population, an effort that could result in conflict with the others who would perhaps be much stronger? This kind of question cannot be satisfactorily answered here, and it extends far beyond the realm of credit. The only safe conclusion to be drawn is that, to the extent that conditions are

unfavorable in particular areas, the chances for "success" are diminished and the effort required for partial results will be that much greater.

*Appendix: The Comilla Program*

One of the most original efforts to organize cooperatives among poor farmers in a very poor country, Bangladesh, holds special interest for rural development, and some of the methods employed may be of value elsewhere. Akhter Hameed Khan, Director of the Academy for Rural Development in Comilla (then in East Pakistan) was the chief architect. While he received a measure of support and attention from the Ford Foundation and other U.S. groups, his ideas were his own and grew out of experience.

The Comilla Academy for Rural Development was started by the government of Pakistan in 1960 in a reformist and experimental spirit that allowed its Director an unusually free hand to explore new ideas (a similar Academy in West Pakistan evolved quite differently). This combination of freedom with government support has been very rare. As Akhter Hameed saw his task, it was to find ways in which large numbers of farmers on very limited land holdings (one hectare or less) could improve their lot by escaping from their dependence on the few wealthier villagers who combined larger (not very large) land holdings with near monopolies of the local crop marketing plus possession of funds lent at high interest. Over time these men had been accumulating assets while the smaller farmers had been slipping further into debt, leaving ever smaller lands to their children. The latter group constitute the great majority of this overpopulated province (now country) on whom the whole economy depends for food and foreign exchange in the virtual absence of industry or mineral resources. Such conditions are not unknown elsewhere; they are found at an extreme in Bangladesh, with a population of 80 million.

A key element in the Comilla program was the espousal of two important technological changes, the use of irrigation from tubewells and low-lift pumps (from the rivers), and the high yielding rice seeds developed at the International Rice Research Institute in the Philippines. This places Comilla in the small group of credit programs that emphasized technology, which was important as a means of offering small farmers concrete benefits if they could organize to take advantage of them. The nature of the irrigation technology inspired organization. Each tubewell or low lift pump would support 30-50 family farms. Once installed, the division of waters among users, the restraint of those who took too much, and the exclusion of those who failed to contribute to maintenance, required decisions; small councils were formed to make the rules and adjudicate disputes. This kind of requirement is sometimes called "technological compulsion," a concept which may be useful to those who plan for cooperative promotion where the idea is unfamiliar: when a new technology forces decisions to be taken affecting a local group, the decision-making can become a focus for group organization—if that process is not pre-empted by administrative regulations.

The originality of Comilla lies in its organization of unskilled, uneducated people in large numbers, lacking prior experience of self-advancement and distrustful of outsiders, to work together in complex new ways required to achieve results. Many of the devices used have been referred to earlier: at the local level there are weekly meetings, weekly savings deposits, and election

of local officers who attend weekly meetings and get technical instruction at the branch levels (the *thana,* a unit of local government, is the area for branch centers). The activities at the branch centers, which connect the villages with the greater world of finance, technology and government, were carefully designed to combine a responsiveness to localized initiatives, an availability of several kinds of expertise and (within limits) credit, and an independence from the local power of the commercial-moneylending-landowning-politically influential groups. Cooperative branch staff are national government officers, though the local units also contribute money to the branches; such officers provide a channel to higher government levels as needed. It may be added that the *thana* branch centers are also the focus of a variety of non-farmer cooperative groups formed within the same areas.

How can all this be made to work? Clearly it takes a lot of doing, and is as fallible as the people involved. Several elements are important: the discipline required for effectiveness is considerable. It grew out of a slow process of persuasion and education mounted by the Academy staff in the early formative stages, followed by dogged insistence that the schedules for attendance at meetings, money contributions, and relaying of information be maintained and rewarded. Rewards are credit and technology, along with personalized recognition; these are denied in cases of non-conformity. Great reliance is placed on intra-group self discipline and motivation. Another important element is the organization of a very busy schedule for training and orientation sessions, not for all farmers but for their elected representatives and model farmers; the numbers of these people are considerable. The contents of these "courses" are carefully designed by the Academy in sequential units, and altogether cover long periods of time; continuing learning is envisaged. Beyond these mechanical elements relating to local farmer cooperatives are a host of solutions to complex problems at higher organizational levels that cannot be covered here.

By the mid-1960s the system was operating strongly in several *thanas* of Comilla district, not without problems of course but at a high level of effectiveness. In 1967, however, the value of total loans extended was abruptly increased (in line with a national rather than Comilla impetus) with some familiar, unfortunate results: discipline in loan allocation in accordance with farm plans slipped badly, favoring rich farmers; so did the loan repayment record, which had been very good up to then. But in most respects the Comilla cooperatives continued to operate as planned, and were expanded slowly, until their total cessation during the Pakistan civil war in 1971. By mid-1972, as life was returning to normal in Comilla and elsewhere, the Academy staff—minus Akhter Hameed Khan, a West Pakistani—was faced with a number of new problems described by Myers in his Spring Review paper. In the irrigation groups, for example, the pump drivers were acquiring new income and status and offering services with the groups' equipment to richer farmers, no longer working under orders of their groups; other kinds of conflicting interests had surfaced, some revolving around *thana* and branch staff; and growing delinquencies had to be (and apparently were) firmly dealt with.

At the same time the new government of Bangladesh has begun a program for replicating the Comilla model widely throughout the country, an ambitious and (as of the April 1973 Spring Review meeting in Dacca) still somewhat controversial plan of which much is expected. The Academy is faced with a major

challenge in the rapid expansion of its training activities and their possible spread to other training centers. It remains to be seen how much will be lost in a rapid expansion involving many more fallible people who cannot go through the old Comilla growth process involving patient listening to local farmers, persuasion, and evolution of new forms as appropriate. Greater bureaucratic formalism can hardly be avoided: many more orders will be given, fast results will be demanded from Dacca, and politicized controversies over results are inevitable. But the national need is very great, and this phase of the Comilla experiment should be of no less interest than its much studied initial growth.

## *NOTES*

[1]Uma J. Lele, "Role of Credit and Marketing in Economic Development," a paper presented at a conference of the International Economic Association in Bad Godesberg, Germany, 1972.

[2]Douglas Horton, "A Preliminary Study of Agrarian History and Agrarian Reform in Northern Peru," unpublished manuscript, University of Wisconsin, 1973.

[3]Inter-American Development Foundation, Arlington, Virginia. Letters and files concerning *"Cooperativa Mista dos Agricultures do Treze Ltda,"* 1972-73.

[4]Salomon Eckstein, *El Ejido Colectivo en Mexico* (Mexico City: Fondo de Cultura Economica, 1966).

[5]Edgar Owens and Robert d'A. Shaw, *Development Reconsidered* (Lexington, Mass.: Lexington Books, D.C. Heath and Co., 1972).

[6]David Fledderjohn, "Cooperative Dilemma," *International Review of Cooperative Development* (University of Wisconsin, Center for Cooperatives) 5, no. 4 (1973): 5.

[7]E.H. McCauley, unpublished report for the World Bank, 1973.

[8]Medford Alexander, *Investment Policies for Projects in Agricultural Marketing,* Inter-American Development Bank, Papers on Agricultural Development no. 10, Washington, 1973.

# 15 *Agricultural Innovation and Technical Services*

This chapter will consider two main aspects of agricultural technical services; how they should be provided in order to reach small farmers, and how this provision should be related to credit programs. We begin from the premises in Chapter 4: that the adoption of new technology is basic to the purposes of small farmer credit programs; that without new technology a credit program may be of little value to borrowers, and is more likely to encounter repayment difficulties; but that with new technology available, when it is appropriate and profitable to small farmers and requires some capital to use, the absence of credit can be an important bottleneck to the adoption of new practices. We shall take the importance of new technology for granted, and assume that the problems of finding it and testing its appropriateness to small farms and particular areas, and of its actual profitability on such farms, have been dealt with. There remain a number of problems lying between availability of a technology, in the sense that its technical qualities have been tested and are known to a handful of scientists and officials, and its actual adoption by large numbers of small farmers.

*The Need For Technical Services*

In countries where educational levels are high in the rural areas, and where there has been a fairly widespread experience with new technologies that have turned out to be profitable, a great deal of information can be conveyed to the farmers merely by sending out printed bulletins. Farmers can read, and they have learned to value the information conveyed; at least some of them will be ready to try something new; others will observe, and will follow suit if the first

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Principal contributors to this chapter were Ronald Tinnermeier of Colorado State University, on the value of supervision to technological innovation; I.J. Singh of Ohio State University on the relations of credit programs to phases of innovation; and Marvin Miracle of the University of Wisconsin on incentives for extension agents. Spring Review papers on the Comilla program in Bangladesh were also contributory.

innovators seem to be successful. But even in the most educated countries it usually takes more than a printed page to persuade farmers to change their practices and risk their money. Adoption will be faster and less subject to mistakes if farmers are able to talk with someone who can tell them more about the required conditions for applying a new technology, and about the experience and yields found when it was applied. To the extent that a new practice is unfamiliar, farmers may want very specific instructions and demonstration by an expert. When the government or other parties want to speed the adoption of a new practice, the expert will not just respond to farmers but will seek them out and try to persuade them in one way or another. Farmers will, in their own ways, decide how far they can trust what he tells them. These are the basic ingredients of the farmers' relations with technical experts.

*The Expert's Employer*

Most commonly, technical experts are employed by ministries of agriculture in their extension service. Within this framework there are wide variations in the results achieved. Obviously it makes a big difference how well the expert really knows his subject, and his ways of conveying knowledge can be quite as important as the knowledge itself in determining what the farmer actually gets from him. Behind the extension agent's knowledge there may be an elaborate infrastructure of research stations, agricultural colleges, methods of keeping up with foreign research, and perhaps special relationships with governments or universities in aid-giving countries. All this lies outside the discussion here except insofar as it may influence the way in which knowledge is conveyed through the ministry from the centers of expertise to the extension agent at the firing line. When the agricultural teaching and research done in universities is kept in a separate and higher-status sphere and not well communicated to the field agents in the countryside, the "available" technologies may not be truly available to agents, still less to farmers. Also, if recommendations from on high do not work out in the field, this fact and the accompanying circumstances may not be communicated upward to the scientists who might then solve problems of adaptation, but will not do so if these are not presented to them. Such communications and status problems are not uncommon: there are usually several bureaucratic layers between working scientists and working field agents, and incentives to communicate, or indeed mutual respect, may be rather poor along the links of this chain. This can have its results for a farm credit program geared to technological change.

In addition to these problems within the agriculture ministry, there are even more stubborn problems in the relations of the ministry's extension agents with farmers. Cultural gaps between experts and villagers were described in Chapter 6. There are also economic reasons for difficulty: farmers are widely scattered, often in areas that are hard to reach because roads are poor, seasonally precarious, or altogether lacking. The budget for the extension service usually sets limits on the numbers who can be sent to cover given areas and on their transport facilities. Low salaries and status combined with rural residence, distance from bureaucratic power centers, etc., do not attract the most active people among those who possess the educational qualifications; indeed, these factors affect the kind of students who select agricultural studies and become qualified.

To what extent could these difficulties be overcome or reduced by moving these agricultural experts out of the agriculture ministry? If they were to be employed by a farmers' organization—say, a cooperative at branch level or above—they would surely be more attentive to farmers' wishes and needs, certainly to those of their particular employing group. But not many such organizations can pay attractive salaries to sufficient numbers of experts to fill their needs. In Taiwan this is widely done, reportedly with good results; but these farmers' associations are unusually prosperous—due in part to good technical services, to be sure, but to other factors as well. Elsewhere, salaries and jobs are likely to be limited. Nevertheless, to the extent that farmers' organizations can afford to hire their own experts it would be useful for their members if they did so. The weakness of incentives for government agents to work for and with small farmers is one of the major problems; a better motivated employee of a farmers' group might well be able to learn as much and more of what his group needed to know than a government employee, even if the latter were more closely connected to research centers.

Another possibility is that technical services be provided to farmers via experts employed by companies hoping to increase their sales of inputs, or by companies buying the farmers' crop and eager to obtain more of it. The first kind of expert is not uncommon among firms selling inputs to farmers in industrial countries, but he tends to function as a single-purpose salesman of his particular machinery or new chemicals. In a developing country, and where the inputs being sold represent more of an innovation to the farmers, the extent of patient explanation, demonstration and follow-up required in technical services to boost sales would usually be beyond the role of salesmen as they or their companies see it. Some large Western fertilizer or chemical companies, however, thinking of building a future market in a poor but growing country, have undertaken in a few areas to hire experts for what amounts to generalized technical assistance to farmers. Similarly, importers of farm products in industrial countries have taken the trouble to engage in technical assistance and even detailed production planning for farmers growing products which they wanted in increasing volume. But this kind of technical service, useful as it may be when it occurs, is too spasmodic to be relied on as a general solution to a widespread problem.

A fourth method, quite widely used, is for credit agencies to hire their own experts to perform technical services, and specifically to formulate farm production plans to support their loans. The credit programs which have been most successful in promoting technological changes have employed their own experts. In a well financed pilot project, and especially where there is foreign technical assistance, such experts may be knowledgeable, well paid, and motivated to achieve results. But in a more routine situation, where credit agencies cannot make special demands for expert services, the question is whether they would do better to rely on their own experts or on the expert assistance they could expect from the usual extension agents of the ministry. We may assume that they cannot offer higher salaries or more enticing career prospects than the agriculture ministry; if they do, it would add to costs that credit agencies have difficulty in covering by their income without such an addition. So they could not count on developing a cadre with any higher skills or stronger motivations than could the ministry under normal conditions; but

they could expect that the experts' work would be more fully concentrated on the particular requirements of farmers who were applying for loans. They should therefore do a better job of loan supervision, and of making individually tailored farm plans. On the other hand, they might—like cooperative employees—be deprived of some technical knowledge by separation from the agriculture ministry and its infrastructure. In addition, technical services and other duties tend to get blended together in job assignments in the field, with the result that a trained technician working in a credit agency is likely to waste considerably more time doing credit agency chores and paper work than he would in an agriculture ministry job.

Tinnermeier argues that, all things considered, technical services should be provided within a credit agency (Vol. XX, pp. 91-112). Only in this way can the probable bureaucratic conflicts and rivalries be reduced, and the provision of credit be strongly tied to the appropriate planning and instruction in the use of unfamiliar inputs. In addition to improved coordination, the quality of input recommendations would be improved. A credit agency technician would be more likely to spot weaknesses in these recommendations, and to correct them, than would technicians on the outside; in this way he can reduce the risks faced by the small farmers and thus contribute significantly to their adoption of new practices. Tinnermeier also argues that joint use of facilities by technicians with other credit agency staff could reduce costs. These arguments concerning the experts' employer rest on an assumption that credit must be tied into supervision of its uses for best results, a position that is not universally accepted.

Aspects of the controversy over loan supervision have been introduced in earlier chapters. Many agricultural economists, following the logic of Chapter 4 which stresses the central role of technological change, have come to favor strong supervision and strong enforcement of conditions that loans must be used for specified agricultural inputs. There are two types of counter-argument. Some administrators find supervision costly, and unlikely to be highly productive if intensified—either because new methods requiring intensive attention are lacking, or because good staff cannot be found. In such conditions, it would be more practical to use limited funds in lower cost operations that are likely to reach more farmers; wider political as well as economic impact could be obtained. Another anti-supervision line of thought, presented in Chapter 5, is that paternalism doesn't work well. Farmers are rational economic men, and once they have obtained the information they need they will have a better idea of what to do with it than will the supervisors, many of whom are not very competent. Building up a bureaucracy to do unnecessary, even counterproductive work is wasteful, and in the end hampers the scope of credit programs by setting "red tape" requirements which the farmers will often disregard in any case.

Social philosophy aside, the issue would seem to hinge on the probability of finding or training, and then motivating and keeping on the job, sufficient numbers of men who could in fact cause the farmers' output to increase above what it would be in their absence. Before attempting to reach conclusions on the issue of loan supervision, we need to examine more fully some of the problems of delivery in technical services.

*Effectiveness of Technical Services*

*Supply.* Problems of supply in technical services are often treated as primarily a matter of numbers of people who have degrees in appropriate fields of study. The solution to shortages in the supply of expertise is then to establish facilities for training courses. Educational plans, however, must give due consideration to the funds needed to provide enough jobs for graduates at professional salaries, as well as the funds for training facilities. This kind of long-term program for expanding expertise is found in many countries, usually supported steadily but at modest levels. The pressure is, of course, to get the most for one's money, given the large size of national needs; and administrators can economize by setting up shorter course requirements and by limiting salaries. The result is that manpower slots may be filled but performance is often mediocre. The qualitative problems of supply may be harder to solve than the quantitative.

The woes of the extension agent are frequently described: low salaries, poor living conditions, inability to get to the places where farmers live, neglect by a distant government, not to mention the unrewarding life of urging improvements on stubborn uneducated farmers who do not respond. If the expert is a credit agency employee, the list would be similar with the addition of having to worry about delinquents. The other side of this coin is that the service supplied may be inferior. For example, Francis C. Byrnes[1] describes survey results on farmers' views of extension agents in a half dozen Asian countries: in one place after another, farmers fail to respond because they find that the agents don't understand what they are talking about, and/or their way of presenting it doesn't inspire confidence. Finding they don't really have much to tell the farmers, many agents will eventually settle into an apathetic routine from which neither party expects much to come. This subject is not often written up, as it involves criticism of governments and their institutions and touches on sensitive nerves among colleagues (or counterparts) that the researcher in agriculture may need to live with. Yet the probability of a good deal of mediocrity in performance by extension agents is inherent in the pervasive conditions affecting their supply curves. For agricultural experts working in credit agencies, these conditions are not very different.

If technological change is essential to the aim of credit programs, ways of improving expert performance must be found. The usual prescription is better training: this means longer, more costly training, and higher salary expectations. It may not be a sure cure; additional courses in agronomy may not be enough to give the agent all the applied knowledge he might need, nor enable him to behave so as to inspire confidence. Even assuming that the right qualities in his education could be provided, the money bottleneck remains: better training implies fewer and more costly agents. Increased training, however, may be an effective strategy, even in very poor countries, provided that the impact of the expert's individual performance can be increased. Ways to do this would include: focusing the services of experts on the propagation of proven technologies, rather than scattering them routinely through the countryside; extending the reach of the educated agent by methods described below; and stronger motivation for the expert to seek and develop solutions to production problems.

*Concentration of services.* The notion of concentrating expert services in the promotion of tested new technologies has an appeal to economic logic. What is the justification for sending scarce trained staff to the field without such a

productive message for farmers? And if there is a promising new technology to be had, what better use could be made of available experts than in pushing for its adoption? The idea is less appealing to experienced administrators, however, especially to those who have watched the enthusiasms for new crops come and go. One cannot run an extension service in fits and starts; it takes time for agents to learn local conditions, to get to know the farmers and earn their respect. Only by slowly building a network of people who know their areas, and who will have this knowledge to be called on when it is needed in these localities, can one expect to reach the farmers with any sort of message. This calls for steadiness in policy, and also for a routine dispersion of agents in all the places where farms are found. Farming is a complex business, even on individual small plots; there are not just one or two problems to be solved but many; and there is always plenty of useful work for an extension agent to do wherever he may be. Then, too, there is the political aspect, which indicates that a ministry ought not to neglect areas where farmers live just because it does not have a new crop suited to their type of soil or weather.

These arguments for a steady, routinized policy are persuasive. Yet the "economist's" case for a concentrated effort is also a strong one. The productive results of routine policy are often disappointing in practice; but the local agents, for better or worse, are necessary as a channel to farmers. One solution would be to devote part of the budget to special training courses in new technologies to be given to agents in localities where soils and climate are favorable to the innovations in question. This means either persuading the finance ministry to provide more money, or cutting back on needed services of the routine variety. As a further step toward concentration, the beginnings might also be made for establishing a small, highly trained group of specialist propagators available for selective assignments to work with local agents when a particular innovation is especially valuable or difficult. This would be most useful for a complex package of new practices calling for extensive community cooperation—new crops, new forms of irrigation requiring maintenance, new machine services, etc.

We must assume that there are potential new technologies to propagate that will indeed be profitable and not backfire—without that, the issue of concentration would not arise. Over-publicized, poorly based "campaigns" for new products must be avoided, while worthwhile improvements must be strongly supported. The amount of budgetary support given to a propagation effort should be contingent on the degree of promise of a new technology, carefully estimated with the best scientific judgment available. This means uncertainties, trial runs followed by differences of opinion among specialists, conditions that make life difficult for administrators and finance ministries. The initial creation of a specialist propagator group would, of course, require a considerable lead time for selection and training. But a concentrated drive could be well worth the effort for a rewarding technology.

*Extending the experts' reach.* If trained persons with appropriate personal qualities for success in extension work are scarce, and especially if one is thinking of increasing their levels of training and making them still more scarce, the need to extend the reach of these experts is clear. In part this involves bridging the cultural gap between expert and farmer, as described in Chapter 6. It also involves the organization of different kinds of auxiliary manpower to work with the expert, so that he can spend less of his time doing things that less

educated people could do as well and more of it on tasks for which he is best qualified. The farmer might learn most from the expert if the latter could spend a lot of time with him explaining just what to do and how to judge all the results, but this is simply impractical in terms of relative numbers. Both the scarcity and high cost of experts, and a recognition of the cultural distances involved, point to the value of developing intermediaries between the two parties concerned.

The effectiveness of the intermediary, indeed the effectiveness of any expert-farmer relation, involves also the motivation of farmers, most importantly in the adoption of new practices. In this chapter no effort will be made to explore non-economic motivations as such, but it has to be assumed that there is resistance to innovation which must be overcome. In addition to the farmer's ignorance of the non-observed possibilities of new ideas, there is his generalized caution based on fear of risk and a distrust of the knowledge, reliability and perhaps the motives of those who would convey the new ideas—all logically derivable from experience. When these can be overcome in a venturesome minority of farmers, then the demonstration effect and the economic motivation of the remaining cultivators can be assumed to do the rest. But this process is a lengthy one. And whether or not particular obstacles can be termed irrational or rationalized into economic logic, the prevalence of generalized resistance and its persistence over time must be recognized.

