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# SMALL FARMER CREDIT PROGRAMS

AND INTEREST RATE POLICIES

IN LOW-INCOME COUNTRIES

By

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## Small Farmer Credit Programs and Interest Rate Policies in Low-Income Countries

by

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#### Introduction

Over the past decade there have been very large increases in the amounts of formal agricultural credit made available in most non-centrally planned, low-income countries (LICs). Major efforts also have been aimed at channelling a significant part of these loans to the rural poor. As a result, most low-income countries currently have at least one small farmer credit program. These programs have been strongly supported by the World Bank, regional banks, the Food and Agriculture Organization, various bilateral aid agencies, foundations, cooperative organizations, and even church groups.

The recent popularity of small farmer credit programs stems from a variety of factors. In a few cases it appears that these programs have been used to gain political and ideological support, and to advertise government concern for the rural poor; credit programs give an aura of action which may or may not be associated with significant economic changes. A few Latin American countries also have apparently substituted credit activities for more fundamental changes in asset ownership and access to social services in rural areas. On some occasions, aid agencies also have found it relatively easy to transfer large amounts of foreign exchange into a country for agricultural credit projects. It is much easier, for example, to move 10 million dollars through assistance pipelines into agricultural credit, than to build 10 million dollars worth of rural schools. Some planners also have viewed loans as a vital input which is often missing in the production processes of small farmers. It has been widely held that large increases in formal credit for small farmers will be needed before their agricultural production can be substantially increased.

A surprisingly large number of these small farmer credit programs have been carefully evaluated. In some cases loan repayment problems have been serious, and in a few programs weak administration has led to unsatisfactory results. Overall, however, these project evaluations show that many projects have been highly successful in achieving project goals. Despite these successful projects, the "sense of the whole" I get from looking at rural financial markets (RFMs) in a number of LICs is that these markets are performing very poorly: In a few countries the purchasing power of formal credit portfolios has declined the past few years, and formal RFMs continue to strongly resist lending to agriculture in general and to the rural poor in particular.<sup>1</sup> The average term structure of loans to agriculture is typically very short, and formal RFMs mobilize very little voluntary private savings. Some repayment problems appear to be almost a chronic issue as long as formal lenders attempt to lend to individuals who have little previous formal loan experience. In addition, it appears that formal lenders are imposing relatively large loan transaction costs on small and inexperienced borrowers. These transaction costs lessen the incentives

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<sup>1</sup> The term "formal credit" is used here to represent loans from banks, cooperatives, savings and loans, and other government regulated financial institutions. Informal lenders are all others who provide financial loans.

which small and new borrowers have to use formal loans. Overall, it appears that RFM activities in most low-income countries are causing substantial increases in the concentration of income and asset ownership, a result clearly inconsistent with the stated objectives of most small farmer credit programs.

The conundrum of moderately successful credit projects, yet floundering rural financial markets, can be at least partly explained by looking at the assumptions and policies on which rural credit programs are built. I will attempt to argue that fixed, relatively low interest rate policies in most LICs, combined with serious inflation pressures, are major factors causing poor performance in RFMs.

#### Common Assumptions and Policies

At first blush a casual observer is often impressed with the uniqueness of RFMs in each low-income country. This impression is often reinforced by the diversity found among the institutions providing financial services in rural areas. More careful analysis, however, reveals a large number of similar assumptions behind most formal agricultural credit activities. At the farm-household level, it is often assumed that the rural poor face credit shortages, that they pay exorbitant amounts for the use of informal credit, and that they need careful supervision in order to use credit wisely. It is further assumed that most farmers need additional credit in order to adopt new, highly profitable technology, and that concessional interest rates are needed on formal loans in order to induce farmers to borrow. In most cases it is also assumed that interest charges make up the bulk of the borrowing costs for most farmers, and that the loan

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demand, especially among small farmers, is very interest rate elastic. Typically, a rural household is also stereotyped as having little or no voluntary savings capacity.

Several strongly held assumptions relate to lender behavior. These include the feeling that informal lenders provide the majority of the loanable funds in most low-income countries, and that formal lenders are tradition bound and do not necessarily make loans wisely. It also is assumed that formal lenders can regulate the uses made of funds by granting loans only for production purposes, or by making loans in-kind. Many lenders as well as policy makers also feel that formal credit should not be extended for household consumption.

Strongly held assumptions about informal lenders also can be found. These include the ubiquitous feeling that moneylenders usually extract large monopoly profits, charge exorbitant interest rates, regularly take advantage of the economically weak, do not provide legitimate economic services, and that they ought to be closely regulated or eliminated.

There are also a number of widely held assumptions about the overall performance of RFMs in low-income countries. One of the most common is that RFMs can be closely regulated and their performance controlled by administrative fiat. It is very common for new governments to announce dramatic agricultural credit programs which typically include credit supply increases as well as concessional interest terms. In a few cases it may also include forgiveness of formal debts not repaid under earlier programs.

As might be expected, these common assumptions have led to very similar policies across countries. Most countries, for example, try to drive

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the informal moneylender from rural areas by increasing formal loan supplies. A number of countries also are developing new financial institutions to service specific target groups in rural areas, especially the small farmer. Also, intensive loan supervision and farm planning often are tied to small farmer loan programs. It is very common for central banks or monetary authorities to use various types of credit regulations to force lenders to service certain target groups such as small farmers. These regulations include loan portfolio-ceiling devices, various discount mechanisms, adjustments in reserve requirements, and loan guarantee programs [Johnson]. Fixed, low interest rates on both formal loans and financial savings instruments are probably the most common policy instrument found in LICs. It is becoming increasingly apparent that these concessional, inflexible interest rate policies are a major reason why most RFMs are performing so poorly.