Another obstacle to innovation may be noted which does not necessarily yield to the incentive of individual profit. This is when a new production system requires extensive community action on a minimum scale in order to succeed, as with an irrigation facility which requires equitable and timely distribution of water at particular times to particular lands as well as a lot of dispersed maintenance work. Here the private self-interest of some farmers could lead them into actions destructive of others' profit, and thus inhibit adoption. This could also happen with the services of a large machine on many small farms. Such obstacles to adoption, however, would seem to be amenable to demonstration effects, with community-wide profit rather than individual profit as the basic incentive. The overcoming of obstacles to community management, with communities rather than farmers as the unit for consideration, may be encompassed in the following discussion of the innovation process, although the dynamics might be a bit different from those to be described here.

*The innovation process.* The phenomena of initial adoption by a small minority of farmers, followed over time by a growing and then receding wave of adopters, with perhaps a group of hard-core resisters remaining after the wave has subsided, is well known and observed throughout the world. These phenomena are found where adoption is voluntary; we are concerned here with independent small farmers, not with the laborers on plantations or state farms. The adoption process is analyzed in some detail, for example, by N.S. Shetty[2] for 270 farmers in a rice growing area in India over a period of 15 years. Numbers of farmers each year passing into stages of "awareness," "acquaintance," and "adoption" of three proven practices were tabulated. The average time intervals per farmer for moving through the stages from ignorance to adoption were calculated, and the characteristics of farmers who were innovators (around 10 percent), imitators, and non-adopters (20-60 percent) were examined. Total adoption time in years per farmer averaged 7.2 for

improved seed, 5.1 for chemical fertilizer, and 4.0 for Japanese-style cultivation (with many non-adopters). The "waves" of new adoptions had largely ended after 8 or 9 years for each practice. Statistically most significant characteristics of the innovators were larger farms, longer schooling and higher socio-economic status; non-adopters were mostly poor and illiterate (no farmers in the sample were very rich or highly educated). The larger farmers could take risks more easily, try out methods on fractions of their land; educated farmers communicated better with extension agents, or followed the media. These findings are reasonably representative, at least where the practices to be adopted are profitable ones for the bulk of the farmers in question.

One of Shetty's conclusions is that adoption could be speeded by a greater mobilization of publicity media to reduce the one to two year time lag from ignorance to farmer awareness of the innovation, but that from that point on there is an unavoidable need for increased contacts of farmers with extension agents (along with demonstrations, etc.). The former suggestion could economize on expert service time; the latter observation, however, indicates that this economizing has its limits. Another implication of this kind of finding, well recognized to the point of being conventional wisdom, is that the expert should concentrate his time on the larger, more educated farmers who are more likely to become innovators. The logic here is obvious; and there is in any case a tendency for experts to spend much time with their educational and social equals among their farmer clients. Such a practice is probably more in need of caveats than of recommendation.

One caveat would be that innovators are often more frequent among the upper-middle farmers in socio-economic terms than the very large owners (not present in Shetty's group) who can get along comfortably without innovations, and especially if these are absentee landlords. Such an observation is common in Latin America. Another caveat is that where there is considerable socio-economic stratification the diffusion of an innovation may be impeded, so that adoption by the upper stratum does not provide an effective demonstration effect; lower strata do not identify with the demonstrators. This may not be as economically irrational as it sounds when the innovation in question is conceived and applied in ways that make it better adapted for large than for small farms. Overconcentration of extension agents on the kinds of innovation that require capital for which the small farmer has little access may well be a by-product of the agent's overattention to rich farmers; so also may be seed varieties that are more risky than they would be if more research had been done to obtain all-weather reliability. This is not to say that experts are necessarily misguided in giving attention to larger farmers who are more probable innovators; but since this book is intended to explore ways of improving the output of smaller farmers, we cannot propose that they be systematically neglected.

Attention to innovators of whatever size has a further implication. When a new practice is presented to a group of cautious, skeptical farmers, it is extremely important that the initial demonstrations be carried out as precisely as possible; if something goes wrong and the crop turns out badly, this fact will be remembered for years. The very first trials will as a rule be mounted with lots of expert supervision; indeed this heavy supervision may be a cause of farmer skepticism over the representative nature of the result. Perhaps the next round following the officially labeled "demonstration," when the innovators are

more on their own, is more important. Also, the official demonstrations may not be seen by very many farmers; in a large target area it is likely that second, third, or fourth rounds of innovation will be those seen by the majority of small farmers. And many of them will want to observe repeated demonstrations before adopting.

The point to be made is that for diffusion and rediffusion of the demonstration effects with new crops or methods, the practices should be correctly followed not just to maximize output but to convince the skeptical. This is one of the best arguments that the proponents of strong supervision in credit programs can make in refuting the claims of the laissez-faire school who would supply information and rely on farmer rationality. When an innovation is faced with skeptics, there is a special sensitivity to successful results and an intolerance of poor ones that continues for some years. Consequently, the application of supervision, and of exacting conditions for the use of credit for specified inputs, may be justified as a general policy because the demonstration impacts are widespread and continuing as a factor motivating small farmers' adoption. In time, innovative practices do become familiar; best methods become known if not universally followed, and the new adoptions fall off, leaving only the hard-core resisters. Supervision may then be relaxed, but this process can take up to a decade for completion.

This discussion of innovators has not so far brought us much closer to reliable ways of spreading the reach of experts. While it is justifiable for them to focus their attention on the first innovators, it is not justifiable to neglect the secondary, tertiary and subsequent innovators in out-of-the-way places; these too must be attended to if adoption is to proceed. Thus, the concern with innovators has tended to accent the desirability of supervisory attention. We must turn now to other devices that may extend the experts' reach without diluting its effectiveness.

*Paraprofessionals and teachers.* The effectiveness of supervision will depend, in the end, on how well the farmers can become motivated to pick up the information and instructions that experts have to offer, and apply them. Except in a few intensively organized pilot projects, extensive personal supervision is too costly to be a general solution; and without continued motivation its effects can be transitory. The extension of an expert's reach by collecting larger numbers of farmers to hear him speak is, in itself, insufficient to create new motivations. Two kinds of solution may be considered.

One is the intensive instruction of paraprofessionals in a narrowly devised curriculum devoted to one or two key technological methods to be propagated. This addresses both the supply and the cultural empathy problems: suitable persons can be found in rural communities who lack a strong educational background but can master some techniques, who can "talk the farmer's language," and who will be content to remain in rural areas at less than professional salaries. Experience suggests, however, that the paraprofessional may have weaknesses in his expertise, and that he may not be any more successful in motivating farmers than the more professional supervisors. Partly this is because he has become a government official, however lowly his status. Expertise can be delegated in this way, but the results may be diluted: somewhat more empathy, somewhat less knowledge. Nevertheless the idea has been useful in a number of areas, and in a good many situations it is by far the most practical method available to deal with shortages of skilled manpower.

Another, less tried solution is to establish the expert as a teacher rather than a supervisor, and to send for instruction a limited number of opinion leaders among the small farmers. The emphasis is more on information and farmer

self-help, less on the enforcement of rules. This is the method evolved in the Comilla program of Bangladesh. Part of the reason for its adoption was that the target group of the program was specifically the small farmers, so it was not appropriate to follow the usual practice of looking for innovators among the larger ones. Another reason was the desire to develop new local leadership and to avoid authoritarian methods. The devices used may be of interest in other countries and programs, even where such objectives are less strongly emphasized than in Comilla, since their employment does have a bearing on farmers' motivation to innovate.

Each local farmers' cooperative in the Comilla program elected one or more "best farmers" to take courses in new technology and to demonstrate it on their own lands. These became the community innovators. It is not unusual for extension agents to select "model farmers" on whose land officially sponsored demonstrations will be held. The difference was that in Comilla these men were chosen for the purpose by their fellow villagers. Whether or not they were less skilled in cultivation than persons that an extension agent would have chosen, they were men who were looked up to in their villages, men with whom their neighbors could identify. For demonstration impact, this quality may be more important than previously acquired knowledge.

The courses they took required weekly attendance at evening meetings in nearby cooperative branch centers; they were not taken away from their fields to "school." Instruction materials for instructors, and for farmers to keep, were carefully worked up at the Comilla Academy for Rural Development. Farmers' printed materials used many illustrations and few, simple words. Each meeting's instruction unit was designed to cover a very limited subject, with subjects arranged in sequence to accompany the seasonal production tasks. No meeting could spend over an hour on instruction or questions, given the farmers' attention span after a working day. Programmed instruction kits could be distributed to widely dispersed places, once the instructors had taken their own training at the Academy.

In this way the reach of the best expert talents, concentrated at the Academy, could be very greatly extended by their course materials along with the other elements in their training programs. The level of expertise needed for the instructors is perhaps variable, depending on the quality of the printed course materials and the training given to them, and also on the rate of program expansion and the intensity of a desire for best results. When expansion is rapid and of high priority, the instructors might be paraprofessionals. All these arrangements in the Comilla program take a lot of effort and human relations skill to organize well, but they offer a potential for making the most of limited skill resources over wide areas of application, and for selection of effective farmer-innovators.

*Motivation of the expert.* Enough has been said in an earlier chapter on personnel practices in credit agencies to suggest a few ways of handling their educated employees in rural work. The proposals to select persons with rural background, and to deemphasize initial degrees but give more stress to mid-career training, may be pertinent to extension agents as well. But the problems of motivation and selection of agricultural technicians seem to be less easily handled than those of financial technicians. More education is needed for the former, and initial qualifications cannot be as readily compromised; indeed,

there is a good case for increased stress on prior education for at least some such experts. Morale and incentives remain serious problems, however, and new thinking on the incentive question would be of interest.

The only pertinent novel idea that appeared, in tentative form, in the Spring Review was the notion that agricultural technicians be rewarded by systematic performance criteria. An extension agent, or a comparable employee in a credit program, is performing well when his farmer-clients produce more. This is basic: while his performance may also be judged by the numbers of farmers planting a new crop or adopting a new practice, these changes may be temporary and in any case the purpose of such changes is to raise production. Production is the real test of the value of his particular recommendations, and of his effectiveness in getting them accepted. The suggestion here is that a method be developed whereby an agent's salary could be varied in accordance with the output of the farms for which he is responsible, with an offset for weather conditions.

This requires that some party other than the local agents obtain accurate estimates of the output of crops in each agent's territory. The difficulties involved in obtaining reliable data of this kind, presumably by sampling, are indeed formidable. Furthermore the calculations necessary for establishing a criterion for the reward of agricultural technicians would also depend on knowing how crops were affected by the weather. The technician cannot control weather, and it would be unjust to punish him for a bad crop when the weather was poor. The value of a good crop would be plus, and the value of favorable weather would be minus. Even with the best of information, problems of weighting would arise in combining the output for different crops, and when relating each to weather the complexities of attribution are considerable. The calculations would have to be made with great care, using prior experience and trends, with trial runs undertaken and checked before any widespread applications.

The idea is hardly practical without a great deal of exploratory research which would be difficult and costly. The argument for attempting such an exploration is that if the necessary calculations could be made manageable without injustice to the technicians concerned, a variability in their salaries resulting from percentage changes in output would surely give them a strong performance incentive that has been lacking. It might also give an incentive for technicians to influence the sampling data to their own benefit, and perhaps to work with large rather than small farmers. It would no doubt be quite upsetting to the technicians concerned. Resistance can be anticipated: to overcome this, the salary variation would have to be introduced as a possible bonus for good crops without any deduction from existing salaries for bad crops (after allowing for weather). Even then, the failure to get a bonus would no doubt be the subject of complaints that the production level resulted from factors beyond the technician's control or responsibility. While this might often be true, the incentive to seek ways of overcoming obstacles to production of whatever kind would be present. So the incentive might lead the ambitious technician to a more energetic examination of local conditions, and perhaps even to buy a book and learn more about his subject. Mid-career training opportunities would become more attractive. The quality of the advice to farmers would benefit, and the attentiveness to farmer practices and problems would be sharpened. And the better performers could receive more recognition than in a promotion process

in which seniority and perhaps connections were dominant. Thus, the value of an objective measure of performance would be considerable; but one may question whether such a measure is attainable under normal field conditions, or would justify its cost if it could be applied in the manner suggested.

*Credit and Technical Services*

The delivery of technical services must now be related to the functioning of credit programs in order for the credit to be used to best advantage. We may return to two questions that were left hanging earlier: whether agricultural technicians should be employed by credit agencies, and whether elaborate methods of loan supervision are justifiable. The conditions favoring both practices are largely similar.

One variable is the nature of the target group of farmers whose productivity and welfare are to be served by a credit program. When the program is aimed at a limited group of farmers, a close integration of the credit with the technical advice supplied by a credit agency employee will ensure that the target group is better served than it would be if it were only one of several groups served by an extension agent. Certainly loan supervision will be more effective when it does not depend on outside extension agents. Such a limited target group could be either a small group in the area of a pilot project, or a defined category of farmers for whom special facilities are intended, such as small farmers (below a maximum in resources) in given localities. The capabilities of the farmers in question are involved. Capable farmers will not need as much special attention; concentrated technical services from a credit agency's employees, and elaborate loan supervision involving individual farm plans and credits tied to specified inputs, would not be appropriate. Also, when the target group is too large, concentrated services to all its members may be impractical in terms of skilled manpower supply, and if attempted would not produce the anticipated results due to inadequacies in many of the technicians that would have to be used. Another pertinent dimension is timing: when fast changes are desired, more concentrated technical attention and stricter supervision are required than would be necessary for a more relaxed time schedule.

The less capable the target group of farmers, the smaller their numbers, and the more rapid the desired rate of change, the greater will be the desirability of the kind of technical supervision which will raise the unit costs of a credit program. The other major variable is the nature of the innovations envisaged. Some innovations are far more demanding of farmers than others, a dimension that must be judged vis-à-vis the estimated capabilities of the farmers concerned. If the required changes in productive methods are not very demanding and the farmers are thought capable of handling them in a reasonable period of learning time, then high-cost supervision can be avoided. In light of the earlier discussion of the importance of keeping unit costs within a level that could be covered by a program's lending income, unnecessary supervision certainly should be eliminated. But if the innovation is not only quite unfamiliar but requires a complex package of new practices working together and especially if new demands on community behavior are made, then a concentration of technical services is likely to bring about a faster and more productively successful adoption process.

When all the preceding variables conspire to indicate a desirable outcome that requires high-cost levels of technical service, then the decisive element will be the

incremental value of the proposed innovations for small farmer profit and national production. When an innovation will add a high enough value to profitable production to cover the cost of technical supervision (and other costs), loan supervision or other intensive services are justifiable. This incremental value also indicates the justifiability of any subsidy that may be needed (see next chapter), and it bears on the general usefulness of credit programs irrespective of subsidy. The advocates of intensive technical services tend to feel that without innovations having a prospect of appreciable incremental value there is little reason for initiating small farmer credit programs. There are other ways of looking at credit, as will be discussed in the chapter on strategic choices below, but for the remainder of this chapter we will pursue the logic of the "technologist" position. It implies, in effect, that credit programs ought to be built around the adoption of rewarding innovations. Whether programs are aimed at pilot project groups, specialized groups, or broader groups of farmers, and whether on a large or small scale, the deployment of credit should always be closely geared to the innovation process. This is an extreme statement of the position, going beyond what most of those favoring loan supervision may think reasonable; but it will be useful to explore some possible implications of a method for subjecting credit programs to the imperative of serving agricultural innovation.

*Gearing Credit to the Innovation Process*

What will be discussed here is a flexibility in credit agency policies such that loans can be focused on the introduction of new practices. Not only technical services, but the amounts and locations of credit granted to farmers could be systematically varied to coincide with the timing and location of the introduction of new technologies. While this proposition may appear intellectually acceptable in terms of program objectives, its application in a detailed and systematic way would raise a number of administrative and financial problems.

A scenario for this approach was outlined by I.J. Singh in a Spring Review paper (Vol. XIX, p. 421) where he describes three major phases of an innovation cycle. The assumptions used in each phase tie together the shifts in the rural capital market as these are affected by the introduction of new agricultural technologies on a large scale.

In Phase I, prior to innovation, a "traditional equilibrium" is assumed. The state of the arts is constant; the savings and investment functions are stable; returns to on-farm investment are so low that few new investments are made, and savings are limited. Rural capital markets are fragmented, largely non-institutional, highly oligopolistic and particularistic.

In Phase II, during the adoption of new technologies, there are "dramatic break-throughs in the state of the arts," widespread dissemination and adoption of new practices, and extensive and continuing changes in farmers' preferences and motives for acquiring new sources of income. Sharp increases in the rates of return to on-farm investments bring forth substantial demand for new investment; simultaneously, farm household preferences move strongly toward increased saving. Rural capital markets, however, remain fragmented and particularistic except where new institutional credits are introduced; the result is essentially dualistic.

In Phase III, a near exhaustion of new on-farm investment opportunities is assumed, with only marginally profitable new technologies forthcoming. However, an advanced stage of commercialization of markets for farm outputs and inputs has occurred during Phase II, and a new set of consumer goods has become available in rural areas. In addition, the expansion of credit institutions integrated in the national capital market has provided a growing rural access to non-farm investment opportunities. Under these conditions, farm household preferences will shift back toward current consumption as compared with Phase II, but savings out of higher incomes will be well above those in Phase I and will be sustained by the access to reasonable returns from non-farm investments.

Singh contends that both the role and the impact of small farmer credit programs will depend on the phase in which the majority of small farmers are at a given time, and that credit policies should be guided accordingly. His recommendations, supported by diagrammatic analysis, may be summarized. In Phase I a credit program could at best achieve some decrease in interest rates, and some freeing of farmers from dependence on moneylenders; but too great an increase in institutional credit would lead to defaults, and a low interest rate would produce excess demand for credit. Limited credit at interest rates a little below the market is indicated. In Phase II, however, the role of a credit program is to supply increasing amounts of credit in line with the shifts of demand curves, and to blend it in a "package" with the dissemination of new technology. In addition, such credit can more successfully lead to greater competitiveness in rural capital markets, and prevent interest rates from rising in response to demand; lower interest rates can overcome a possible barrier to new adoption, though excess demand must still be avoided. In Phase III, the demand for liquid funds continues to rise with commercialization, and becomes more interest-elastic in a wider capital market so that interest rates will fall somewhat. With the higher level of cash flows to farmers and a decrease in on-farm investment opportunities, the injection of outside funds can be tapered down. The role of credit programs would then be to stimulate savings mobilization by encouraging the development of local rural savings associations, and the competition among them, in part to substitute for its own services. No specialized farm credit programs should become self-perpetuating, in Singh's view, but should eventually phase out in favor of the "regular" integrated financial system.

This picture of a credit program moving up and down in response to the availability of technical innovations has a strong appeal. It is no derogation of its virtues in resource allocation to consider for a moment the kind of practical administrative problems that it raises. In Singh's scenario there are clear and dramatic shifts from one phase to another, signalled by the changes in availability of new technologies and their rates of adoption. But reality is much more mixed and confusing. One could view the phases as covering very long time periods: Phase II, on this scale, could begin rather slowly, and last for several generations; Phase III might be regarded as representing a rather advanced stage of national development—provided technical change were to stop dead in agriculture. In this view of the phases, the Phase II policies would have to be applied with some caution and variability, with the guidelines followed very loosely. But if the three-phase scenario were compressed and applied to a single innovation in one district, where the second phase would last no more than a

decade, then the application of guidelines might be tightened up to the point where an administrator could see clearly what to do. Here the model would make a distinct contribution to policy by comparison with prevalent thinking about credit programs.

The difficulty that needs to be mentioned is one of identification. How can the agricultural administrators, central planners and finance ministers know just when District A is entering Phase II, or District B going into Phase III? They must know this, for the task of assembling the financial and skilled manpower resources for deployment in and out of districts is a demanding one. It must be carried out against all the interests tugging and hauling to move resources in other directions. It calls for a level of scientific knowledge and a degree of unanimity among scientists and decision makers that seems rare. More important, the realities of innovative practice, and the varieties of innovation going on at the same time, are very likely to present mixed pictures to the best of diagnosticians. The transitions into and out of Phase II are susceptible to different interpretations when some farmers are doing this with one crop, other farmers doing that with another. The complex possibilities need not be spelled out.

Nevertheless, the model poses an important challenge. It might be easier to develop an application of the implied policies if there were some modification in the proposed savings policy and in the Phase III directives. Suppose that a well organized credit agency with nation-wide scope were confronted with some districts in Phase I and others entering Phase II. In the former, the agency would establish token branches; in the latter, it would try out and then amplify regional programs with specific innovations and tied credits. As the innovations were taken up in Phase II areas, the agency should open up a savings window offering attractive interest rates (for cooperative or individual deposits), and gradually untie its credits; new credit injections would then become decreasing proportions of the savings accumulations in these particular branches. New savings windows for non-farmers could be added as the agency's productive loans increased. This would free funds to be applied for innovation in some Phase I areas. However, there could well be subsequent innovations becoming available that were suitable for the Phase II areas, and would justify new capital injections; if so, new tied credit injections in these districts might be more appropriate than moving funds elsewhere, provided that the push for savings continued. If Phase III-type situations arose, the district branch in such an area would become self-sustaining, and in time a net exporter of loan funds within the agency. In effect this would define Phase III for the agency. The encouragement of additional financial institutions in Phase III districts could also be undertaken, but the agency need not necessarily be phased out; for example, its Phase III branches might be separately incorporated as going concerns. Thus, the agency could adapt to situations in which innovations did not cease, or to others where they did. In various ways, the agency could work toward a capital market integration in which it continued to have a place, changing with its circumstances.

There are, of course, other possibilities. In some countries a greater pluralism of institutions might seem more desirable in terms of local culture than the monolithic centralized operation just proposed. The advantage of a monolith would be the capability, in principle at least, of mounting a sensitively flexible

deployment of funds and technicians in a variety of scientifically guided programs, assuming an increase in resources from continued savings attraction. Planned flexibility is the key element here, and it is the heart of Singh's message.

*NOTES*

[1]Francis C. Byrnes, *Some Missing Variables in Diffusion Research and Innovation Strategies*, New York, The Agricultural Development Council, ADC Reprint Series, March 1968.

[2]N. S. Shetty, "Agricultural Innovation: Leaders and Laggards," *Economic and Political Weekly* (Sameeksha Trust Ltd., Bombay) 3, (17 August 1968): 1273-1282.

# Part 5
# Strategies

# 16 *Subsidy*

In developing policies for small farmer credit, one of the main strategic issues is the consideration of how much if any subsidy to this activity is justified, and how it should be applied. The major purposes of credit programs are at stake: if their basic objective is the creation of *viable* small farmers, this could be taken to mean farmers operating successfully without subsidy of any kind, direct or indirect. However, many would not take such an austere view of the implications of viability, and few would accept the desirability of its application without exception to the agricultural sector. As a minimum, a publicly supported system of agricultural research and extension services is almost universally regarded as desirable in this one sector, though not normally in others. There are few countries in the world, rich or poor, where farmers do not routinely benefit from some kind of government subsidy. In most there is a variety of such subsidies, especially if one includes activities that are not always recognized as subsidized but do entail a measure of indirect government support. Public capital provided at concessional interest rates is an example. Thus, farmer viability may be regarded as a generally worthy objective, certainly in a long run sense, but one which may need to be qualified or redefined in various ways when it comes to current operations.

Along with the question of farmer viability, there is the narrower issue of viability of a credit program. While it may be argued that some groups of farmers ought to be given a subsidy for extended periods, subsidized credit programs are only one way of doing this and perhaps not the best one. The case for a viable credit program, one free from dependence on any direct subsidy and capable of self-sustaining expansion, does not depend on a denial of all the arguments against subsidy to farmers, and in that sense is easier to defend than a "purist" position which condemns all forms of subsidy. We

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Principal contributors to this chapter were Philip Church of AID, on the graduation of farmers from subsidized credit programs, and Charles T. Nisbet of Evergreen State College, Washington, on the choice among different forms of subsidy.

will suggest below that temporary subsidies may be justified as necessary to attain longer run viability, for credit programs as well as for farmers.

The organization of this chapter falls under three headings: (1) a general consideration of subsidies and the grounds for their justification; (2) the relative suitability of alternative vehicles for subsidy—interest rates, goods, or services; and (3) an exploration of the ways of terminating subsidies, including the "graduation" of farmers from subsidized programs.

*General Considerations in Applying Subsidies*

*Economic justification.* The purpose of this discussion is to present a logical framework within which public expenditures for subsidy may be evaluated. The standard approach to the justification of subsidies is to estimate the costs and benefits of the economic activities involved in a project which is under consideration and which may need subsidy. This procedure requires a "financial" analysis of the costs and incomes for individuals and institutions affected by the project. It also calls for an analysis of costs and benefits from the standpoint of the economy as a whole; this is often termed "economic" analysis, but to avoid possible confusion we will call it "social" cost/benefit analysis. The brief statement on these techniques in Chapter 3 will now be amplified, first to define the method and its problems for readers to whom they may be unfamiliar, and then to apply this approach to small farmer credit.

The financial analysis involves the kind of accounting that any business firm or household must maintain to keep track of its cash flows. All of the anticipated economic transactions resulting from a project, representing either income or costs to some participant, must be calculated and organized to show the balance of gain or loss to the parties concerned. These values must be estimated and projected ahead for the years of operation of the project in question. When completed, they will reveal the levels of net financial profitability that are expected for firms, groups of farmers, and other participants in those years; the estimated values for expenditure and income in government operations are of special importance. Perhaps the most consequential problem for financial analysis is that of making the best possible estimates of future incomes and costs over time, especially while a proposed innovation is underway.

The social accounting requires a summing up of the results of the separate financial accounting estimates for all the enterprises or economic entities (including government units as well as private accounts) that will be involved in the project to be evaluated. In financial accounts, all incomes are counted as benefits to the income receiver; in the social accounts, benefits are the goods and services produced for the nation irrespective of who gets the income for their production. In analysis of a farm credit project, the main benefits are the increases in agricultural output that it is expected to bring about. All the costs which contribute to the anticipated farm output must be recognized, no matter who actually pays for them: the farmers' use of land and purchases of inputs, along with the relevant services of the credit agency, the agriculture ministry, and the merchants who move the crops to market must be included. (As was noted in Chapter 3, the social accounts summation cancels out transfer payments like taxes or subsidies where no goods or services are involved. Interest on borrowed funds is considered payment for a service.)

When a social account analysis has been prepared for a proposed project, it will indicate the value of the benefits, consisting of a flow of goods and services

to be produced in the years covered, along with the flow of costs in inputs of goods and services required to produce the benefits. All of these are estimated in market values; the production of non-marketed goods of the same kinds that enter into markets will be incorporated in the benefit total. Private (financial) profit equals income minus costs; social profit is the total of social benefits, as defined, less the total of the associated social costs. When a project requires the expenditure of public funds, the overall profitability for the country of this particular public investment can be defined. When other possible public investments have been analyzed by a comparable social accounting, their social profitabilities can be compared; the most profitable ones can then be selected. These will make the greatest contributions to national income.

Even the strongest proponents of cost/benefit analysis as a decision-making tool are careful to point out that its calculations are not enough to give policy makers everything they may need to consider in their overall judgments of projects. Nevertheless, it is often useful to put small farmer credit programs through a laborious social accounts analysis, and to estimate their prospects for social profitability in comparison with other ways of meeting the problem. It is always easy to say that farmers ought to be able to produce more if they can obtain more credit on reasonable terms, so that a credit program is a good idea and should be adopted using whatever funds the finance ministry can be persuaded to supply. It is much less easy to say just what size of increase in output should be expected, year by year, and at what costs, and then to defend such estimates as being more reasonable and probable than alternative estimates. The very process of trying to define such estimates provides a valuable discipline, and an occasion for taking a harder look at what one is doing and perhaps revising it or choosing a different route. A further kind of discipline is involved in defending one's proposal to finance ministry officials in competition with other potentially profitable proposals they may have before them. A well prepared social accounts analysis should help to impress these officials with a project, and would contribute in any case to their understanding of policy decisions.

Another strength of the social accounts method is that it supplies a device for bringing together in one package the costs and benefits anticipated over various time periods in a way that allows comparison among projects. Policy makers are frequently required to pass judgment on proposals having very different time horizons. Proponents of proposal A will be urging that it can bring fast and visible results, which are always appealing to governments. Proponents of proposal B are put in the position of trying to convince others that theirs will accomplish more in the long run, that while its benefits will be longer delayed than A's benefits and may involve periods of current loss (cost exceeding benefits) the B benefits will do more for the economy in the end. Even with reasonably good cost and income projections for A and B, the decision between the two can be very hard to make. Some people are by nature short run activists (and officials' tenure in office may also be uncertain), while others are by temperament and habit more inclined to foresight. Benefit/cost analysis provides a way of dealing with such conflicts that reflects both kinds of outlook and supplies a relatively impersonal means of adjudication.

The device in question is the capitalization of cash flows using a "social rate of discount" for the passage of time. It is assumed that present benefits are

worth more than future ones, as are present and future costs in a negative sense, and that future values of both kinds should be systematically reduced for a judgment in the present. An annual rate of discount can be applied to each value so as to reduce it by the same percentage in every succeeding year. Suppose, for example, that a flow of benefits (production values) is estimated to continue at a level of $100 each year, and a 10 percent rate of discount is applied. The value for the first year is 100; the value for the second year would be 10 percent less, or 90; for the third year it would be 81; and so on. These values can then be added up, including as many years as the benefit flow would continue. Although the flow might be projected indefinitely into the future, the cumulative discounts applied with the passage of time would reduce the values to insignificance in the distant future, so that after 20 or 30 years they can be disregarded.

The discounting procedure is applied to costs as well as benefits, either separately or to the stream of net profits—i.e., the excesses of benefits over costs (negative or positive) in each year. Their summation gives a present net value for a proposed project in one figure, which may be used in comparing projects. There are several ways of making this comparison (benefit/cost ratios; internal rates of return; or returns on the public investment) which need not concern us here. The point is that one can, by choosing an appropriate rate of discount, compare long and short run results, and also compare projects with rather different requirements such as: one calling for a large capital expenditure (counted as a cost when it occurs) and low maintenance cost, versus a project needing a lesser investment but higher maintenance. And these comparisons can be reasonably objective if the discount rate is the "right" one.

One might imagine that the choice of a discount rate will be highly subjective, however, with the short-run enthusiasts choosing a high rate and the foresighted a low one. But economists' logic, and certain conventionalized practices, come to the rescue. The rationale is that the individual time preferences in a society are found in its interest rates: borrowers are willing to pay extra in the future to get money in the present, and lenders are willing to forego money now for future income, with the interest rates as their mutually agreed prices. There are, of course, a number of different interest rates to be found in a given country for different kinds of loans and investments, but economists who must make decisions on how to define a representative interest rate for use as a "social rate of discount" have developed conventional ways of doing this. For present purposes, the results of such decisions are of more interest than the details of the methodology. The World Bank, for example, uses a range of 8 to 15 percent for most of its project appraisals in considering loans to developing countries. It may be noted that the level of social discount rates also serves as an indicator of levels of social profitability that should be reached in projects to be adopted in the same countries.

This rather lengthy exposition of the apparatus of social accounting, while insufficient to serve either as a manual for performing the necessary operations[1] or as a guide to the many refinements that have grown up around it, does indicate the kinds of information that will be needed when public investments and subsidies are assessed in this way. The virtues of the method are that it can supply a path to be followed in evaluating small farmer credit programs

*provided:* that the objective of increasing national economic growth is accepted as the criterion for judgment, and that the estimates involved are also acceptable. The latter problem is one to which there is no easy or quasi-automatic solution. The future behavior of farmers when they use credit and try to increase output has to be predicted, and such predictions can be very hazardous. But there is no getting away from it: if one has no idea of the probable results of a credit program, one cannot know what to do about it. Experiences with comparable programs elsewhere, and the prior experience with farmer reactions in the area of a proposed project, can be useful aids to making estimates. But uncertainties will remain.

A recommended procedure for dealing with these uncertainties is to make several estimates of possible outcomes—for example, an optimistic estimate of farm production over the years, a pessimistic estimate, and a "most probable" estimate—and run them all through the social accounts analysis. Similarly, varying estimates of doubtful cost factors, and of possible project delays, can be made and run through in different combinations with the benefit estimates. This is a lot of work, to be sure, but at the end of it the analyst will have a much better idea of how much difference his uncertainties will make in their effects on the overall outcome. He can tell whether the economic profitability of his project will be reduced to zero or negative values if some defined difficulty occurs, or whether the project will still be nearly as profitable, all things considered. This is called "sensitivity analysis"; it will reveal just how sensitive the economic profitability of a project may be to various contingencies. When a project proposal turns out to be highly sensitive to a contingency that looks fairly probable, this would cast doubt on its advisability even when the "most probable" estimates were favorable. Conversely, when the dangers cited by opponents of a project can be shown to be contingencies to which its profitability is relatively insensitive, then the project may be undertaken with added confidence.

The method used in sensitivity analysis may be applied to the justifiability of specific subsidies. For example, in a credit program directed toward expanding the output of a new crop, the question may arise as to whether the product should be given a subsidized support price in the market to speed its adoption by farmers. The assumed market prices with and without supports can be separately estimated, along with the associated output levels, and both estimates can be run through the social accounts analysis to see whether the investment in annual subsidies would be socially profitable. Both the price itself and the farmers' reactions to it are involved. Estimation of the prices may be a manageable problem, but the farmers' price responses are more uncertain. How much difference will the supported price really make? It is easier to attempt output estimates in a general way over a period of years than it is to make two sets of estimates with the differences between them specifically attributable to price supports. Nevertheless, the effort to do so can be worthwhile when the cost of the subsidy is appreciable. The results may be checked against experience as time passes—though admittedly one cannot be sure what would have happened if a different course of action had been followed in a given year.

The complicated array of numbers appearing in a social accounts presentation looks a bit mysterious, and may be overly impressive to the uninitiated; as we have seen, the numbers are in fact no better than the estimates that lie behind

them. This points to a danger that can arise when the method is adopted and becomes more familiar, and when people start to realize that these numbers can influence the flow of money in one direction or another. In such circumstances there is an incentive to make up estimates and numbers that will put one's project in a favorable light, and which may be misleading. Proponents of a project will include optimists who sincerely believe in a favorable outcome that is not realistic, along with others, more cynical, who recognize the uncertainties but see no reason to let the money get away if a few estimates of future events that nobody can predict very clearly are reshaped to keep money flowing where they want it. All this is very troublesome, especially when the technical basis for estimation is understood only by a few specialists—all of whom may be in the same ministry and perhaps subject to pressures from a boss who is pushing his pet projects. The result may be a general inflation in the level of social profitability figures in many of the proposals presented in a competitive atmosphere. The finance ministry may then apply its own discount to all of them, regardless of merits—which punishes the honest practitioners. The only corrective here is a persistent effort to monitor the results of project performance, and to keep checking these against the predictions.

*Application to credit programs.* Assuming, however, that cost/benefit estimates can be made and assembled with a reasonable realism and honesty, and that the analysis is treated with respect by policy makers, what is this likely to do to the financing of farm credit programs? There seems little doubt that a number of existing programs would end up with a negative score on social profitability, and others with a positive value that is rather low. There could also be programs which are more socially profitable than had been realized. In most cases the demonstration of benefits in the form of production gains attributable to a credit program may be difficult; but the effort to find out more about social profitability would stimulate more thinking on how it could be achieved. In this connection, the World Bank has been conducting an extensive review of its agricultural credit projects, and looking into the accuracy of its initial predictions of benefits and costs (nothing has been published as of this writing, but any reports that may appear should be of interest.)

Public subsidies for activities involved in a credit program can be justified if they, in conjunction with the private inputs, can be shown to result in sufficient production in excess of total cost over the relevant time period. This is not necessarily inconsistent with the aim of eventual farmer viability, for there are likely to be programs in which short run subsidy can initiate a level of output greater than before that will be sustainable without later subsidy. It is also possible that the analysis would reveal cases of socially profitable output sustainable only with continued subsidy; in such cases, a government may wish to consider whether the increased tax revenue generated by the activity (not normally included in a project appraisal) would facilitate the continuation of the subsidy, or whether it might better be terminated. For the most part, however, the economic justification of subsidies would take the form of short run stimulus to innovations which, once adopted, would represent viable practices for the producers concerned.

Conventional social accounting ignores questions of income distribution,[2] since it adds up benefits without regard to who gets them. We have noted that agricultural innovations tend to be taken up more rapidly by large farmers than

by small farmers. In addition, when the farms are large, fewer innovators are needed to obtain a given increment in output than on small farms. For these reasons it is often true that larger and more rapid increases in production are anticipated in programs involving the larger farmers, whereas a concentration on small farmers may entail higher costs for services as well as slower results in output. The latter are then diminished in value by being discounted through time. This tendency for more social profit to be expected in a program directed to large farmers does not arise from any difference in degrees of uncertainty over results: but here, too, the small farmer programs may suffer in the comparison. Does all this mean that the social accounts method incorporates an improper bias against small farmers? Not necessarily; if the estimates favoring large-farmer projects are realistic, i.e., if they are not a result of unjustified prejudice against small farmer potential, then their meaning is that a country can raise its real income more efficiently by concentrating on the larger producers. To do otherwise would be to slow aggregate growth; and when a slower-moving, higher-cost small farmer program takes up resources that might have gone into an alternative and more efficient program, this will entail some sacrifice by the nation as a whole. If, in addition, the small farmer program needs a larger subsidy, the sacrifice is that much greater.

Recognizing the existence of such sacrifices, however, does not rule out all efforts to help small farmers. The tendencies described do not prevail in all circumstances; nevertheless they do have a general probability in the short run. Would a longer run outlook be more favorable to the small farmer? Perhaps; but the question is how far into the future one must look. And if that could be estimated, what social rate of discount for the passage of time should then be applied? Conceivably, the conventional method of determining this discount rate from prevailing interest rates leads to unintended results: even if people are relatively short-sighted in their personal lending and borrowing behavior (i.e., they agree on high interest rates), it may well be that their government ought to be a good deal more farsighted in its policies. The same people who borrow at high interest—e.g., small farmers—might prefer to see a "higher" standard of behavior in those who guide their society. One might suppose that government behavior usually is more farsighted than that of individuals, but this does not necessarily follow. Depending on the nature of the political system, the practicing politicians are sometimes under intense short-run pressures that would imply a time horizon much narrower than that implied in the social discount rate the World Bank uses for their country. However that may be, it is apparent that the issues involved in the degrees of desirable farsightedness in policy, and in the way that the future of small farmers should be looked on, have carried us beyond the scope of conventional economic logic.

*Non-economic justification for expenditure.* Many government expenditures are undertaken, and are socially approved, with little or no economic justification. A defense establishment, for example, must be justified on other grounds. It can be argued that national security is necessary for an economy to function; but one can hardly relate the addition or subtraction of an army batallion to any increments in output. Any number of expenditures, from the establishment of a department of religion to the building of a public monument, are acceptable without any pretense of economic justification. So why not a small farmer credit program?

Such a credit program, of course, does pretend to be an economic investment, and these claims may be subjected to tests of economic profitability. But these programs are thought by many of their proponents to have other claims to public resources as well. Political support for small farmer programs is probably the result, in common practice, of a combination of the investment idea with the notion that a government ought to do something for the welfare of its poorest citizens with a little of the money from its more fortunate. While there are other reasons for adopting such programs, the welfare of poor farmers deserves most attention. Such an aim is sometimes compared favorably with the reasons for expenditure on public monuments or military gadgets. However, this ethical view of purposes is often at variance with the reality of credit programs, which are vulnerable to becoming political handouts to partisans or vehicles for cheap credit to rich farmers. It may be argued (see Chapter 2) that the best and indeed the only way of attaining the ethical objective—i.e., small farmer welfare—in any enduring way is to make a small farmer program a truly productive investment in the creation of viable producers.

The difference between this view and the usual profitability approach to public expenditures may be defined as follows. A pure profitability approach, such as that embodied in social cost/benefit analysis, implies that people will be fitted into the most efficient production activities; those who do not, for whatever reason, are disregarded. The creation-of-viable-producers approach starts from the premise that a particular group of people must be given attention. Alternative ways of doing this may then be subjected to profitability tests; but the assumption is that the most efficient project pertinent to the group in question will be adopted, even when its social profitability is lower than that of other activities which would benefit other groups. The people who are to receive priority attention will not be disregarded. Production plans will be fitted to them—under the guidance of efficiency criteria—rather than the people being fitted to the production imperative.

Reasons for giving priority to the creation of viable producers among the small farmers of developing countries were presented in Chapter 2. Because of the subject of this book, our discussion suggests that the production to be promoted is in agriculture. But this is a limitation on the subjects to be discussed here, and not an implied derogation of other kinds of production that might be undertaken by people who are now small farmers. There are no doubt many such farmers working on very poor land, or who for other reasons would be better employed in non-agricultural activities if they are ever to become viable producers. The promotion of agricultural output, however, will result in an increase of non-agricultural activities in farming areas that can provide new job opportunities for farmers. Agricultural expansion is very often the most promising engine of general growth in rural areas; and questions of geographical migration lie beyond the scope of our consideration.

The small farmer target group is a very large one, indeed it represents the majority of the population of many countries. To what extent is it possible for governments with limited resources to give special attention to so large a group, to sacrifice the potential income from investments in activities that would not help small farmers in order to undertake activities that will do so? It cannot be denied that some such sacrifice is probable when the small farmers'

responses to production stimuli such as credit programs are significantly slower, less certain, and involve more expenditure on auxiliary services or outright subsidy than the responses of other groups.

A strong argument for accepting this kind of sacrifice is to consider, as the social accounting does not, what would be the consequences of neglect of this group. If the people concerned would simply continue to live in their traditional way, producing enough agricultural surplus to supply urban and foreign exchange needs without causing any trouble, then neglect might be considered acceptable. This means accepting increasing dualism as a growth strategy; and to a large extent this is what many countries do without conscious decision or self-examination. It appears natural; and with limited resources that preclude any widely effective small farmer programs, some degree of dualism is inevitable. But there are many countries in which such a decision in favor of dualism and rural neglect would not be thought desirable if there were believed to be alternatives, and if the decision were confronted as a conscious choice. In others, the option to neglect with impunity may no longer be open. Burgeoning population growth in rural areas, pressing on land resources (under traditional technology) and generating a massive flow of unassimilable migrants to the towns, may already be creating problems that cannot be ignored. Both urban and rural unrest may be considered threats to stability. In still other countries the pressure of population growth on resources may be more moderate, but a policy of neglect may not be politically feasible due to rising expectations from various changes already underway in the countryside.

When for these or other non-economic reasons a government concludes that it must do more for small farmers, are there any guidelines as to how much of its resources should be devoted to this purpose? Should it subsidize, use up capital, and subsidize again until some viable producers are created? Once headed in this direction a government can never afford to do as much as it will wish to; but it must set its own non-economic priorities without much help from the economist (or the political scientist, for that matter). It must weigh its small farmer claims against those of others, economically productive or otherwise; and it must consider how far it should try to raise more revenues to meet the demands on its budget. Only within a framework of this kind where the basic scale of pertinent national expenditure has been settled, can the economist offer advice on how its small farmer expenditures may be most fruitful, as will be attempted below. The basic decision to make the effort on behalf of its small farmer population on a large or small scale can only be the expression of a national will, and the outcome of particular national cultures, political forces and leadership.

Before concluding a discussion of the non-economic justification for subsidies, one non-economic warning should be mentioned. Discussion of economic policy often proceeds as if it were possible to turn policies on and off with ease whenever this is socially desirable, but as a practical matter this is not true of subsidies. They can be easy to start but hard to terminate, because vested interests grow up around them. The final portion of this chapter deals with the particular problems of subsidy termination.

*Vehicles of Subsidy*

There are three types of vehicles for public subsidy affecting small farmer credit programs. The first is a subsidy of the credit program itself by providing concessionally priced capital and/or operating subsidies. A second is to subsidize the associated marketing activities by supporting product prices and/or providing concessionally priced inputs. A third is to subsidize associated services, either by providing them at public expense from outside a credit agency or by reimbursing the agency for specific service costs. The chief considerations in the choice among subsidy vehicles are their cost effectiveness in raising farm output, the probability of causing distortions in production patterns, and the probability that the subsidy will actually reach or benefit the target group.

*Program subsidy and the interest rate.* When a credit program is subsidized, the implication is that the program's lending operation does not cover its costs. The usual approach is to say that the unavoidable or justifiable costs are too high to be covered by a lending income which is regarded as fixed. But another way of looking at the same set of facts is to say that the lending income is too small to cover the costs that ought to be incurred. Since the lending income is largely determined by the interest charged on loans, we may say that the subsidies given to a credit program amount to a subsidy of the interest rate.

In Chapter 9 a number of reasons for raising interest rates were advanced; among other things, low interest rates divert subsidy benefits away from small farmers and curtail the scope of credit programs by a dependence on public funds. For the most part, the provision of operating subsidies seems to be an inferior way of covering justifiable costs in comparison with an increase in interest rates (delinquencies may not be considered justifiable costs). Furthermore, the difference between low subsidized interest rates and moderate rates that would cover normal costs is too small, at least in its impact on short term loan repayment cost, to have significant effects in discouraging farmers from adopting productive innovations. While that may not be true in all cases, we will argue below that this form of subsidy is less effective than others in supplying adoption incentives.

The subsidizing of credit program operations usually has two forms: payments of public funds to lending institutions to cover their deficits; and the provision to them of public capital at concessional interest rates below the opportunity cost of capital. The investment of public capital in a credit program, whatever the terms of its provision, seems necessary and does not have the deleterious effects of a direct operating subsidy. In the beginning of small farmer programs there is usually no other source of loan capital to be found (aside from foreign aid funds) in sufficient volume to get the program started. In time a certain amount of capital could be raised by farmer savings stimulation, but it will be slow in coming even with attractive deposit rates. Non-farmer savings could be actively sought, but this too could be slower in coming than may be thought desirable for the capital needed in the encouragement of new practices. So it appears that public capital will have to be provided, certainly for initial seed capital and very likely for a large portion of the program's expansion.

The rate of interest that should be charged by a government or central bank to the credit agency for its use of public capital, and the question of whether

repayment of the capital should be envisaged, are difficult issues. It is fairly common that little or no interest is paid, and no repayment is expected. These practices must be recognized as indirect subsidies because the capital is less profitably invested than it could be in other uses. However, if the government were to charge market rates of interest, this might raise initial program costs so high as to kill off the program before it got started. Perhaps the best solution is to charge a relatively low concessional rate in the beginning; a zero rate, however, would imply free capital, an unhelpful attitude to encourage. As a program becomes established and productive (i.e., assuming income from program lending rates exceeds costs), it may be possible to raise the government's rate. But this rate is unlikely ever to equal private market rates. The view that it should do so, however justifiable in theory, is extremely unlikely to be acceptable in practice. This is also true of government capital in uses other than small farmer programs.

As for requiring the repayment of public capital by a small farmer credit agency, this would imply either that the capital has no further socially accepted purpose in its use by the agency or that its use elsewhere has become a more urgent need. The farmers concerned may have achieved sufficient viability to need no further special loan funds, or else their viability may have come to be seen as a hopeless cause unworthy of further support. Some may feel that all small farmer credit agencies should eventually be phased out of existence and find their place in an integrated capital market. This last implies that their interest rates offered as payment to obtain loan capital should eventually compete with the rates in other comparable capital-seeking institutions. This does not necessarily mean private market rates, but could be those in the nation's larger banks. Putting these considerations together with those of the preceding paragraph, the conclusion which emerges is: in principle, a specialized credit agency for small farmers should either move toward the obtaining of its capital on terms like those of other financial institutions or, if it cannot make this transition and remains dependent on concessional terms, it should in time repay that capital and cease to operate. (This last assumes that the capital has remained intact.) Both these alternatives, it should be noted, are "tough" policies, implying an end to the special position of credit agencies intended to benefit small farmers.

To summarize: when a government decides that it wishes to give public support to a credit program for small farmers, it will probably have to invest some of its capital therein; but it need not and should not subsidize operating costs directly except in abnormal circumstances, and then with caution. It may initially provide this capital at concessional interest rates to help start the program. From then on, the more capital that can be raised from private sources the better; and the use of increasing interest rates to be paid on further tranches of public capital should be considered. In the longer run, if a government decides that particular groups of small farmers (not necessarily all its small farmers at the same time) should no longer be given special treatment, the pertinent credit institutions or branches thereof would either have to be phased out or made to function in an integrated national capital market. The integration effort is, of course, much harder to carry out effectively than a simple cessation of funding, but is probably the more constructive of these two alternatives.

*Marketing subsidies applied to input and product prices.* The strongest case to be made for marketing subsidies is that they can materially affect the adoption of desired technical innovations by increasing farm incomes. That they can do this more effectively than an interest rate subsidy may be indicated with an illustration using figures presented by Richard Roberts of FAO at the Abidjan workshop. In round numbers, these relative values are those found to be representative of a number of common innovations surveyed by the FAO: a farmer making an annual net income of $50 with traditional practices can frequently raise his output level by $150 using new inputs purchased with a loan of $100 to be repaid after ten months. Taking these figures literally: if the interest rate is a subsidized 6 percent a year, this will take $5 out of his net gain of $50. If the interest rate is a (presumably) non-subsidized 24 percent, its cost to the farmer is $20, a difference of $15. The interest rate subsidy, therefore, will not add very much to his adoption incentive: the farmer's $50 income will rise to $95 rather than $80. However, if the price of his input is reduced by subsidy, the percentage of this change will be applied to a base cost of $100; or if the subsidy is applied to raise his product price, the percentage of this change will be applied to a base cost of $100; or if the subsidy is applied to raise his product price, the percentage change will be applied to a base crop sale of at least $200. Thus, rather small percentage differences in these prices could produce quite significant increases for net profit values in the $30-45 range as seen by a farmer whose previous income standard was $50. (This illustration is more suggestive than conclusive; particular farm income changes in more carefully defined conditions would have to be calculated, and compared with respect to the associated subsidy costs, to reach firm conclusions on relative cost effectiveness.)

The relationships between the cost to government of applying marketing subsidies to inputs as against farm products, and the resulting percentage changes in price levels, are subject to a number of uncertainties. This is especially true of the volatile prices for farm products subject to variations in weather and short run supply conditions. Both demand and supply elasticities are involved, along with the volume of the commodities in the national markets. Generally, input markets are smaller in volume and thus cheaper to manipulate than product markets. If the objective is to push the adoption of an input like fertilizer which can be used for a variety of crops, then an input price subsidy is indicated. If the objective is to push the adoption of a specific new crop, then a product price subsidy is indicated. If both new inputs and a sharp increase in a familiar crop are desired, either subsidy can be appropriate: a given percentage change in price is likely to have a larger impact on farm profits when it takes effect on a product price (see illustration); but it will probably cost the government more than a comparable input subsidy. The relative cost-effectiveness of these two kinds of subsidy can hardly be estimated in general terms. It does seem probable, however, that a given subsidy amount invested in the marginal manipulation of either type of market could be magnified into larger farm income differences than would be possible using the same amount of public funds in the more direct income transfers of an interest rate subsidy.

Nevertheless, some of the institutional problems connected with the use of subsidies to support or depress prices, mentioned in Chapter 13 on marketing, indicate that it is not always easy to get the incentive results that may be intended by the adoption of such policies. There are numerous complexities and

areas where slippages can occur. It is not obvious who will actually be the beneficiaries of these subsidies, as they will frequently accrue in large part to people in the marketing chain that supply inputs or buy crops rather than to the farmer himself. Among farmers, the beneficiaries will often be disproportionately the larger farmers, who may not only be quicker to adopt the new inputs or plant the new crops but whose position in the market and whose access to credit may be more advantageous. Below-market prices for inputs can also depress supplies. Above-market prices for farm products may benefit chiefly the big farmers who did not need the added stimulus. Such farmers may also be the principal buyers of subsidized inputs when these are scarce. Overresponse to crop support prices can bring about unsold surpluses, leading to unanticipated subsidy costs and/or a sharp drop in prices thereafter. And so on.

If the subsidy objective is to stimulate new practices among a small farmer group, marketing subsidies will have some of this effect even when the major direct benefits fall outside the target group. The small farmers may indirectly benefit by having the chance to see demonstrations of new practices on large farms, or by getting better marketing services when that is the result (it often is not). These gains might be considered worthwhile, although a market subsidy is an inefficient way of reaching the target group. If innovation is the priority rather than small farmers per se, market subsidies look somewhat more efficient but still rather sloppy. It is, after all, impossible to direct market subsidies to just those producers who will need that particular stimulus to make the adoption decision without also subsidizing those who would adopt without the stimulus. The farmers who are in the marginal category will keep shifting year by year as adoption spreads. Perhaps the only way to obtain selective subsidization of adopters would be to offer to groups of non-adopting farmers a temporary package of credit facilities and low input prices on condition that they plant a new crop, or use a new method, with the whole arrangement understood to terminate at a fixed time (see discussion below). This is a far cry from the usual market subsidy, however.

In sum, the use of marketing subsidies is a relatively inefficient way of benefiting small farmer target groups, and is perhaps semi-efficient as a stimulus to innovation. It is also costly, and the costs are uncertain from year to year. Unlike the provision of seed capital to a credit agency, which can be augmented or not each year as budgetary constraints permit and which will continue to revolve usefully when it is not augmented, the entry into a market subsidy effort implies a continuing drain of unpredictable budgetary impact. It is most justifiable for innovative inducement, but for this purpose it should be gradually phased out as an innovation becomes better known. If an innovation never does become profitable without subsidized prices, it should not have been promoted in the first place. Its adoption under these conditions represents an inferior use of resources. The phasing out of a market subsidy is politically difficult, however, especially when the beneficiaries are rich and influential—as they often tend to be. Thus, market subsidies should be used cautiously, temporarily, and mainly to assist clearly desirable innovations that will later become profitable without such assistance.

An argument that is sometimes advanced for market subsidy is that it will help groups of farmers who are at a disadvantage in the market and give them a more equitable market position. Crop support prices are quite often defended

with this sort of rationale, and its simplicity gives it a readier political appeal than the more sophisticated argument on behalf of innovations. Support prices are easier to administer than many of the complicated proposals in this book for the assistance of small farmers. But in light of the preceding argument that public subsidies ought to be applied where there is a net gain in production, implying profitable innovation, the justifiability of non-innovative income transfers is much weaker—especially considering the possibility that farmers may not actually get much of the income transferred. Therefore, a tie-in with the promotion of a desirable innovation should be a prerequisite for crop price supports even where equity is also an important consideration.

*Subsidized services.* The services to be considered here are educational and advisory services, principally those in agricultural technology and in cooperative or farm management. The services of a credit agency that are related strictly to its lending operations ought to be covered by lending income, as argued above. The marketing services received by farmers, insofar as they involve no technical assistance and are supplied by traders or conventional marketing institutions, would not normally need or merit subsidy. However, a variety of educational and research activities supporting the services to farmers are appropriate for subsidy. Along with the conventional education and research in support of extension work, this could include market research, training courses for farmers, and mid-career courses for credit agency employees or extension agents. Some borderline cases may be envisaged: for example, subsidized services to enable farmers to develop cooperative marketing activities may be desired. Some kinds of stimulus to traders, such as credit facilities and instruction in the use of new inputs to be relayed to farmers, might also be thought desirable as objects for minor subsidy. For the most part, however, the conveyors of the subsidized services under consideration would be extension agents and cooperative advisors, and perhaps credit agency technicians similar to extension agents.

Most of the considerations mentioned above in derogation of other subsidies do not apply with the same force to subsidized services. These do not, in themselves, distort market forces but tend to assist them. They tend to reach target groups of small farmers with greater certainty. To be sure, the extension agents do have a tendency to spend more time with large farmers than small farmers, but this weakness is in some degree remediable. And generally speaking, services do not involve governments in such large or unpredictable expenditures as do market subsidies or the provision of public capital. This last point must be made with caution: overelaboration of service bureaucracies which are less productive than anticipated can be costly, and fully as difficult to phase down as a market subsidy. But, on the whole, the subsidization of services seems less likely to bring about large expenditures for dubious purposes.

On the positive side, the consideration of ways to remedy prevalent weaknesses in small farmer credit programs, as taken up in various parts of this book, have pointed to several kinds of improvement in the operation of such programs that imply higher quality service inputs. This is particularly true of the need for emphasis on new technologies, which should be tested for small farmer profitability and adapted to local conditions before their promotion. It is also true of the stress on higher quality in cooperative performance, and the value of training in cooperative management. These two areas, improved technology and management, are the most hopeful avenues to the goal of small farmer

viability insofar as claims on public funds are involved. (Other useful policies, such as improvement in rural capital markets and attention to savings, do not imply public expenditure on a significant scale.)

While one may say that subsidized services are likely to prove more productive than subsidies in support of low interest rates or non-market prices, this does not mean that services are the only vehicle appropriate for subsidy or that they can accomplish what is needed in isolation. For example, well tested new technologies will need loan capital to facilitate their adoption, and this will imply public funds. Also, there are always limits to what can be spent for services on behalf of small farmer agriculture, while service establishments can always think up reasons why they need more money. The kinds of research that *may* be productive can be nearly infinite; and extension or cooperative divisions can always reach more farmers if they have more personnel. Obviously there must be selectivity, and the cost-effectiveness of different activities must be scrutinized. Nevertheless, when there is a choice of subsidy vehicles for accomplishing similar purposes in small farmer programs, the services vehicle should be given a general preference over interest rate or marketing subsidies. This view was developed during the Spring Review workshops by Charles Nisbet, who presented it in the later meetings without being seriously challenged.

*Termination of Subsidies*

The notion that subsidies, however useful as temporary devices, ought to be terminated after they have passed their peak of usefulness has been brought up in connection with the provision of loan fund capital and the use of market subsidies for the promotion of innovations. A reduction would also be appropriate for some, but not all services. Technical advisory services for promotion of specific new practices would be decreasingly needed as the particular practices became known; but it is not desirable that an extension service be curtailed nor that scientific research and the development of subsequent innovations should cease after a few victories. In the most advanced countries such activities are carried on at a large and increasing scale, and the needs of poor countries are surely not lesser ones. Certain kinds of skill that are in short supply initially may later become sufficiently widespread that training courses may be cut down, but not necessarily to zero; training may be desirable for the new generations of practitioners. For example, training in cooperative management would probably be at a peak when new cooperatives are being formed most rapidly; but in countries like Taiwan and South Korea, where these institutions are already nation-wide, the training of new managers continues. However, except for the public support of services that are thought desirable as permanent adjuncts to agriculture, subsidies should eventually be ended. This is required for the goal of viability.

There are two ways of managing the termination process. The first is by phasing out the public support of an institution, or of a policy in the case of price subsidy. At the end of the preceding chapter the idea of termination as a gradual change, applied with flexibility where most appropriate, was proposed. It may sometimes be easier, however, for administrators to terminate support policies abruptly than gradually and with precise appropriateness. This would vary with circumstances. Termination involves a struggle with the representatives of beneficiary interests, and the most effective tactic can hardly be

prescribed in general terms. Some observers recommend that subsidies, particularly market subsidies, be initiated with a terminal date and perhaps a phase-down schedule defined from the beginning. This too is a tactical matter, for it means prolonging and repeating a struggle at every phase unless the schedule can be accepted as automatic. There are situations where economic disruption could be reduced by gradual withdrawal, as opposed to abrupt termination; and there are cases where pre-defined terminal dates may seem less appropriate when the time comes than they did when they were set. As against these economic considerations favoring gradualism and flexibility, the possibility that gradual shifts may be harder to enforce against resistance than would be a firm and simple decision is worth considering. The political effectiveness of different tactics should perhaps govern here if the job is to be done.

The second and less used way of managing the termination of subsidy, one which merits serious examination, is to apply it to individual farmers rather than to whole institutions and policies. This means "graduating" farmers from subsidized conditions, leaving them to find their way in the market after having received the benefits of preferential treatment. In a credit program where loans are extended with subsidized low interest rates, a graduating farmer would cease to be eligible for such loans and would seek credit from conventional banks or from informal sources at higher rates. There could also be special services within a credit program for which he would no longer be eligible, and conceivably special prices as well.

Several reasons may be advanced in support of this idea. The basic thesis is that farmers who can stand on their own feet should be encouraged to do so rather than retained under preferential treatment at government expense. If the experience of getting supervised loans at concessional rates has an educative value, and especially when this treatment has taught the farmer to use improved methods, then he should be able to stand on his feet more readily than before; but he will not choose to do this unless he is forced to by graduation. When credit programs are operating at a loss they cannot be extended to all the farmers for whom this experience would be desirable, so that there should be a turnover of farmer clients to augment the reach of such a program beyond the limited numbers it can accommodate at any one time. In this way more farmers will get the chance to learn, and will then have the incentive to use their knowledge to achieve viability—which is the ultimate program objective.

The Nicaraguan experience with farmer graduation illustrates some of the practical problems involved (Rene-Ramirez, Vol. I, article 5, p. 9). Out of some 24,000-30,000 clients of the rural credit program of the National Bank of Nicaragua, which began in 1959, 457 had been graduated as of 1971 and 700 more were considered potential graduates. The criterion was: farmers who had "reached the point of qualifying for ordinary bank credit," which meant, in practice, capital assets of a minimum value. It was thought that the physical distances from banks and their loan processing time were the main obstacles to graduation. Many farmers reportedly "try to remain in the NBN program," even when this allows them less credit than they could productively use. It was not clear how much compulsion was used on them to make the transition to graduation. The program's interest rate for most purposes was about 10 percent a year; the banks' alternative rates were not stated, but evidently that was not the main obstacle. One may conclude that, in Nicaragua at least, the banking

system was not ready to accommodate very many small farmers, nor were the farmers eager to seek bank loans.

The graduation idea was discussed at the first Spring Review workshop in Costa Rica. The form in which it was presented stressed the provision by a credit program of loans at low interest rates, and the graduation of the best farmers among the clients of a program by denial of such access. The best farmers, it was assumed, were those who would be most capable of managing without low interest loans and most acceptable as bank customers, as in the Nicaragua scheme. In this form, the graduation proposal drew virtually no support among participants from developing countries and aroused strong opposition on the part of some U.S. participants. It was objected that this method would set up perverse incentives by punishing the farmers whose performance was superior, and would lead to bad feelings toward the program along with poor farming. From the standpoint of credit program administrators, graduation would mean systematically ejecting their best clients while retaining the inefficient and the defaulters, which could not fail to injure program performance. After this reception, the graduation idea was given only sporadic discussion in subsequent workshops.

This was unfortunate: while graduation of the most viable farmers appears to be the conventional approach, there are other ways of doing it that would have more appeal, and these would seem to merit further discussion and an exposure to the reactions of program administrators in developing countries. The method proposed by Philip Church in his Spring Review paper (Vol. XIX, pp. 401-20) is to graduate individual farmers after a four year period of special treatment without attempting to judge their relative efficiencies or repayment records. This would provide a rapid and automatic turnover of a program's clients to extend its reach, and would not entail fallible judgments of farmers' skills or their relative capabilities in the absence of subsidy. It would keep the incentive for graduates to attain viability in the market, but would not depress performance records and financial solvency within the program. Indeed, if delinquencies tend to increase over time, as experience indicates, a rapid turnover of clients could have a positive impact on client repayments. (This would depend on whether the increase in delinquency is an individual more than a group phenomenon; but even if it were the latter, turnover might be helpful). Further, the Church method would be consistent with a credit program emphasis on technical innovation. The period of preferential tutelage would be one in which adoptions were speeded up, and that would provide grounds for anticipating a generalized improvement in farmer capabilities at the end of the period. And if farmers knew from the beginning that they and all their fellow clients were to graduate at predefined times with no favoritism, this should eliminate the resentments that would result from an administrative selection of the graduates.

These advantages are strongly persuasive, but some limitations should be mentioned. Regardless of how the graduates are selected, the whole concept assumes that there will be credit facilities available to them where they no longer have access to program loans. Ideally, the banking system should be ready to step in and expand its small farmer credits to keep pace with the program's output of presumably viable graduates. But in a good many countries this is not realistic. Not only must the bankers' reluctance to engage in such high cost lending be overcome, but the graduates would have to qualify for loans in the bankers'

terms. Good performance in a credit program, including his repayment record, might entitle a farmer to favorable consideration by a bank, but it would not necessarily supply him with the requisite collateral; if he were a tenant farmer, that would certainly be lacking. A possible solution would be for credit programs to make up a formal certificate of good performance for presentation to the bank, either in place of or in addition to collateral. If these were to become of value in obtaining bank loans, however, they could not be issued too easily, or in very large numbers which would prevent the banking system from honoring all of them. This could impose a severe limitation on either the practice of graduation or the meaning of it: if most graduates could not expect certificates, the graduation concept could be undermined; but if certificates were usual for large numbers of graduates they would nearly be worthless; and if graduation and certificates were both limited to small numbers, then the automatic turnover of an expanding program clientele would no longer be possible.

Several alternatives may be considered. The least difficult would be to accept no responsibility for graduates, leaving most of them to return to the informal market in countries where the rural banking system is limited—i.e., in most developing countries. The graduating farmer would be somewhat better off than before if he had learned something during his credit program experience. If this alternative is compared with the normal credit program having a relatively static clientele, the practice of graduation and client turnover may be defended on equity grounds: more farmers would be reached with limited resources, and the opportunities for improvement would not be the exclusive privilege of those who had the luck to become early clients. On productivity grounds, too, an increased impact of credit programs is probable. One could do worse than to operate in this way.

A more ambitious alternative is to try to ensure non-subsidized institutional credit facilities for graduates, growing with the numbers of graduates in particular areas. A major difficulty, of course, is that at least some, and perhaps a great many of them when graduation is automatic, may not be creditworthy even by relaxed standards. (This was the rationale for graduating only the "viable" farmers which, as we have seen, is probably an unwise procedure.) The graduates ought not to be given an unconditional license to borrow. The right to one initial loan, however, would be less harmful than a right of indefinite duration; borrowers would have to prove themselves by repaying that loan on time, as a minimum, and lenders' discretion in the selection of continuing clients would be a necessary discipline. Other, more elaborate conditions could be imposed on the farmers. Nevertheless, the provision of institutional credit for graduates in any systematic way, however conditional, would still require a purposeful expansion of rural facilities in most countries, an expansion which could not be left to market forces and the occasional inclination of bankers.

One way this could be done would be the selective issuance by credit agencies of certificates of creditworthiness to graduating farmers which banks would be required by law to accept in lieu of collateral. Banks would be allowed to charge higher interest rates to such borrowers than to ordinary customers to cover their higher costs and risks. This arrangement would be possible when banks had at least some branches in the appropriate rural areas. Not all banks would want to take on such loans, however, and some would be more interested in doing so than others. The legal requirement to accept this kind of substitute

collateral might be applied only to banks which had volunteered for the function, having ascertained that the interest rates they would then be allowed to charge were high enough to hold out a prospect of profitability. If the experience of such banks proved with the passage of time that small farmer lending was in fact profitable, other banks would wish to enter the field. If not, various adjustments could be tried out. This device could be regarded as a means of enticing banks into small farmer lending, and thereby integrating such rural loans into the national capital market.

An alternative way of providing institutional credit for graduating farmers in countries where this kind of requirement for banks was unacceptable, or where branch banking had been very little established in rural areas, would be a special-purpose credit agency for serving these farmers without subsidy. Like the institution from which they had graduated, this one would also need public capital to get underway, but it could be provided by the government on non-concessional terms. In other respects, such as the absence of supervision, the graduated farmers' agency would function more like a normal bank. This two-tiered set of institutions for small farmer credit could serve the purpose mentioned above of shifting such credit away from the subsidized to the non-subsidized category. Rather than attempting to accomplish this change by shifting policies within one agency, which could be difficult, it would be done by shifting farmers from one agency to another. And the second agency could, if it actively sought savings deposits to expand its loan capital, eventually find its way into the integrated capital market of the country.

There is, of course, a wholly different approach to the question of graduation by eliminating the need for it. If a small farmer credit program could operate without any kind of subsidy, then there would be no necessity for graduating farmers out of it. This seems unlikely, however: as a minimum, public capital on somewhat concessional terms and educational/advisory services seem to be required for such programs to accomplish their purposes. But if interest rates on loans were kept high enough to cover lending costs, then the difference between these rates and those charged by a wholly non-subsidized small farmer lending institution would be very much reduced. The difference would not be wholly eliminated until the first small farmer agency obtained its loan capital on market terms, but this difference could be reduced to a point where the graduating farmer would find it a lot easier to think about. With one of the most visible aspects of graduation rendered more innocuous, the transition would be greatly eased.

*To summarize:* the termination of subsidies in a small farmer credit program can be accomplished either by graduating an institution from subsidized treatment, or by graduating its clients from the institution. The former is a more familiar idea, though it seems not to be widely practiced. The graduation of farmers has, as far as can be ascertained, been tried out only in Nicaragua on a small scale, and has never been used as an automatic policy affecting all farmers after a defined period as proposed by Church. The termination of market subsidies has been more widely undertaken than the termination of subsidies to institutions, and has been more widely discussed as a conscious policy. In particular, the phasing out of subsidation of fertilizer prices has been the policy in a number of countries; and crop support prices have come and gone in various countries. The subject of terminating institutional subsidies, and the development of policy

criteria and methods for doing it, deserve far more attention than they have yet received. And the method of graduating farmers after a specified period of time certainly merits further exploration.

One may speculate on whether the paucity of interest in subsidy termination stems from a general pessimism regarding the potential viability of small farmers, and whether or not this is realistic. Contemplating the many poor farmers of Nicaragua, for example, it is hard to imagine that most of them could become acceptable as bank clients in one or even two generations, so that a certain despair over this prospect is understandable. It may be, however, that the reason for a lack of interest in subsidy termination is not so much pessimism as inattention to the idea, which presents itself in a negative light to those who are engaged in small farmer programs and who are thinking positively about increasing rather than ejecting their clients. For example, client turnover may never have occurred to them as a feasible means of extending their services. At the same time, the pessimism concerning small farmer prospects may be the result of using conventional bank lending criteria as the test of "viability." It is not the only possible test. As noted in Chapter 2, almost any farmer could be regarded as viable at one level or another if he is not on the road to bankruptcy. Viability at high levels of commercial sales and bankable assets may be too elevated a standard to set. What is needed may be some working definition intermediate between subsistence and the eligibility for conventional bank loans.

The farmer who is slowly increasing his output and sales, and making occasional improvements in his farm or house or his family's educational level, may be considered individually viable, even when he is unimpressive to a bank. So the challenge would be to devise credit facilities which he could use to advantage that do not depend on public subsidy. Thus, while the goal must be stated in terms of farmer viability, the way to reach it is through institutional viability. This is the answer to the pessimist who doubts that farmers can change fast enough and in sufficient numbers to make farmer viability a practicable goal of credit programs, and is therefore resigned to the prospect that many small farmers will "need" subsidies indefinitely. Farmer viability will be a practicable goal when sufficient imagination is applied to the problem of successfully achieving an institutional viability suited to the farmers' rates of change.

## *NOTES*

[1]Interested readers may wish to consult J. Price Gittinger, *Economic Analysis of Agricultural Projects* (Baltimore: Johns Hopkins University Press, 1972), the text used in courses of the Economic Development Institute of the World Bank. A condensed article based on this book appears in AID's *Development Digest*, July 1973, p. 3.

[2]Some relatively new and controversial methods of making up social accounts to incorporate other factors than those described here, such as income levels or unemployment, are being discussed in the World Bank and elsewhere. They do not, however, provide automated solutions to income distribution problems.

# 17 *Basic Strategic Choices*

The preceding chapters on policies for financial and auxiliary institutions have pointed to a wide variety of policy tactics which must now be considered in combination, so that overall strategies may be developed. To initiate the consideration of strategic choices, we will analyze two fundamentally different approaches to small farmer credit: the extensive and the intensive; we will also explore two versions of the intensive strategy. Both the major strategies have their virtues, and both encompass particular policy suggestions that have been brought into the preceding chapters. But they lead in quite different directions, and they imply very different priorities in making up policy combinations. In the interests of clarity in analysis these two strategies will be described in extreme form—too extreme, perhaps, for wholesale adoption by governments. Most policy makers would probably wish to obtain some of the benefits from both strategies. But it will be very difficult to get the best of both worlds; certainly this would be true in any short-run period, and it is probably true in a medium-run perspective as well. Therefore, a comparison of the most probable results of the two contrasting strategies can pose some basic questions as to what one believes is most important, and supply guidelines to paths which will lead in appropriate directions.

*The Extensive Strategy*

The goal of the extensive strategy described here is to make institutional credit available under reasonable conditions to the bulk of a nation's small farmers. This is *not* to be confused with the short-run purpose which has too often afflicted credit programs, that of pushing out loans to the maximum number of people in the minimum time. Such a policy invites defaults and financial losses, and thus prevents the establishment of a credit operation that could reach all

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Contributors to this chapter include Dale Adams, of Ohio State University, whose vision of the potential in what is termed here an extensive strategy has been influential; Ronald Tinnermeier, of Colorado State University, has contributed ideas on production strategy; and Akhter Hamid Khan of Pakistan, founder of the Comilla program, has contributed ideas on equity strategy.

farmers in any regular, enduring way. Building a durable structure that can extend everywhere is primary to the strategy and it must be designed from the start with this in mind. The time it will take to be brought into operation is a secondary, tactical consideration and will of course vary widely by country. However, the serious pursuit of an extensive strategy would generally bring about a more rapid attainment of nationwide coverage than would be possible with alternative strategies described below.

In order to meet this goal, credit institutions will have to be capable of reaching small farmers "under reasonable conditions," which means a geographical dispersion of credit facilities to localities where they are needed. It also means that the conditions for obtaining loans be such that the great majority of small farmers can meet them. Not all farmers will need or wish to borrow, and delinquents cannot be allowed to borrow *ad infinitum.* But lending criteria must be adapted to the clientele, unlike those used in conventional banking. A second major requirement is that the lending to small farmers be sufficiently profitable to credit institutions that they can expand and maintain their credit operations on a large enough scale. Whether these institutions are public or private, and whether or not they are chiefly special-purpose organizations or are integrated with other types of lending, it is clear that the total operation must be large and will represent an appreciable element in a nation's overall capital market. For such a large operation to be sustainable, profitability is essential.

Given this objective, one of the most important implications is a heavy emphasis on low-cost operations and cost-conscious discipline in decisions at all levels. This means maintaining a low level of overall cost to government, reducing administrative and auxiliary costs within the lending organizations, and holding down defaults. Another, equally important implication of the extensive strategy is that lending income must be raised high enough to at least cover normal operating costs. The two implications go together: only when small farmer lending can become essentially self-supporting can it be extended as widely as to satisfy the strategy objective. While many governments may provide major subsidies steadily to small credit programs, they would not be able to keep this up for larger programs extended to all a nation's farming areas. Some kinds of subsidy to a nation-wide credit scheme are probably unavoidable, at least in the initial stages, but there is a clear conflict between extensiveness and operating deficits.

All this puts a high priority on higher interest rates for loans to farmers. They must be high enough to at least cover normal costs, and preferably to permit some capital accumulation for expansion of loan operations. The interest on loans should also be high enough to permit the accumulation of savings by payment of effectively attractive interest rates on deposits. In these ways the need for government seed capital will be reduced. The 18-24 percent loan rates suggested in Chapter 9 may approximate a viable standard for many countries; after the volume of operations has reached a reasonably large scale, it may be possible to reduce loan rates somewhat.

Once the rate of interest has been increased enough to make small farmer lending profitable, a major barrier to extension of credit to farmers will be much reduced. It then becomes possible to interest existing banks in small farmer lending, thus reducing still further the need for government seed capital. The devices noted earlier for inducing banks to take up small farmer loans may be applied:

preferential rediscount rates and other preferences, such as differential taxation based on a bank's portfolio content; and capital matching for establishing private rural banks. These policies will be far more likely to succeed as the lending in question becomes demonstrably profitable. The establishment of special-purpose lending organizations running at a profit could provide a demonstration effect. One of the main reasons why such lending has not been thought profitable has been high default rates; but, given a potential for profitability within reach, banks would have a stronger incentive to pursue delinquents and prevent the spread of defaults. In general, the extensive strategy is one which favors maximum participation in small farmer lending by all types of financial institutions, and an acceleration of the process of integrating rural credit into national capital markets to ensure its permanence.

At the same time the extensive strategy must be a low-cost or minimal approach, which implies a restraint on or elimination of various services which might be thought desirable. Supervision of loan uses, with technical specialists devising farm plans for individual farmers and specifying inputs for which credit is to be used, is virtually ruled out—at least as an activity performed within the credit agency. When this kind of guidance is not attempted, neither is the enforcement of any recommendations, leaving the farmer free to use credits for consumption or any other purposes he may see as important to him. Such an approach is consistent with the "line of credit" for individual farmers, as proposed in Chapter 5, where the farmer can obtain loans up to a maximum limit with little or no processing by the lender, and thus promptly, so long as he maintains his credit standing by timely repayments.

The extensive strategy does not require a total absence of technical services, but rather a restraint on the expert manhours devoted to them. In effect, it implies that technical services should feature the provision of information in improved methods, new crops, etc., but without a lot of expert time spent on the instruction and follow-up with individual users of the information. Where such instruction is undertaken, much of it could be done by low-cost paraprofessionals. It may also be possible to organize classes for innovating farmers chosen or elected from different villages, in the Comilla fashion, provided this can be done at low cost and results in a saving of expert time in the extension process. Generally speaking, reliance will be placed on a farmer's incentive to adopt innovations insofar as they seem profitable to him, a philosophy conducive to cost reduction.

In another field, the low-cost imperative points to the value of group lending, and therefore of farmers' organizations. However, the government may not need to invest much of its resources in major efforts to organize cooperatives where they do not exist, and should not emphasize the elaboration of their functions as a goal in itself. Simple loan receiving groups, with group responsibility for repayment (as in the Ivory Coast), may be sufficient. The extensive strategist can look on farmers' organizations in a flexible, instrumental way: if they exist, and can do a good job when supplied with credit facilities, well and good. But if there is resistance to their formation, or if they perform poorly vis-à-vis the credit institution, then other relationships may work better. The extensive strategy, for example, could well be consistent with an effort to develop individual bank agents in villages as an alternative means of reaching more farmers at low cost; it could also include a bank's cooperation with *promotores* or loan guarantee schemes (see Chapter 10). In the discussion of village agents in Chapter 10, the

principal weakness of this method was seen to be the difficulty of controlling these agents. But if banks find small farmer loans profitable, they will have an incentive to find ways of establishing such controls as they find necessary to their purposes; we need not try to predict what forms such controls might take.

In the field of marketing, the emphasis under an extensive strategy would be on generalized facilitation rather than particularized efforts to improve the position of a target group. This is consistent with an effort to increase competition among traders by improved roads, increased storage facilities at all levels, and perhaps by an information service with radio broadcasts describing prevailing prices and supply conditions. Loans to build storage capacity, and selective extension of credits to traders to bring more of them into an area and broaden competition, would not be out of place. Again, reliance on private incentives is the key, but with an alert government eye to areas where physical infrastructure is most in need of public improvement. Some of the tax money saved by the elimination of subsidies to credit institutions and by a reduced need for public seed capital could be used to build storehouses or feeder roads. The resort to price controls requiring subsidy, however, is alien to the spirit of the low-cost strategy envisaged here, although an extensive strategist may wish to use these occasionally.

*Results.* What kinds of result could be expected from the adoption of an extensive strategy of this kind? It is not simply a laissez-faire policy leaving everything to market forces, but it concentrates government attention on providing new facilities to be used as market forces and private incentives will indicate, and on bolstering private incentives. It is not a reinforcement of the status quo: the new facilities and new activities envisaged are very likely to disturb vested interests of various kinds. But it is certainly a loose policy, one which avoids government responsibility for the details of economic decision making and for the fate of particular socio-economic groups, even though there will be some groups that benefit more than other groups.

Accordingly, the results will be diffused, and not easily predictable since they will depend on a wide range of private and institutional responses to incentives. With respect to the two major purposes of small farmer credit programs, production and equity, the prospect for the former is necessarily uncertain. If credit facilities become effectively available to all farmers, these may be wisely or unwisely used. There is no way of guaranteeing specific or short-run production results, and a certain amount of time lag in responses should be anticipated. But there is, at least, a prospect that many of the counter-productive consequences of the more usual control policies can be avoided, and that in the end the incentives will take effect. The question of how much effect is, in part, a matter of the degree of small farmer rationality, and partly a result of their skills and dynamism in response to opportunities. Empirical research cannot fully answer the question: some economists keep finding new evidence of small farmer rationality in specific situations, while others find irrationalities widely prevalent.[1] Perhaps it can be said that a country pursuing an extensive strategy will achieve something like the production levels that its producers will really want if they are given the opportunity—a platitudinous but not empty statement.

On the matter of social equity, more can be asserted. If credit facilities which have been available to other sectors are extended to small farmers who have been deprived of them, and if institutional credit is an important key to economic opportunity, then the cause of equity is served. The farmers who have been dependent on high-cost informal moneylenders will be freed from this dependence; and improved input supplies and competitive markets, insofar as these appear,

will open the farmers' horizons. Since one cannot predict the productive responses of small farmers who are given these new opportunities, one cannot predict how far they will improve their income levels relative to others; but the result surely ought to be positive. And the concept of equity is not limited to income equalization as measured by changes in Gini coefficients; it also implies an element of justice, in the sense of equalizing opportunities irrespective of how these opportunities may be used.

This reasoning may sound a bit facile. Too often the introduction of new credit facilities for small farmers has ended, in practical terms, with the larger farmers taking most of the credit and improving their relative position. But such credit programs have been limited in scope; always there were scarce facilities for some to seize at the expense of others. If institutional credit at interest rates more favorable than those of informal lenders were sufficient for the needs of all farmers, this would make a significant difference. It would not transform society, but it could lead to incremental improvements in equity in ways not reflected in past experience except, perhaps, that in Taiwan. The corruption arising from limited supplies of cheap credit would be eliminated. There would still be a probability for differential gains by the more capable farmers, and for local advantages obtained through personal contacts, for a persistence of patron-client relations, and a scope for other kinds of corruption. If banks extend credit through cooperatives or village agents, village notables may continue to play a part in the availability of credits. But there would at least be a weakening in some of the pre-existing monopoly powers of the more privileged, and a prospect for their further erosion over time.

In sum, the extensive strategy offers an undefinable but generally positive prospect for gains in production levels, a diffused rather than concentrated advance but one which may be more consistent with local resources than would production stimulated by more highly focused and administered methods to be considered shortly. With respect to equity, the strategy offers a very probable net gain in the equalization of incomes. However, the loose policy approach by government does little to prevent localized abuses by the strong or wealthy. These should in time be reduced; but in the short run they will have to be ignored in the interest of a wider opening of rural opportunities generally, many of which will benefit small farmers.

It is difficult, however, to draw conclusions on the prospect for success in an extensive strategy on the basis of experience, since no country has followed all the guidelines suggested here. In terms of a nationwide availability of institutional credit to small farmers, this has been achieved only in Taiwan but is well on the way in South Korea. In both cases, however, it was the result of organizing specialized farmers' associations over a period of 50 years or more, carefully and with strong centralized management. This was not a process relying on generalized stimulus to existing credit institutions nor on private incentives alone, although profitability in lending (and good production results) can be claimed for the outcome. Another example of relatively wide coverage by credit institutions is found among the rice farmers' cooperatives in Sri Lanka. But the high delinquency rates and the dominance of financially unprofitable public organizations in many aspects of the Sri Lanka program preclude its being treated as an example of the extensive strategy as defined here.

Perhaps the closest approach to an extensive strategy is that in Costa Rica,

where four public commercial banks have supplied an estimated 70 percent of the total credit to agriculture (see Spring Review reports by Gonzalez-Vega and Brown). Aside from a few foreign-owned banana plantations, most farms in Costa Rica are small or medium sized, and there are few landless laborers or tenants. Small farmer access to credit has been facilitated by special rural bank branches for small loans, called *Juntas Rurales,* organized by the largest bank; the Banco Nacional de Costa Rica provided over half the bank credit to agriculture and 85 percent of small farmer loans in 1971. Also important was the provision of credit to smallholder coffee growers through 127 dispersed processors. Banking is generally profitable: capital is supplied by the central bank at 2½ to 3½ percent interest and lent to farmers at 8 percent; administrative costs are spread over a sizeable volume and wide range of loan types in these relatively large banks, and default rates have been low. In the *Juntas Rurales,* with their somewhat higher administrative costs, minor losses were experienced steadily in their separate accounts from 1940 to 1961, followed by modest profits during 1962-69 from 0.8 to 5.7 percent of income; defaults ranged from 0.2 to 1.1 percent. Small farmer lending became profitable at 8 percent loan rates because of increased volume and conservative lending practices: collateral in land, cattle, or crop liens is almost always required; good local knowldege of borrowers and an active pursuit of delinquents have held down defaults.

In Costa Rica's nationalized banking system, lending by sector is tightly allocated by the central bank. This applies to small farmer loans, which are usually allotted 20-25 percent of the agriculture total. It appears that most bank credit has gone to medium (by Latin American standards) rather than small farmers, and to the latter chiefly because of long-standing allocation policy. The numbers of small rural borrowers rose during 1937-52, but remained relatively static in 1952-70 despite increases in total loan values; they began to rise again in 1971 only with AID funds specifically destined for small farmers. Agriculture has been generally prosperous, with production growing at 4.9 percent annually from 1950 to 1969; in 1964-71 the rate was 8.2 percent. But the main contributors to growth were the larger farmers; expansion was greatest in the traditional crops and in cattle, and these are where the bank credits were concentrated (cattle make good collateral). In sum, Costa Rica is a partial case of the extensive strategy, reaching further out to small producers than most credit systems while maintaining profitability. Although the results may be seen as generally good and superior to most credit programs, more could be done for small farmers if (1) interest rates were higher; (2) further crop diversification were undertaken; and (3) rural savings facilities were to be established.

Two other countries seem to be embarking on something like an extensive strategy, Colombia and India. It will surely be more difficult for them than for Costa Rica, a small (population 1.8 million) and homogeneous country with only minor ethnic/income disparities or political tensions and a per capita income of about $500. In Colombia the shift is too recent for comment. As for India, any brief comment on the latest intricate plans for extending agricultural credit, and on adjusting institutional strengths and weaknesses, would be inadequate. Much intelligent thought has gone into this planning, which involves designating a "key bank" in each District that is to finance local farmers through a variety of intermediary institutions. It is not clear to what extent these credits will be supervised or tied, whether interest rates will be raised , or how far market forces will determine allocations.

*The Intensive Strategy*

The essence of an intensive strategy, as contrasted with the extensive, is that whatever one undertakes should be done thoroughly and well. To use an analogy: if one is building a boat, it should be the best boat possible; one ought to use the best tools on the market, study the properties of different materials and select the most suitable, and consider carefully how the boat will be used so that its design takes account of all the aspects of its proposed uses. This does not mean indulging in unnecessary expense—for example, buying a costly machine that will save time on a few operations, or selecting a rare material for its looks when a cheaper one would be as durable. But as compared with the extensive strategy, an intensive strategy will give more weight to the discipline of quality and less to the discipline of cost.

This kind of thinking can lead in several different directions when applied to credit programs, depending not only on one's definition of quality but on one's level of caution. It could, for example, take the form of what may be almost a no-credit strategy: where there is no well-tested agricultural innovation yielding a predictable profit increment to probable users of some minimum value, such as an assured productivity gain of over 50 percent,[2] then institutional credit should be avoided. Capital is saved for other uses, and the risk of failure is eliminated. When a potential innovation does meet all the tests, it should be started slowly and expanded only as it proves itself at each step; and loans to farmers should be extended with strict security requirements. The assumption here is that there are profitable innovations and creditworthy borrowers to be found outside of agriculture, and these must be given priority. Any other policy would be wasteful, and would retard national progress.

Such a perfectionist approach would, in a great many situations, lead to a total neglect of smallholder agriculture—a result contrary to the main theme of this book. Yet the central point is important: credit which does not increase output and profit can do more harm than good if it encourages default or undue debt burdens and uses up scarce capital. Nevertheless we must not apply a perfectionist standard only to farm credit investments: it should not be a higher standard than that used in other fields with respect to the certainty of profitability. It is not necessarily true that non-agricultural profits are certain, or easy to obtain. However, the prospects in small farmer agriculture may seem unfamiliar to investment planners, and longer time horizons may be involved, so a higher level of caution is applied. Generally speaking, the overcautious investor avoids the mistakes he sees others making; but he misses their opportunities. For many individual investors, caution may be a suitable way of life. But for governments responsible for the economic progress of growing populations which include numerous small farmers, a higher level of ambition and courage would seem appropriate.

In what follows, we shall assume that an intensive strategist has an ambition for improvement of the welfare of small farmers equal to that of the extensive strategist, and we will compare the results of their different methods. In so doing, we do not ignore the virtues that may be seen in a no-credit or a limited-credit approach. It remains an intellectually respectable option; and inaction may produce "successes" in that money was not wasted and failures were

avoided. But these virtues seem clear enough, and in no need of further emphasis or elaboration; we turn now to more activist applications of intensive strategy.

In contrast with the extensive strategy aimed at diffused nationwide results, an intensive quality-oriented approach can be applied to a single project, one which might be rather small in scale. Indeed, the smaller the project the easier it may be to maintain the kind of controls and inspections that will ensure high quality in its operation—however quality is defined. But the purposes of a reasonably ambitious credit program are such that the high quality of a small, localized project is insufficient as a criterion for success. There have been a number of single projects in the credit field which have shown high quality performance in restricted areas, and are a source of satisfaction to their sponsors and managers. But unless they can be replicated more widely, they will be unable to contribute significantly to either the production or the equity goals of small farmer programs. Therefore, an important "quality" in a project is its replicability, not merely its individual performance. Typically, the outstanding projects that have been admired but not successfully imitated have been dependent either on high-cost inputs of some sort, whether elaborate physical requirements or costly services (including those of foreigners), or on the presence of unusual personalities who cannot be duplicated at any cost.

The application of an intensive strategy may initially take the form of a pilot project, even though the strategy will require an eventual network of similar projects. Initial efforts could also include several pilot projects, undertaken simultaneously in different areas and with somewhat varying methods, in an effort to find what will work best. Alternatively, intensive promotion of a particular crop, or a particular form of organization, can be started in a number of places at the same time. One virtue of the intensive strategy is that, where one does not have the assured solutions to problems ready for nationwide application, one can try things out on a limited scale and learn from experience. Nationwide failures are far more costly, and even destructive of future prospects, than are wrong guesses at the pilot project level; and the latter are easier to correct, not only once but repeatedly if necessary.

For an intensive strategy, as defined here, it must be recognized that the replication process is itself a different experience from that of an innovative pilot project, and will require additional planning and attention to new variables which need to be carefully considered. A corollary of the intensive approach is that replication should be undertaken cautiously, not too fast as a rule, and with attentive monitoring of the process itself.

All this planning, checking, thinking and rethinking, imply higher manpower costs in operation, and slower motion, relative to the "extensive" methods. Credit programs handled in this way could take many years, perhaps generations, to reach all the small farmers in a developing country with medium or large population. There is always a danger that the initial impetus to completion of coverage will fade, that programs will be upset or redirected when political changes occur, so that the cumulative results which would justify the intensity of the original effort may never be forthcoming. This may not always be a destructive result; the original plans may have been misconceived, and the shifts through time may incorporate some of the lessons from experience. A new political sweep may sometimes be essential to further progress. Nevertheless, it is necessary to recognize that an intensive strategy with a long time horizon is

peculiarly vulnerable to personnel and political changes and thus to discontinuities, to arbitrary program shifts, to the abortion of complicated schemes before they can prove themselves in action.

*Intensive strategy—the production goal.* Turning now to the qualities that could be emphasized in an intensive strategy, we may refer to the chief goals of small farmer credit programs—production, and equity. Beginning with the former, some of the main features of an intensive approach to production would be an emphasis on technological improvements, on the basic research and field testing that would make possible the best technical recommendations, and a concern that credit be used to implement these recommendations most effectively. This usually means credits tied to the purchase of recommended inputs, and supervision to ensure that these inputs are properly used—at least in the early stages of innovation. Typically, an integrated package of practices for one or a few associated products will be promoted in conjunction with credit.

Some further policy implications of this strategy may be found in the conclusions to Chapter 4 on profitable technology. First, initiation or expansion of credit programs is not advisable until new output-increasing and profitable technology is available in practical terms to potential borrowers (this is sharply at variance with the extensive strategy goal). Second, emphasis must be given to training technicians so that new technology can be introduced to small farmers, and presented to them in ways that minimize their risks (this conflicts with the anti-supervision thrust of the extensive strategy). Third, adequate price incentives and markets, including reasonable and stable prices and growing consumer demand, must all exist for new technologies to be profitable (this seems to imply more price controls than the extensive strategist would care for). And finally, more than the customary research is needed to ensure appropriateness of the technologies to small farmer uses (this could also be done, but is less likely to occur, with an extensive approach).

As compared to the extensive strategy, an intensive strategy geared to production increase is a planned and managed effort to overcome all the obstacles to a rise in output. Particular obstacles will of course vary under different conditions, but they must be faced and attended to with appropriate policy tactics if the increase is to be maximized. A wide array of tactics, employed without a doctrinaire inhibition against state intervention in the economy, is called for. A greater degree of centralized production planning and implementation, along with price controls and perhaps allocation, would be permissible, though not a necessary feature of the strategy; they could be regarded instrumentally.

Another contrast between strategies is found in the implied relation of government credit programs with private credit institutions. The intensive production strategist is not much concerned to bring private banks into the field, partly because of his emphasis on technical supervision which is not usual or practical in private bank practices, and partly because he is interested in seeing that credit resources are not used unless there is a pertinent new technology available at particular times and places. He would be much more interested in developing a centralized credit agency that could deploy its capital in response to the needs of the innovation cycles of new crops or practices in pertinent districts, as described in Chapter 15. This last objective would hardly fit into the extensive strategy, as it implies rather heavy-handed management. On the other hand, the intensive production strategist would probably be less interested than

his rival in accelerating the integration of small farmer credit into a national capital market—not a bad idea, he might feel, but rather far down the road and less important than the pressing demands of production problems.

On the question of higher interest rates, there is less divergence of view but some difference in shading. The intensive production man would like to see a credit agency ready and able to lend when needed, and therefore he would generally support policies that could make small farmer lending a profitable operation, even though this is less central to his goal than to that of the extensive strategy. The 18-24 percent loan rate would perhaps be acceptable to him most of the time. He might, however, be more tempted to lower interest rates, temporarily at least, to speed the adoption of credit-using innovations. This rationale is sometimes used although, as was argued in the last chapter, low interest is often overrated as an incentive factor. In the medium or long run it is probably a mistake from the production standpoint to sacrifice major lending profitability to a rather minor increment in farmer profits.

As concerns farmer cooperatives, the intensive production strategy, like the extensive one, leads to an instrumental view. Farmers' organizations can be helpful in the extension process, as they can in facilitating group loans or in supplying an improved market position for potentially innovating farmers. When cooperatives do this—well and good. But if they interfere, or create situations where local notables distort the organization's purposes at the expense of lesser members, then they should be bypassed—or perhaps reformed if that is feasible. Generally speaking, an intensive strategist of whatever persuasion is less hostile to supervisory and organizational efforts on the part of government, and is thus more likely than the extensive strategist to favor the promotion of cooperatives and the training of their managers to enable them to function efficiently. On the other hand, the use of village bank agents to handle credit would certainly not fit an intensive strategy focused on improvement in production, since they would probably be worse than useless in any effort to guide the use of credit toward appropriate productive inputs. And the notion of a "line of credit" that farmers could use as they pleased would be clearly inconsistent with such an approach.

The best examples of relatively intensive production strategies in action on a scale of national significance would be the programs for promotion of improved wheat and rice varieties, i.e., the Green Revolution. Packages of new practices to go with the high-yielding varieties of seeds, developed and tested in lengthy and concentrated research, have been introduced and expanded widely in a number of countries since the mid-1960s. Outstanding cases were wheat in Mexico, India and Pakistan, and rice in the Philippines, Indonesia, and to a lesser extent India and Bangladesh. There is much controversy over whether the new seeds have done or will do as much for small farmers as for big ones, a debate which will continue; but all can agree that many small farmers have benefited, and that national output has been significantly increased in these countries. Not all growers of given products can or will wish to use the new seeds in any country; but this is not a necessary feature of the intensive production strategy in the way that nationwide availability of credit is a criterion for success in the extensive strategy.

*Intensive strategy—the equity goal.* The intensive pursuit of production increases in a credit program is a familiar idea, but this cannot be said of the

intensive pursuit of social equity as a first priority. Much less is known with certainty as to how to go about it, and much of what is asserted on the subject tends to be controversial. Certainly this is true of those aspects which have a bearing on credit programs. The pursuit of equity is addressed here by analyzing a significant model from experience. We will use the Comilla program in Bangladesh as the best case of equity-oriented effort involving small farmers and the use of credit. No doubt there are other ways of seeking equity, more commonly by socialist methods of collective farming which are excluded from the scope of this book. But the Comilla methods are especially appropriate for dealing with very poor owners of small farms.

We have seen that the extensive strategy could make substantial claims to a contribution toward social equity, but that it could not concentrate the benefits on any well-defined target group or prevent its continued subordination by others in the short run. The intensive equity strategy can provide such a concentration if so designed, and a careful, planned concentration of this kind was an important feature of the Comilla program (see Appendix to Chapter 14). Credit was allocated to small farmers, not to the richer farmers nor to landless laborers, and the same was true of technical and marketing services. Thus the program was not designed to increase farm production irrespective of the identity of producers; but in other ways it presents no conflict in goals and policies with the intensive production strategy just described, including the emphasis on supervision, well tested technical recommendations, etc. Indeed, the production objective always ranked high in Comilla. The divergence in methods to be examined here is that between the intensive equity and the extensive strategies.

An important point of difference is the stress on cooperative organizations in Comilla, where they lie at the heart of the strategy and cannot be regarded merely as instruments that may or may not be useful in different situations. The small farmers were organized with great care to advance their interests against anticipated opposition; the effectiveness of this organization could not be a matter of indifference in the overall program. Another divergence from the extensive strategy is found in the treatment of private sector credit. Far from welcoming such participation in the small farmer field, the Comilla institutions were intended to provide a publicly supervised institutional alternative, insulated from profit-seeking lenders both informal and institutional. This has meant a reliance on public lending capital, supplemented in a minor way by the small farmer savings that were actively mobilized within the program. Special and somewhat insulated marketing activities were also organized through the cooperatives, using a kind of infant industry approach. An eventual integration of small farmer credit and marketing institutions into national markets is not ruled out, but is clearly subordinated to the special treatment of the target group in the short run.

It may be added that the special-purpose institutions for the benefit of the target groups also included the method of bringing technical innovations to small farmers by organizing classes attended by elected "best farmers" from each cooperative. An important element in the Comilla approach was the intensive effort to provide training of all sorts, at low and medium levels, and in a continuing way. Training was considered an important key to economic opportunity.

The Comilla method would be inconsistent with the use of village agents for the extension of bank credit because the loose controls over agents' activities

in the villages would be likely to encourage non-approved profit-seeking behavior on their part. Comilla's institutions are far from being socalist in the authoritarian sense of reliance on generalized orders from on high, collective farming, and strong hierarchical relations. Instead, they stress voluntary private cooperatives and administrative sensitivity to local initiatives, fostering of local leadership, etc. But they are also very different from the institutions of a laissez-faire, unplanned system in their reliance on elaborate, carefully monitored integration of organized activities by large numbers of people whose private self interest must be restrained.

One might suppose that this attitude would lead to a low-interest philosophy, as it has in so many countries. In fact, the interest charged to small farmers at Comilla has been an annual rate of 12 percent, less than our suggested 18-24 percent level but higher than the rates charged in numerous countries where farmers have considerably larger incomes than in Bangladesh. That it was not lower was the result of a realistic awareness of the lack of resources in the country, so that a self-supporting credit program was thought desirable. The 12 percent rate more or less covers the costs of lending as narrowly defined, but it makes no pretense to cover expenses of the many auxiliary services which are provided by government officers. For a pilot project, expanding within a single district with the backstopping of a national institution—the Academy—the notion of covering all expenses by the proceeds from lending to a local group of poor farmers would have been hopelessly out of reach, as well as being inappropriate for an experimental venture. But once the precedent of 12 percent is set, the replication of the Comilla organization that is now being attempted inevitably leads to considerable expenditure by a government whose financial position is extraordinarily limited. Seed capital and government services will not be an insignificant charge on the national budget. Logically, then, the 18-24 percent rates might make a contribution here which need not be inconsistent with a Comilla-style strategy. Whether this would actually be sufficient in particular cases can only be decided on empirical grounds; but at least it may be asserted that a medium interest rate is in principle consistent with an intensive equity-oriented strategy, and should be helpful to it.

*Results of intensive strategies.* When an intensive approach is made toward one goal or another, it may be true more often than not that progress toward the defined goal will be greater than it would be without such a concentration, whereas other goals may suffer as a result. In the case of small farmer credit programs, however, this kind of result does not necessarily follow—at least, it cannot be asserted without more discrimination. When a defined goal requires a complex interaction of elements, it may not be sufficient just to set a course aimed in one direction, i.e., to try to "build the best boat." To illustrate: when a strong campaign is launched for the promotion of a single crop, this is probably the fastest way to increase output of that particular product, but it may well interfere with the production of other crops. If the goal of an intensive effort is to raise the value and profitability of the production of a particular group of farmers (irrespective of crops) this effort may go astray if the intensity and control devices are unsuitable to the farmers in question, or if mistakes were made in the selection of crops or methods for the locale. As we have described the intensive production strategy, it calls for a careful study of the crops or methods to be promoted. Nevertheless, mistakes cannot be ruled out—human nature being as it

is. Even the history of the Green Revolution included examples of unforeseen results, whether of grains unsuited to local consumers or plants vulnerable to disease, or of social consequences like the eviction of tenants.

When a mistaken idea is promoted with intensity, the end result could be less output than if the farmers were simply given credit facilities and left to their own devices, as in the extensive strategy. The basic question is: does this outcome favorable to the extensive approach have a greater probability of occurrence than its opposite? Let us assume that in both cases the farmers have some kind of access to technical information, but the difference lies in the technical instruction and the tying of credits to recommended inputs. There is also a difference in strategies resulting from a tendency of credit agencies, in common with other government bodies, to formulate general rules and order their widespread application as in cases where technical conditions for loans are imposed. Since the intensive production strategy must be administered by fallible field agents, they may be likely to follow such rules mechanically—ideally the agent should judge each farm on its merits—so that the value of their advice depends partly on the correctness with which the rules were formulated and partly on the skills of the field agent.

No sweeping answer is given here to the basic question, but a few inferences may be suggested. Both strategies are vulnerable to mistakes: in an intensive production strategy these are the mistakes of trained agronomists and administrators and of their subordinates with intermediate training, as compared to mistakes of the relatively unguided farmer under the extensive strategy. Trained experts ought to know more than ordinary farmers. Theirs may be book knowledge as against the practitioner's specific experience and acquaintance with his farm, but it should encompass a wider range of possible alternatives. Their risk is rather little in making recommendations, however, by comparison with the farmer's great risk in accepting them; this has both its good and bad sides. Perhaps the best conclusion possible is that an intensive approach would be more likely than an extensive one to raise production and farmer profits more rapidly in the short run when there is an unfamiliar but well-tested innovation at hand, and when a package of new practices is ready to propagate. And if the technology in question is truly an appropriate answer to the production problems of an area, then the gains from having followed the intensive method should carry over into the longer run as well.

However, there is a further consideration here. Intensive methods are more costly, and use scarce manpower, so they cannot be extended as widely. Even if the above generalization about better results holds true where intensive methods are applied, the value of the national production increment attained in this way could be less than that obtained from a wider propagation of information plus unguided credits. Better results in a small area, on the other hand, could be of greater value in the long run if the experience gained in the process yielded useful lessons for subsequent propagation, lessons that would not have been learned, or not so closely observed and reported, in a loose, extensive approach. The intensive strategy probably does more to generate careful experiments and new knowledge, even if this reaches fewer farmers in a given time period.

To summarize: governments making the choice of strategies must consider: (a) whether there is a sufficiently important and promising innovation available to justify the costs of an intensive promotion effort; and (b) whether it is more

important to them in political or economic terms to reach large numbers of people in a shorter time with credit and information, or to build up the output more slowly and carefully among fewer producers. Neither strategy can be guaranteed to bring about a larger national production increment than the other unless condition (a) is present to tip the balance toward intensity.

Consideration (b) leads into the equity goal. It was noted that an intensive equity drive can do more for a defined target group in the short run than an extensive strategy, though—like the intensive production drive—it is vulnerable to mistakes in planning or implementation. Again, the question of dispersion of results enters: however much the Comilla-style effort may accomplish for target groups within a small area, there are many more farmers in similar groups outside the affected area that will have to wait for years to be as well organized and assisted. In addition to these geographical inequities, questions of equity as between the target group and others in the same area may arise: in Comilla, for example, the landless were left out of the major program described here.

One final point: debates over small farmer credit policies are most often conducted as if the central issue is the choice between production, or some measure of efficiency (e.g., one that includes production gains, farmer profits, and credit agency viability), as against the equity goal—usually defined rather vaguely. What we are suggesting here is that this may not be the basic choice to be made: an intensive drive for production in a limited target group is quite consistent with an improvement of that group's position which will serve the equity goal. Rather, a more fundamental choice lies between a reliance on the concentrated, administered methods of an intensive and targeted strategy, higher in cost and expanding cautiously from a limited coverage, as opposed to the less predictable results but faster outreach that is attainable with an extensive strategy.

This choice comes down in the end to a matter of faith. The extensive strategist, clearly and overtly, puts his faith in the social consequences of small farmer rationality and market forces. This faith is embedded in the Western tradition of economics. The intensive strategist, who is not usually called on to define his faith, takes it for granted that an application of the expert knowledge of educated people, and the capabilities of a relatively centralized apparatus for guidance and control, will accomplish more for his society. He assumes, in effect, that "Father knows best." The reader may judge for himself the relative capacities, and the motives, of both the "fathers" and the "sons" in particular environments.

### *The Development of Strategies*

The reader may by now be getting impatient with this detailed and somewhat artificial comparison of strategies, none of which may appeal to him in their pure form. He has been warned that he cannot have the best of both worlds, and the effort to combine intensive with extensive tactics can sometimes produce situations where one gets the worst of both. Yet many practitioners may wish to make a new mixture of policy tactics that will blend at least some of the advantages of both major strategies, and will best suit a particular environment with all its national idiosyncracies. Readers may also be wondering whether there are any universal rules in all this complexity, particular policies which should be generally followed or avoided under all circumstances.

Policy tactics can, of course, be mixed. It is possible for a government to en-

gage in intensive experimental pilot projects in production at the same time that it reforms its capital markets and sets up the incentives for an extensive strategy. It may wish to promote multipurpose cooperatives slowly in some areas, but confine itself to simple loan-receiving groups in other areas where management capabilities among farmers look less promising. It may use supervised lending for the more backward, isolated farmers but not in more commercially advanced agricultural regions. It may wish to make institutional credit facilities more widely available to small farmers, but hesitate to take the leap toward universal availability; it may therefore try out extensive strategy methods in a limited area to test farmer responses, and perhaps resort to guidance where they seem inadequate.

These and other compromises between strategies may represent optimum solutions to national or local problems. The preceding analysis of the implications of defined strategies is not intended to suggest that these are the best alternatives, but to illustrate how one policy leads to another, and how patterns can be formed which will lead to results not always foreseen when the individual policy tactics are considered separately. Over and over again one finds that if one follows policy X one will make a gain in one respect and sacrifice something in another respect—or at least one may, unless something else is attended to. Typically, the policies in most countries grow up piece by piece without a grand debate on basic strategy issues, and without any clear agreement on a strategy conclusion that will be maintained with no changes. Political processes are such that it often appears necessary to accommodate conflicting interests and ideologies by a patchwork of policies, and by partial policy shifts through time. But the overall results of such an evolution may not look very strong if subjected to a careful analysis. However necessary this accommodation process may seem, we are suggesting that some people ought to take a long and strategic look at small farmer credit and its ramifications in order to come up with policy recommendations that hang together, and that will lead in directions that a nation's policy makers can be made aware of. Small farmer development is too important to leave to the passing gestures given to one group or another as the political pressures mount, or to the indifference and neglect that can prevail when pressures are absent.

If a strategic approach is to be worked out, some of the major items to be developed are the familiar ingredients of economic planning—surveys of the existing data, cost/benefit analysis of proposed alternatives and their application to defined target groups, along with estimates of the availability of public resources present and future. All these must be analyzed as carefully as possible with an eye to the probabilities for a variety of unfavorable contingencies, and a realistic assessment of the human capabilities required for the projected results. This process will not produce automatic strategy decisions, but it will define some of the boundaries within which strategic thinking can take place. Some desirable outcomes will simply be ruled out; and some possibilities will be shown to be more improbable than others. It is necessary to know these contours, but they are not sufficient for final policy decisions.

What we would urge here is that the strategist not stop with the usual assembly of statistics, project appraisals and macro-economic projections but go on to consider some of the less conventional possibilities for institutional change. Our final chapter will review the kinds of innovative ideas for specific policy tactics

taken up in previous chapters, each of which may be considered for its suitability to national or regional environments. What may also be suggested is a look at some of the variables and interconnections involved in the general direction of strategy.

Certainly the extensive strategy merits more serious consideration than it has yet received in most countries. It may hold out the best promise of success where resources are too limited for any widespread applications of intensive approaches to small farmer problems, and where this will remain true for a number of years. If, in addition, there appears to be no new crop or livestock possibility, well tested for profitability, which would require intensive promotion, but rather a series of useful minor innovations or perhaps a generalized need for more fertilizer, then the conditions may be appropriate for the extensive approach. The next question to be asked relates to cultural compatibilities: how have farmers responded to the credit institutions they have? A critical look at past performance, followed by selected extensive-type reforms to increase small farmer access and some modest pilot experiments with various kinds of credit intermediaries, could be fruitful. The wider institutional incentives could be tried out, and savings mobilization attempted. The final decision, however, may shift in the intensive direction if there are major changes in farmer practices that seem necessary within a short time horizon—a decision that must be made with a realistic appraisal of cost implications. Both the time dimension and that of geographical dispersion have a bearing on the cost of achieving results: alternative definitions of target groups, and their political implications, need to be considered. And the probable responses by farmers to the probable level and style of managerial approaches in an intensive strategy are relevant.

These are some of the variables that need to be looked at in devising strategies. Since there are many uncertainties and areas of inadequate knowledge, experiments should be encouraged and their results used in policy decisions. It is clear that each country must develop its own strategies for its own environment. But there appear to be two basic points that deserve emphasis in conclusion, as they would apply in almost any situation. If small farmers and their problems are taken seriously, and if credit institutions are to contribute to their welfare, these institutions must be adequate for the job. They must be both accessible and durable: this means, among other things, that interest rates must be sufficient to allow lending income to cover normal lending costs, and defaults must be held down. Second, since any agricultural credit structure rests on a foundation of farm productivity and income generation, the technology of farming must be a central concern. These general principles seem to be universal. The ways in which they will be best applied can differ rather considerably, but where they are ignored there is a price to be paid.

*NOTES*

[1]See, for example, the irrationalities reported in various writings by Michael Lipton of the University of Sussex, England, such as those noted in AID's *Development Digest* 7, no. 2 (April 1969): 18.

[2]R.E. McDowell, for example, suggests that an initial doubling or tripling of yields is necessary to ensure adoption of improved livestock practices—see *Effective Planning for Expanding Livestock Production in Developing Countries,* Cornell International Agricultural Development Mimeograph Series no. 32, Ithaca, New York, November 1969. This kind of reasoning is not uncommon among agricultural specialists working in developing countries.

# 18 Experimental Innovation and Research Areas

The discussion of strategic choices just concluded was an attempt to organize in summary fashion what seems to be known about small farmer credit. This final chapter is, by contrast, an effort to define and organize the principal areas where too little is known. During the foregoing text, various new or partly novel ideas for policy were introduced; here they will be reviewed and placed in categories rather than explained anew. The result is an assembly of ideas for experimental action which, by the sequence of their presentation, are given a priority rating implying relative promise of their being important and useful. The priority sequence is from high to low. Along with the proposals for experimental action, associated areas for research and analysis will be mentioned.

The five general categories are the following: first, and most fundamental, are experiments and research concerning the role of a small farmer credit program in relation to capital markets. Second in order, and in priority, are new items bearing on technical services. Third is a group of unanswered questions and areas for exploration in the internal operations of a credit agency. In fourth place are two proposals having in common that they would make changes in the sharing of risks. The subject of farmers' organizations is included in fifth place because, while there is need for basic research, there do not seem to be specific novelties of practice to be tried or well defined research areas that are likely to yield answers to practical questions. Within these categories, the sequence in which individual items are taken up also has some relative priority implications. All these priority judgments are, of course, the author's subjective guesses.

### *Capital Markets*

*Interest rates.* The first priority here is given to the increase in interest rates to levels that can make small farmer loans more profitable to lenders. This is because the establishment of a capability for profit is a key to a number of other things besides profits per se, as indicated in the preceding chapter. More concretely, it is proposed that experiments be started with lending rates of 18-24 percent a year to see what their effect will be, whether they will indeed do all the things that may be hoped for them, and whether they should be modified up or down in the light of experience. It may appear to some readers that such

interest rates are not so very novel, or so different in nature from prevailing practice that they deserve to be called an experimental innovation. However, the cases where such rates have been charged in officially sponsored small farmer lending, as in South Korea for example, were almost always instances where the prevailing rate of inflation was very high, so that real rates were much lower. The interest rates in question were regarded as abnormal adjustments to abnormal inflationary conditions, and brought down when the price level stabilized. Thus, they were never tested for long as a normal feature of the capital market.

Some will say that a proper test of the role of an interest rate would require that a defined level of real interest be fixed, as opposed to setting a nominal rate for which the real value would be distorted in varying degrees by inflation. In analytical terms this is correct; but as a practical matter the setting of real rates at steady levels in a volatile inflationary environment is a complicated affair requiring shifts in financial obligations in response to price changes, as is done by "indexing" in Brazil, for example. This in turn sets up a whole new series of customs and expectations, and it could hardly be attempted in one or a few credit institutions without being done in others, so that it involves far more considerations than can be dealt with here. A less ambitious proposal, suited to countries where inflation rates are lower than in Brazil, would be to make a general estimate of future price change and include this as one of the considerations to be built into an experiment with the use of a steady nominal rate, calculated as being a medium real rate in the vicinity of 18 percent.

What we need to know more about is the effect on profitability of small loans when there is a stable expectation that such interest rates can and will be charged, and the further changes that will then be brought about. It is true that there are farm credit programs which remain solvent using lower rates; but there is reason to question whether they are actually serving small farmers, and if so whether this represents a minor fraction of their portfolio which is subsidized from other loan proceeds. It is possible that the 18 percent rate would be too high in some cases, but this is not obvious, especially when capital erosion from inflation is taken into account; and we need to know more about it. Perhaps the condition of solvency is possible only with still higher rates, or with an undesirable curtailment of services.

It seems possible that a large scale management of small loans may be achievable at lower cost than 18 percent, but that such a scale cannot be built up because the initial high costs of doing so are greater than is allowed under a maximum interest limitation. It is also possible that a 24 percent nominal rate is not enough in many circumstances to guarantee profitability plus a reasonable rate of capital accumulation. Further, we know rather little about the price elasticity of demand for institutional credit at medium level interest rates, given various possible levels of service to small farmers. All these are important matters to learn more about if small farmer credit is to be widely used as a development tool. The relation of interest rates with small farmer access to credit institutions, and the financial viability of their dispersed rural branches, is particularly important.

*Stimulus to non-specialized lending institutions.* It was noted in Chapter 10 that various incentive devices for inducing private lending institutions to serve small farmers have been tried but without much success. The failure to produce more than nominal results can be attributed in large measure to low interest rates—or so it might appear. But we do not know this with certainty: it may be

that there are other reasons for banks to be reluctant to get involved in chancy, low-status relationships with large numbers of small farmers, reasons that would prevail even if higher interest were possible. This, too, would be worth finding more about; but it could only be done if higher and more profitable interest rates were charged.

Historically, small farmer loans have been the province of special-purpose and usually public institutions (plus informal lenders), and it is there that experimentation with institutional interest rates must begin since they have at least an initial access to their clients. But once these organizations prove that they can make a success of small farmer loans by charging interest at rates somewhat above those in urban banks, the next step is to try to multiply their successes. One way, of course, is to multiply the special-purpose institutions (which could create a dualistic institutional credit structure with higher rural rates). This solution may be appealing in relatively small countries, or to political leaders whose ideology is hostile to private capital in general or to the power of private banks. In some countries there may simply be no private banks of any consequence for historical reasons. Public lending means a dependence on public capital, with the budgetary drain and/or slow advance that this implies.

Some economizing on public capital is possible when credit is managed so as to be introduced only in conjunction with technical innovations, and in areas where the appropriate stage of the innovation cycle is occuring (Chapter 15). For governments which opt for this centralized, technocratic and controlled route to small farmer credit, some institutional experimentation would be in order. More needs to be learned about administrative relationships, and the methods of management required to obtain good performance. One approach would be to create an initially centralized organization which could, in time, become more decentralized as skilled cadres were developed for localized decision making, and as indirect supervisory techniques were evolved. Alternatively, existing local organizations might be taken over and enlisted to serve in the more centrally planned undertakings. Experiences like those in Japan, Taiwan and South Korea are of interest in this kind of endeavor, and these have been given some study and analysis. But their experience is closely woven into their peculiar cultural traditions, and much more needs to be known about managerial methods in other settings.

For governments which favor a less demanding "extensive" approach less costly in public capital and services, and where private bank participation in rural lending is welcomed, a quite different set of experiments is indicated. Here the encouragement of bank loans to small farmers by differential rediscounting, preferential taxes, etc., along with public capital matching, could be tried. Publicly owned or mixed public-private commercial banks could be given this kind of incentive treatment along with (or even in place of) the private banks; the methods described here need not be limited to the private sector when the public institutions are so managed that they will respond to financial incentives. There is much to be learned about how such incentives work, singly and in combination, and how long it would take financial institutions to overcome their non-financial resistances to small farmer lending. The establishment of localized rural banks as part of a credit structure, and their relations with other kinds of banks, is another area for experimental exploration. Among other problems to be dealt with is that of how to move toward integrated capital

markets while maintaining differential interest rates to enable expansion of small rural loans, differentials which may appear both within and among lending institutions.

*Savings.* Methods of eliciting small farmer and other rural savings in a form that will become available for agricultural credit are an important field for research and experiment. It hardly needs reemphasizing that this is relatively new territory to explore, since prevailing pessimism regarding small farmer savings potential has effectively limited the prior experience in this field. Adequately high interest rates are a part of the picture, and the experiments with medium-level loan rates should have their counterpart in medium-level interest rates on savings deposits.

Experimentation with ways of organizing farmers to save is perhaps the key. The few but surprising successes in the mobilization of small farmer savings seem to owe more to organization than to interest rates per se. Banks cannot be expected to organize savings-oriented farmers' associations, although they can certainly cooperate with and encourage them, and their willingness to seek individual depositors could play a useful role in certain cases as some experience in India and South Vietnam suggests. Governments, and officially sponsored cooperative movements, would seem to be the likely vehicles for promoting local savings groups; non-governmental credit unions are another. Cooperative leaders have not often given savings a prominent place in their view of the functions of their organizations, and they usually share with banks the general pessimism on the subject. But if more experiments in savings attraction were tried, and if more were learned concretely about farmer responses to various kinds of appeal or requirement, this would do more than anything to overcome pessimism. Enough has already happened to show that the potential exists if the ways of tapping it were better understood.

### *Technical Services*

Among the various aspects of the provision of technical services to farmers that were taken up in Chapters 4 and 15, there were a number of areas where improvements were found to be important. Given the key role of technological change in rural development, scientific and applied technical research is obviously fundamental, and the testing of potential innovations for their profitability in representative small farmer usage is especially pertinent to credit programs. Greater emphasis is clearly needed on research directed to identifying the products and methods that will be most useful on small farms.

In addition to the need for technical research of this kind which cannot be overstressed, there is a need for more research into the conditions in which credit is or is not an impediment to adoption of agricultural innovations. This is, of course, a fundamental question bearing on the need for special efforts to bring credit to small farmers, and the justifiability of their costs. More also needs to be known about the effectiveness of various methods of delivering technical services. This is hardly a new or neglected subject, but there are important questions that remain unanswered. Is the American form of extension service the best solution for developing countries, and under what condition? Where it is not, how may alternatives or modifications be analyzed? What can be said about the perennial question of whether credits should be tied to specified expenditures by farmers, and the cost-effectiveness of loan supervision. All these

matters call for more empirical surveys of experience, although it seems unlikely that any revolutionary new results will be obtained. Nevertheless, differences in degrees of probability, or fuller definitions of required conditions for application of familiar ideas could be discovered, and these would be of value to credit programs.

Aside from such areas of basic research, a few specific innovations in technical service delivery may be considered for experiment. We will have no more to say about the employment of paraprofessionals, nor on the question of concentrated versus general-purpose organization of an extension service, as these are hardly novel ideas by now. The three items to be mentioned are: Comilla-style classes for selected farmers; cut-off dates for provision of technical services and credit (graduation); and performance incentives for extension agents.

*Programmed instruction for selected farmers.* The weekly classes organized at Comilla for elected "best farmers" seem to represent a new method which has only been tried in that program but which seemed to be successful. The novel aspects appear to be two-fold: the idea of using a class format adapted to poorly educated farmers (as opposed to instruction conveyed at individual farms, or to occasional assemblies of farmers to hear a speech); and the method of selection of farmers from dispersed villages. The idea of school classes is hardly new, and adult education is not unfamiliar; but the specific programming of operational instructions for use by semi-literate farmers, and the timing of classes to accord with steps in an on-going cultivation process, are unusual and should have usefulness elsewhere. The technology of programming such instruction is an interesting field for educators, in which there is much to be learned about what is most effective in particular settings. The costs and benefits of using a weekly classroom to focus the time of experts, and the level of salary and expertise of instructors that can be employed effectively once the teacher's kit has been prepared by higher level experts, would seem to merit careful comparison with more conventional extension methods when enough experience with this technique has been accumulated.

Other aspects that could yield some useful insights from research would include the question of whether farmers will learn more in a classroom type of setting than in the relationship with experts that takes place in a farm visit. Cultural differences are likely to be important here. Another persistent research question is whether farmers are more likely to adopt innovations they learn about when they elect a representative farmer to attend classes, when they casually watch a neighbor's practices, or when a "model farmer" is selected by the extension agent for a demonstration plot. Cost-effectiveness, with effectiveness measured by farm productivity, could be inferred from comparison of these alternatives if systematic differences were observed.

*Time-period graduation.* The "graduation" of farmers after a stipulated time period from credit programs in which they receive concessional credits and technical supervision was discussed in Chapter 16 as a means of terminating subsidies. As such, it is a worthy experiment that has not been tried widely if at all. It is also a device that has value for the focusing of technical services as well as credit, economizing on expert manpower by its concentration on selected innovations within limits of time and perhaps space. That is, a special credit program with firm termination dates for clients could be mounted in one district for

propagating a new crop or package of practices, and then moved on to another district as it tapers off in the first. This deserves some trial in order to spread scarce resources to more farmers. It is perhaps more useful as a financial device when credit terms—i.e., interest rates—are concessional rather than self-sustaining (as advocated above); but it has virtues also as a device for economical use of technical experts in cases where promising innovations are to be propagated rather intensively.

*Incentives for extension agents.* The proposal for rewarding extension agents by adjusting their pay in accordance with the production of their farmer-clients was mentioned in Chapter 15. It seems never to have been tried, and the difficulties are great; but it could be of value if it were possible to arrange for a just discrimination among factors over which the agent has no control and those where his influence could be legitimately anticipated. Devising and testing the ways of making such a discrimination could make a valuable contribution to knowledge and practice.

*Operations of a Credit Agency*

*Repayment habits.* In the discussion of possible reforms in the practices of credit institutions in Chapters 10 and 11, one aspect stands out as having both a pervasive importance and a mysterious quality that defies full understanding; the question of defaults. If it were possible to learn more about why some farmers repay debts and others do not, and why farmers change their repayment behavior under different conditions, this would do a great deal for the cause of small farmer credit. Thus it is a significant subject for research, and it is sufficiently complex to challenge some of the better minds among those who may take an interest in the subject. A certain number of surveys of defaulters have been made, usually by gathering statistics on defaulter characteristics in a given year; this kind of data should be assembled and subjected to international comparison and analysis. But more needs to be known about the dynamics of the process than can be inferred from static statistical comparisons alone, and far more needs to be learned about the conditions in which particular types of remedy can be expected to work. Systematic experimentation with remedial tactics, which need not be very innovative—though unusual devices will of course be of interest—should be followed up by systematic observations over a period of years. A striking instance of the need for new kinds of knowledge is found in the sequel to the excellent survey of defaulters conducted in Sri Lanka in 1971 (described in some detail in Gunatilleke *et al.*), followed by annual repayment rates in subsequent years which remained at the 50-60 percent level with virtually no improvement.

*Delegation of functions.* The potential gains in wider and more economical extension of small farmer credit by the delegation of credit agency functions has been argued at several points, particularly in Chapter 10. But there remains a good deal to be learned about how this can best be done. The method of group lending to farmers' organizations has been tried so widely that it cannot be termed an innovation, but there do seem to be unanswered questions here, and some less-than-usual methods that might be further explored. Some of the questions to which answers are not firm would be: how should the reciprocal responsibilities of credit agency and farmer organization be established? Should the farmers' group select individual borrowers and their amounts of credit freely,

with no concern by the lender? If loans are conditional on considerations other than simple repayment timing, for example when loan uses are guided, or when crop sales are to be made to designated parties, how can group leaders or the group as a whole be made responsible for non-compliance? And if such responsibilities cannot be fixed, how can credit agency purposes be served while gaining the advantages of group lending? Or, if the credit agency decides against the use of conditional lending, can it move as far in the opposite direction as the establishment of a "line of credit" for a whole group, as opposed to an individual borrower? No doubt these are questions to which overly generalized answers would be inappropriate; but they are of sufficient operational interest that surveys of comparative experience would be of value.

The extension of credit to farmers via middlemen in the marketing chain is a method that merits more experiment. Credits to farmers supplied privately by input sellers or by processors of crops are common enough without special arrangements. What is less common is the purposeful use of such channels in officially sponsored credit programs as a means of extending their access to small farmers. Two examples of success in this method are the extension of credits to coffee growers via small dispersed coffee mills in Costa Rica, and the joint arrangements with the Uganda Marketing Boards for producers' cooperative credit. There must be many other places where this method could be utilized as an economical means of reaching additional small farmers more easily than in the usual farm credit institutions, and other types of middlemen, such as traders, who might plan an appropriate role.

Turning to the methods of extending a credit institution's reach by internal decentralization, there arise questions as to how its local agencies could best be organized. What are the strengths and weaknesses, and the unit costs, of mobile branches? How small a local resident branch can be effective—can it be reduced to the level of a single village agent? How best to supervise scattered small agencies to maintain desired standards while gaining flexibility and localized knowledge? Are there ways of devising incentive systems to reward and punish local agents or branches that can stimulate performance in desired directions while alleviating the burden of direct supervision? Again, generalized answers to such questions are likely to be inappropriate; but there is much to be learned, and a variety of experiments to be tried, particularly in the extreme case of the one-man village agent working on commission.

Another area for research potentially related to credit institutions would be the existing practices of the informal lenders. As noted in Chapter 8, informal commercial lenders have been much better adapted to the rural environment than credit institutions, but very little is known about their actual costs. If the expansion of institutional credit is to fall short of meeting total demand, and informal lenders continue to operate, then a more sophisticated and constructive way of dealing with them would be desirable; and this would seem to call for more information and analysis. It would be useful to be able to discriminate between "moneylender" practices which are contrary to small farmer interests, and those which are of positive value in reducing the real cost of credit to small farmers. The effort to find out more about these informal operations might also yield findings which could become useful in institutional practice.

*Felt needs.* Finally, there is the consideration that both default and supervisory problems may be greatly reduced when loans are used for purposes which

a local group of borrowers choose for themselves, after obtaining adequate information on technical alternatives and subjecting the matter to adequate discussion. One application of this idea is the organization of a *promotor* function, as described in Chapter 10, to investigate possible community projects and prepare communities for action and for wholehearted acceptance of their financial obligations. Such a function could either be treated as an expansion of the job of the loan officer in a lending agency, or delegated to an outside organization that would certify borrowers as creditworthy (see below).

The function in question may be regarded as related to the job of a resident village level worker (VLW) in a community development organization, who is supposed to be continually urging villagers to do more about satisfying their "felt needs" by self-help methods with such assistance as can be obtained from government departments; but this work was not usually combined with credit facilities in any systematic way. A number of community development programs were initiated in the 1950s, and their experience has not been thought highly successful by most development practitioners. In part this was because the VLWs and self-help methods often seemed to be rather ineffectual; in part it reflected the belief of administrators and others that the felt needs of villagers frequently did not coincide with what these people properly should be doing for their own development. As a consequence of disappointing results in community development, the "felt needs" terminology has tended to fall into disfavor. A question that may be raised at this point of time is whether there is not a significant difference between such felt needs as could be taken care of by volunteer labor with a few meager government inputs, and the kinds of felt need that require an appreciable cash outlay for which farmers are demonstrably willing to live up to a medium-term repayment obligation. The latter probably should be taken more seriously, both because they correspond to effective demand in economic terms and because they are likely to represent a more consequential variety of developmental activities.

If the experience of the Pan American Development Foundation has validity (Chapter 10), then some kind of search for the felt needs of rural communities has a value that is at least reflected in creditworthiness. The local judgments of needs and resources may not be generally inferior to those of more educated outsiders. However, if the crystallization of a felt need has been stimulated by an amateurish *promotor,* some might consider the result suspect. The remedy could either be the education of *promotores* in pertinent fields, or the screening of project proposals by blending the judgments of technical experts with those of the specialist in dealing with small farmer communities. Whether this function (or functions) could best be performed and paid for inside a credit agency or by delegation outside, and whether it would in fact prove itself in the discovery of significant numbers of useful projects and creditworthy borrowers who would never have been found by the usual procedure of waiting passively for loan applications, are questions that can only be answered by trial and experience.

### *Risk Sharing*

*Loan guarantees.* The practices of commercial banks, public as well as private, of requiring loan collateral, and of estimating creditworthiness of borrowers by inference from their demonstrated commercial success along with their assets, are a natural outgrowth of the banking function. The problem is that this

tends to supply credit facilities to established enterprises and property owners, and exclude new entrepreneurs; it is not only small farmers that are affected. In a society where dualistic economic growth patterns are present, this tendency helps to augment the incomes of the rich and well-connected and to leave outsiders further behind, thus inhibiting developmental possibilities that should be facilitated.

One solution to this problem that takes account of a bank's concern for the security of its loan funds is for an organization to provide complete or fractional guarantees for the value of repayments by selected borrowers, thus shifting all or part of the risk from the bank to itself. This method makes it possible to obtain financing for new entrepreneurial ventures by reliance on a form of insurance, one that has a number of possible applications. It has some history and experience which cannot be adequately discussed here, except to note that it has seldom been considered appropriate to small farmer loans. It is possible that this device may be of increasing interest as the problems of economic dualism are given more attention.

Application of this kind of insurance to small farmer loans presents formidable problems in the identification of suitable clients for guarantee, but it is not out of the question. For example, the *prêt de soudure* loans to small farmer groups by the BNDA in the Ivory Coast (Chapter 5) are insured up to a 25 percent default level by the government; and there may be other such cases. In this instance the insurance was taken on as a government function, in which the risk appeared to be reasonable in view of the conservative management of the BNDA —a government bank; in effect, the lending and the insurance are both parts of a joint state policy. At the opposite extreme, the Pan American Development Foundation started out with private organizations to find their own creditworthy borrowers among Latin American communities, and the private banks later showed interest in Foundation guarantees as an *ad hoc* initiative on their part. In the first case a guarantee was supplied with no investigation of borrowers beyond that of the lender; in the second case the investigative work came first, with the guarantee as an unplanned byproduct.

Other variations are possible. Insurance, presumably fractional, could be regarded as a legitimate government function, or delegated to a state insurance corporation, or it might be undertaken by a private insurance company with some form of reinsurance. Investigative responsibilities and jobs might be variously organized—the *promotor* function being either specialized or combined with other jobs. All this is admittedly rather far away from conventional practices, but the notion of risk sharing is not totally unfamiliar and the concept may be attractive enough to become a subject for experimental pilot projects.

*Alleviating small farmer risk.* As was noted in Chapter 11, the usual credit relationship with small farmers is one in which the greater part of the risks from unfavorable weather or the adoption of unfamiliar farm practices is borne by the farmer—the party whose resources are usually the least. Crop insurance is one way of mitigating the farmer's risk, but it faces many practical obstacles in developing countries and is more likely to be made available to large than small farmers.

A compromise proposal was made for providing a diminution of the risk of a farmer borrowing from a credit agency by varying the terms of his repayment in accordance with weather and/or crop results in his area, reducing his obligation

somewhat in bad crop years while raising it in good years. This too is rather distant from prevailing practice, but it may be thought to represent a sufficient improvement in the justice of risk sharing to merit some controlled experimentation.

*Farmers' Organizations*

The experience with farmers' organizations around the world has been extensive and variegated, and as noted in Chapter 14 a good deal of it could be regarded as relatively unsuccessful or mediocre in result. Clearly there are many unanswered questions regarding the most effective means of organizing farmer groups for handling credit and other purposes. However, a great many books, pamphlets and articles have been written on farmers' cooperatives and similar organizations, and while the field is a broad one it cannot be said to have been neglected. While many of these writings would not qualify as rigorous research, there has been wide publication of the results of experience and widespread discussion and analysis from one point of view or another. In addition there has been a considerable range of diversity in the forms of organization and methods tried out in practice, whether as a result of planned innovation in pilot projects or because indigenous as well as traditional Western ideas were put into operation in a variety of settings.

As a result, it is difficult to identify questions to which answers could be foreseeably obtained by new experimental projects or research—answers that would be peculiarly pertinent to small farmer credit programs. The specialist in organization theory and practice has much work that he could do, and if this were oriented to problems bearing on credit programs the results could be of interest; but it goes beyond to scope of this book to advise him on how he should go about it. In the meantime, credit program practitioners can look to successful experiences as models to learn from: the Taiwanese, the Comilla, the Egyptian, the Ugandan, not to mention such lessons as can be gleaned from Denmark or Israel; and there are smaller projects that supply useful experience.

One general observation may be appropriate. It seems probable, to this author and to others, that the most important cause of weaknesses in cooperative movements is that methods which have produced results in one cultural setting that seem worthy of emulation are applied in other cultural settings where the same kind of results do not come about. No doubt there are some organizational methods and forms which are superior to others in any culture, as the advocates of cooperatives tend to believe. But since the success of cooperatives depends so very much on the quality of the human relations and responses they evoke, it would appear that differences in cultural preconceptions and values are key factors. These are likely to be more important, and harder for practitioners to identify, than the more readily understandable formal elements that would apply more generally. If that is so, the task of finding ways in which traditionalist or semi-traditionalist farmers in diverse cultures may best organize themselves to deal with credit, along with the other aspects of rural development, will call for a more imaginative search for local adaptations than has been usual in the past. This, in turn, suggests the value of basic inter-cultural research, and improved theories of cultural compatibility based on analysis by social scientists who are willing to focus on this kind of problem.

*Conclusion*

It is fitting that this book should conclude with an acknowledgment that there is much to be learned about small farmer credit. The subject has a great importance in developing countries for a variety of reasons, and its importance seems to be receiving increasing recognition. But the experience so far, though not lacking in success stories and partial successes, has been widely characterized by disappointments, by ineffectual programs facing stubborn obstacles, and by a certain bafflement as to their causes and probable cures. However, small farmer credit is far from being a hopeless cause. There is a great deal that can be done to improve the effectiveness of credit in rural development, both in the adoption of relatively familiar policies within the framework of national strategies and in the experimentation with less familiar possibilities. Rural development, and the use of credit by small farmers, will continue for better or worse, and the effort to see that it goes better will affect the welfare and aspirations of millions of people.

# Appendixes

## A Reading List

The literature on small farmer credit in developing countries has been relatively limited, and the Spring Review papers (see Appendix B) represent a significant addition to it. This reading list of non-Spring Review items is suggestive only, emphasizing works of general interest and surveys rather than project case studies. A more exhaustive *Annotated Bibliography on Rural Credit and Savings in Less Developed Countries* (1972) may be obtained from the Department of Agricultural Economics and Rural Sociology, The Ohio State University, 2120 Fyffe Road, Columbus, Ohio 43210, U.S.A.


Adams, Dale W. "Agricultural Credit in Latin America: A Critical Review of External Funding Policy." *American Journal of Agricultural Economics* 53, no. 2 (May 1971): 163-172.

Baker, C. B. "Credit in the Production Organization of the Firm." *American Journal of Agricultural Economics* 50, no. 3(August 1968): 507-520.

Barry, Peter J. and John R. Brake. "Financial Strategies and Economic Decisions of the Firm." Agricultural Economics Report no. 185, Department of Agricultural Economics, Michigan State University, East Lansing, Michigan, February 1971.

Belshaw, Horace. *Agricultural Credit in Economically Underdeveloped Countries* Rome: Food and Agricultural Organization, 1959.

Bhatt, V. V. *Structure of Financial Institutions.* Bombay, India: Vora, Vora and Co., 1972.

Blitz, Rudolph, and Millard Long. "The Economics of Usury Regulation." *The Journal of Political Economy* 73(February-December 1965): 608-619.

Bottomley, Anthony. "Monopoly Profit as a Determinant of Interest Rates in Underdeveloped Rural Areas." *Oxford Economic Papers* New Series 16, no. 3 (October 1964): 431-437.

Bottomley, Anthony. "The Costs of Administering Private Loans in Underdeveloped Rural Areas." *Oxford Economic Papers* 15, no. 2(July 1963): 154-163.

Bottomley, Anthony. "Interest Rate Determination in Underdeveloped Rural Areas." *American Journal of Agricultural Economics,* May 1975: 279-291.

Chen, H. Y. and R. A. Bailey. "Agricultural Credit in Taiwan." AFC Research Publication 109, Department of Agricultural Economics and Rural Sociology, The Ohio State University, August 1966.

Colyer, Dale and Guillermo Jiminez. "Supervised Credit as a Tool in Agricultural Development." *American Journal of Agricultural Economics* 53, no. 4 (November 1971): 639-642.

Dantwala, M. L. "Institutional Credit in Subsistence Agriculture." *International Journal of Agrarian Affairs* 5, no. 1 (December 1966): 52-61.

Food and Agriculture Organization (FAO). *Agricultural Credit Through Cooperatives and Other Institutions.* Rome: FAO, 1965.

Inter-American Development Bank (IDB). *"Evaluación de Programas Globales de Crédito Agrícola en Seis Paises Latinoamericanos."* Document on Agricultural Development no. 21, Inter-American Development Bank, Washington, D. C., August 1971.

Johl, S. S. and C. V. Moore. *Essentials of Farm Financial Management.* New Delhi, India: Today and Tomorrow's Printers and Publishers, 1970.

Long, Millard. "Interest Rates and the Structure of Agricultural Credit Markets." *Oxford Economic Papers* (New Series) 20, no. 2(July 1968): 275-288.

Nisbet, Charles T. "Moneylending in Rural Areas of Latin America." *American Journal of Economics and Sociology* 30, no. 1(January 1971): 72-84.

Oluwasanmi, H. A. and J. A. Alao. "The Role of Credit in the Transformation of Traditional Agriculture: The Western Nigerian Experience." *The Nigerian Journal of Economic and Social Studies* 7, no. 1(March 1965): 31-50.

Owens, Edgar L. and Robert d'A. Shaw. *Development Reconsidered.* Lexington, Massachusetts: Lexington Books, D. C. Heath and Company, 1972.

Pan American Development Foundation. "Credit for Marginal Groups." Unpublished report prepared for the Inter-American Bank, December 1, 1969.

Penny, D. H., "Farm Credit Policy in the Early Stages of Agricultural Development." *Australian Journal of Agricultural Economics* 12, no. 1(June 1968): 32-45.

Rao, Bodepudi Prasada. "The Economics of Agricultural Credit Use in Southern Brazil." Ph.D. dissertation, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 1970.

Rask, Norman. "The Impact of Selective Credit and Price Policies on the Use of New Inputs." *Development Digest,* April, 1971: 49-54.

Reserve Bank of India. *Report of the All-India Rural Credit Review Committee.* Bombay: Reserve Bank of India, 1969.

Robinson, Harry J. and Ato Mammo Bhata. *An Agricultural Credit Program for Ethiopia.* Report no. 9, prepared for the Technical Agency, Imperial Ethiopian Government by Stanford Research Institute, Menlo Park, California, January 1969.

Sanderatne, Nirmal. "Agricultural Credit: Ceylon's Experience." *South Asian Review* 3, no. 3(April 1970): 215-225.

Sarmago, C. S., "The Agricultural Credit Administration." Unpublished report prepared for Committee on Agricultural Credit Systems in the Philippines, Department of Agriculture and Natural Resources, Manila, Philippines, January 1972.

Shahjahan, Mirza. *Agricultural Finance in East Pakistan.* Dacca, Pakistan: Asiatic Press, 1968.

Swift, J. G. "Capital, Saving and Credit in a Malay Peasant Economy." In *Capital, Saving and Credit in Peasant Societies,* ed. R. W. Firth and B. S. Yamey. Chicago: Aldine and Co., 1964.

Thisyamondol, P., V. Arromdee, and M. Long. *Agricultural Credit in Thailand: Theory, Data, Policy.* Thailand: Kaetsart University, 1965.

Wai, U Tan, "Interest Rates in the Organized Money Markets of Underdeveloped Countries." *Staff Papers of the International Monetary Fund,* vol. 5, 1956-57:249-278.

Wai, U Tan. "Interest Rates Outside the Organized Money Markets of Underdeveloped Countries." *Staff Papers of the International Monetary Fund,* vol. 6, 1957-58: 80-142.

# B List of Contents of Spring Review Volumes

The 20 volumes of Spring Review papers may be purchased, individually or as a set (see directions below). Their contents are listed here in sequence with titles of volumes and articles, name and affiliation of author(s), and number of pages per article. (In volumes I to XVI there are no volume page numbers; "articles" with their own page numbers are separated by yellow pages to assist in finding them. In two cases, several papers are combined in one "article." In volumes XVII to XX, however, there are volume page numbers, shown here.) The article titles are often modified slightly from the originals, either for brevity or to ensure that the institutions discussed and their country of location are specified. The affiliations or employers of the authors are those in effect when these reports were written in 1972.

A typical article entry, using uniform punctuation, includes the following. Number of article in volume sequence, e.g., 3). Title, with credit institution (if any) named: country of location (if any). Name(s) of author(s); affiliation(s) of author(s). Page numbers. In some cases articles are excerpted or reprinted in full from prior publications; these are designated (Excerpt) or (Reprint).

*A.I.D. SPRING REVIEW OF SMALL FARMER CREDIT*

Vol. I *Small Farmer Credit in Mexico and Central America*

1) Guarantee and Development Fund for Agriculture, Livestock and Poultry (Fondo): Mexico. Jorge Uriza-Salgado *et al.*; Agricultural Economics Center, Chapingo. 123 pp.
2) The Puebla Project: Mexico. Heliodoro Diaz-Cisneros; The Puebla Project. 48 pp.
3) Supervised Credit Program, Administracion de Bienestar Campesino (ABC): El Salvador. Ricardo A. Vasquez, Gustavo Solis, David E. Weisenborn; ABC and AID (El Salvador). 50 pp.
4) National Development Bank: Honduras. Reinaldo W. Santos *et al.*; National Development Bank. 44 pp.
5) Rural Credit Program, National Bank of Nicaragua. Carlos Rene-Ramirez; National Bank of Nicaragua. 51 pp.

Vol. II *Small Farmer Credit in Costa Rica*

1) Agricultural Credit Project: Costa Rica. Albert L. Brown; American Technical Assistance Corp. 50 pp.
2) The Juntas Rurales: Costa Rica. Claudio Gonzalez-Vega; Stanford University. 130 pp.

Vol. III *Small Farmer Credit in South America*

1) Supervised Agricultural Credit Program: Peru. Octavio Carranza; Ministry of Agriculture. 50 pp.
2) Review of Small Farmer Credit in Bolivia. Tom C. Royden; Utah State University. 66 pp.
3) Instituto de Desarollo Agropecuario (INDAP): Chile. Charles T. Nisbet; Evergreen State College, Washington. 71 pp.
4) Rural Capital Markets and Small Farmers, 1960-72: Brazil. Richard Meyer, Dale W. Adams, Norman Rask, Paulo F. Cidade de Araujo; Ohio State University. 57 pp.

Vol. IV *Small Farmer Credit in Ecuador*

1) Supervised Credit Program for Settlements in Santo Domingo de los Colorados: Ecuador. Gonzalo Guzman; National Development Bank. 61 pp.
2) Central Bank Trust Fund for Farm Development: Ecuador. Juan F. Casals; Central Bank Trust Fund. 20 pp.
3) Directed Agricultural Credit Program (DACP) of the National Federation of Savings and Credit Cooperatives of Ecuador (FECOAC). Manuel Benitez-Contreras; FECOAC. 20 pp.
4) Evaluation of Directed Agricultural Credit Program (DACP): Ecuador. R. Hayes Keeler, R. Rodrigo-Mera, Roberto Cruz-P.; AID and FECOAC. 87 pp.

Vol. V *Small Farmer Credit in Colombia*

1) INCORA Supervised Credit Program: Colombia. James Schwinden, Gerald Feaster; U.S. Department of Agriculture. 101 pp.
2) Use of INCORA Supervised Credit in 1969: Colombia. Dana G. Dalrymple; AID. 13 pp.
3) Small Farmer Credit of Caja Agraria: Colombia. Ronald L. Tinnermeier; Colorado State University. 79 pp.

Vol. VI *Small Farmer Credit in Africa*

1) *Prêts de Soudure,* National Bank for Agricultural Development (BNDA): Ivory Coast. Staff of BNDA. 17 pp.
2) National Center for Promotion of Cooperative Enterprises (CENAPEC): Ivory Coast. Samuel Nnebe; African Institute for Social and Economic Development (INADES), Abidjan. 20 pp.
3) Western Nigeria Agricultural Credit Corporation (WNACC): Nigeria. A. Ijose, J. N. Abealu; Universities of Ibadan and Ife, Nigeria. 21 pp.
4) Fund for Agricultural and Industrial Development: Eastern Nigeria. Sylvester Ugoh; University of Nigeria, Enugu. 12 pp.
5) Agricultural Credit Strategy for Nigeria. Adeniyi Osuntogun; University of Ife. 11 pp.
6) Rice and Maize Scheme, Agricultural Development Bank: Ghana. Joseph B. Goodwin, Roger Selley; AID, Harvard Development Advisory Service. 42 pp.

7) Organizational Structure and Administrative Procedures Appropriate for Supervised Agricultural Credit Institutions in Developing Countries. Daniel Goodman; AID (Nigeria). 27 pp.
8) Government Small Farmer Credit Programs in Morocco. Norman Ulsaker; AID (Morocco). 62 pp.
9) Local Mutual Credit Unions: Tunisia. William F. Johnson; AID (Tunisia). 43 pp.
10) Small Farmer Credit: Sudan. Thomas Stickley, Mohammad Hamid Abdallah; American University of Beirut. 54 pp.
11) Cooperative Credit Scheme: Uganda. D. C. Frederickson; AID (Uganda). 54 pp.
12) Role of Money in Development of Farming: Mumbwa and Katete areas of Zambia. Richard A. J. Roberts; Food and Agriculture Organization of the United Nations (FAO). 90 pp. (Excerpts)

Vol. VII *Small Farmer Credit in Kenya*

1) Survey of Farm Credit in Kenya. Graham F. Donaldson, J. D. von Pischke; World Bank. 163 pp.
2) Vihiga Maize Credit Program: Kenya. Peter Weisel *et al.*; AID (Kenya). 43 pp.

Vol. VIII *Small Farmer Credit in Ethiopia*

1) Credit Program of the Chilalo Agricultural Development Unit (CADU): Ethiopia. Johan Holmberg; Swedish International Development Authority (SIDA). 94 pp.
2) CADU (see preceding) as a Program Intermediary for Foreign Assistance: Ethiopia. John M. Cohen; Haile Selassie I University, Addis Ababa. 74 pp.

Vol. IX *Small Farmer Credit in West Asia*

1) Supervised Credit Program, Turkish Republican Agricultural Bank: Turkey. Thomas Stickley, Suha Santana; American University of Beirut. 66 pp.
2) Agricultural Credit Corporation: Jordan. Thomas Stickley, Marwan Hayek; American University of Beirut. 134 pp.
3) Supervised Credit Program, Agricultural Cooperative Bank: Iran. Thomas Stickley, Ebrahim Hosseini; American University of Beirut. 34 pp.
4) Review of Agricultural Credit in Afghanistan, 1954-72. Douglass G. Norvell; AID (Afghanistan). 56 pp.
5) Agricultural Credit For Small Farmers in the Middle East. Thomas Stickley, Raja Mourcade, Yusuf Kahshu; American University of Beirut. 32 pp.

Vol. X *Small Farmer Credit in South Asia*

1) Small Farm Credit in Bangladesh. M. Solaiman, Azizul Huq; Academy for Rural Development, Comilla. 52 pp.
2) Comilla Cooperative Production Loans—A Note on the Cost of Capital: Bangladesh. Joseph F. Stepanek; AID (Bangladesh). 15 pp.
3) Comilla, Reassessment and Replication: Bangladesh. Desaix Myers; AID (Bangladesh). 15 pp.
4) Cooperative Credit and Small Farmer Adoption of New Cereal Varieties: India. Michael G. G. Schluter; Indian Institute of Management, Ahmedabad, and Cornell University. 43 pp.
5) Cooperative Credit for Small Farmers: India. Sarojini Abraham; AID (India). 26 pp.

6) Selected Papers.
   a) Dimensions of Small Farmer Credit Problems: India. William E. Hendrix, AID (India). 10 pp.
   b) Small Farmer Credit Programs in India. B. Sen; AID (India). 12 pp.
   c) How Important was Credit for the Green Revolution?: Pakistan, India. Joseph Lieberson, AID. 6 pp.
   d) Bibliography on Agricultural Credit in India. AID staff (India). 17 pp.
7) Report on Credit Services for Small and Marginal Farmers and Farm Workers: India. National Commission on Agriculture; Government of India. 46 pp. (Reprint).
8) Cooperative System of Small Farmer Credit in Sri Lanka. Godfrey Gunatilleke *et al.*; Marga Institute, Colombo. 201 pp.

Vol. XI *Small Farmer Credit in East Asia*

1) Farm Credit in South Korea. Robert B. Morrow, Paul E. White; AID (Korea). 92 pp.
2) Rural Capital Markets and Small Farmers in Taiwan, 1952-72. Dale W. Adams, H. Y. Chen, C. Y. Hsu; Ohio State University, and Joint Commission on Rural Reconstruction, Taipei. 72 pp.
3) Rural Banks and Small Farmer Credit: South Vietnam. Nguyen An Nhon; Agricultural Development Bank, Saigon. 46 pp.
4) Credit and Small Farmers in the Mekong Delta: South Vietnam. Clifton G. Barton; Cornell University. 46 pp.
5) Rice Production Credit Scheme, Muda Irrigation Project: Malaysia. Leong King Wai, Robert G. Hoover; Bank Pertanian Malaysia. 94 pp.
6) Selected Papers on the BIMAS Rice Program in Indonesia.
   a) The BIMAS Program. Abdoer Rachman; Bank Rakjat Indonesia. 9 pp.
   b) The BIMAS Program for Self-Sufficiency in Rice. Alexis Rieffel; AID (Indonesia). 30 pp. (Reprint)
   c) Indonesia's Green Revolution: Abandonment of a Non-Market Strategy For Change. Gary E. Hansen; East-West Center, Honolulu. 23 pp. (Reprint)
   d) Problems in the BIMAS Program. Gary E. Hansen; East-West Center, Honolulu. 28 pp. (Reprint)

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1) Bank for Agriculture and Agricultural Cooperatives (BAAC): Thailand. Marcus D. Ingle *et al.*; AID (Thailand). 109 pp.
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4) Rice Productivity and Profitability, Iloilo Province 1971-72; Philippines. Kenneth F. Smith; AID (Philippines). 16 pp.

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3) Field Survey of Small Farmers: Sahiwal District, Pakistan. Muhammed Naseem; University of California, Davis. 46 pp. (Excerpts)
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5) Borrowing-Lending Arrangements Involving Cultivators' Cash Savings: Zambia. Richard A. J. Roberts; Food and Agriculture Organization (FAO). 10 pp. (Excerpt)
6) Credit and Small Farmers in the Mekong Delta: South Vietnam. Clifton G. Barton; Cornell University. 46 pp. (Also appears as article 4 in Vol. XI.)
7) The Rotating Credit Association: A "Middle Rung" in Development. Clifford Geertz; University of Chicago. 22 pp. (Reprint)
8) A Rotating Credit Association in The Dominican Republic. Douglass G. Norvell, James S. Wehrly; Texas A & M University. 12 pp. (Reprint)
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10) Credit Systems For Small Farmers: Cases From Mexico. Simon Williams, James A. Miller; Coordinacion Rural Inc., Mexico City. 32 pp. (Excerpt)
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3) Institutional Success—ACAR: Brazil. Judith Tendler; University of California, Berkeley, 10 pp. (Excerpt)

4) Agricultural Credit in Latin America: Persistent Problems, Potential Promises. Roger E. Soles; Inter-American Foundation, Washington, D. C. 28 pp.
5) Are Small Farmer Credit Programs Getting at the Cause of Small Farmer Problems? L. Harlan Davis: AID (El Salvador). 5 pp.
6) A Three-Story Agricultural Banking System. Alfonso Rochac; Inter-American Development Bank (El Salvador). 12 pp.
7) Agricultural Credit Policy in Developing Countries. Jiryis S. Oweis; AID. 57 pp. (Reprint)
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9) Agricultural Supervised Credit—The Farmers Home Administration (FHA) Way: United States. Jack Hartman *et al.*; FHA. 37 pp.
10) Design Criteria Suggested by Mexican Experience. Simon Williams, James A. Miller; Coordinacion Rural Inc., Mexico City. 8 pp. (Excerpt)
11) Cooperative Credit in Perspective: Case Study, Pakistan. Mahmoud Ali Khan, Dilawar Ali Khan; University of Agriculture, Lyallpur. 47 pp.

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18) Rationalizations and Operating Procedures For Small Farmer Credit. Richard S. Eckaus; Massachusetts Institute of Technology. pp. 377-400.
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# C Alphabetical Index of Spring Review Authors and Countries

*With Volume and Article Numbers*

In order that readers may identify the Spring Review articles from references in this book that give only the author's name, the following alphabetical listing of authors supplies the volume number (Roman numeral) and article number (Arabic numeral, for sequence within volume) of their contributions. With Spanish names, the last two parts of a name are joined by a hyphen and the joint name is listed alphabetically. Countries that were subjects of Spring Review reports are similarly listed. Readers may then look up the indicated articles in Appendix B for more complete information.

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