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#### Arguments for Low Interest Rates

Various combinations of at least four arguments are used to justify low and inflexible interest rate policies in RFMs. The most common is that low rates are needed to induce farmers to <u>adopt</u> formal credit and to use same to purchase modern productive inputs. This adoption argument holds that small farmers will not borrow formal credit unless low rates are charged, that they will not adopt profitable new technology unless special inducements are given, and that low rates are necessary to offset the uncertainties associated with adoption of new production activities. A second and more complicated argument is that low interest rates are needed on agricultural credit to compensate farmers for other economic policies which cause production and investment disincentives. These policies might include food price ceilings, overvalued foreign exchange rates which depress prices of agricultural exports, various forms of taxes, and policies which raise the prices of major inputs purchased by farmers. Some policy makers argue that low interest rates on agricultural loans are an easy and efficient way to compensate farmers for the production disincentives inflicted on them by these various policies.

A third argument used to justify cheap credit policies, especially for small farmers, relates to equity or <u>income transfer</u> objectives. Policy makers who feel compassion for the economic plight of the rural poor argue that low interest rates on agricultural loans are an easy way to transfer additional purchasing power to the rural poor. When interest rates are low, borrowers pay less for their loans and thus have more income to spend on other activities. A slight variation of this argument is that low interest rates are justified to help farmers ride out periods of low income due to disasters caused by war or weather.

The fourth argument might be labelled the "moneylender syndrome." It is widely held in LICs that informal lenders apply usurious lending terms to their loans. These terms lead to either perpetual economic bondage of borrower to lender, or even worse, turnover of borrowers' assets to the lender to satisfy debts. An objective of many small farmer credit programs is to provide inexpensive formal credit to rural households so they can escape the clutches of the moneylender. It is also often hoped

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that an increased supply of inexpensive formal credit will at least weaken the economic power of the moneylenders, and hopefully even drive them out of business.

## Recent Research Results

A substantial amount of research has been done the past few years on rural financial markets. Results from a good deal of this research challenges many of the widely held assumptions about RFMs in LICs. This research is also raising serious questions about the efficacy of concessional interest rate policies which are largely based on these increasingly questionable assumptions.

Hyun, Kalla, Kato, Lee, Ong and Roberts, for example, have all argued that voluntary rural savings capacities may be very substantial in LICs, even where per capita incomes are quite low.<sup>2</sup> Wai has pointed out that the availability of financial instruments along with attractive interest incentives can be very important in helping RFMs to mobilize these savings.

Singh, Stitzlein and Barton have argued that many informal lenders provide valuable services in rural areas of LICs. Further, that on the average, these services are reasonably priced. They would also likely argue that financial programs which are aimed at driving wicked moneylenders from rural areas are ill-conceived.

Other research by Meyer, Tinnermeier, Adams and Howse also suggests that additional credit and supervision may not be critical in the production activities of many small farmers in LICs. They report that many of these

2 Studies cited are listed alphabetically by author's name in the Bibliography.

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rural households already own enough liquidity, or can borrow enough from informal sources, to capitalize on highly profitable investment opportunities. A number of other researchers have carried out farm level analysis which indicates that many small farmers in LICs cannot profitably use additional credit in combination with their current bundle of resources. Still other researchers have reported that loans to help stabilize household consumption among the rural poor may be more important than so called "production credit" for these same households.

Researchers have levelled even stronger criticism at the concessional interest rate policies. They have pointed out that rates of inflation which exceed the nominal rates of interest paid on financial debts, and result in negative real rates of interest, cause havoc in financial markets. Some countries such as Brazil, Argentina and Chile have had very long periods in which real rates of interest in formal RFMs were almost always negative. During the past 5 years almost all LICs have experienced rates of inflation which resulted in negative real interest rates on most formal rural financial instruments. Despite double digit inflation, very few LICs have adjusted significantly their rates of interest on financial instruments in the past 5 years. Researchers are showing that these negative real rates of interest have a very adverse effect on the operations of RFMs. These adverse effects can be seen at the farm-household level, the lender level, and at the overall, financial market level.

#### Farm-Household Level

Low or negative real rates of interest have a double effect on farmhouseholds. The first effect of low rates is to induce some households,

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who are lucky enough to have access to low cost credit, to overuse these loans. Recent farm level research in Brazil showed that many large farmers who had ample access to formal credit had loans far in excess of their cash operating needs [Adams and others]. A good deal of the money borrowed by these individuals was obviously being diverted to uses outside those authorized by their agricultural production loans.

The second effect of low interest rates lies on the savings side. In most cases low interest rates on credit force financial intermediaries and monetary authorities to set even lower rates on financial savings. Almost all market-oriented countries in the world currently have negative real rates of interest on most financial savings instruments available to the rural poor. As Kane has pointed out, low interest rates on savings are particularly onerous on the poor. These low rates force rural households to accept erosion of the real value of their financial savings or to hold their savings in other asset forms. This also results in rural households receiving a lower rate of return on their total assets. Savings activities are, as a result, made less attractive to the household and the opportunity costs of consumption lessened. Said another way, poor rural households are induced to consume more and save less through low interest rate policies.

#### Lender Level

As suggested earlier, low interest rates on agricultural credit are often justified on the basis of what they do for, or to the rural poor. Policy makers almost always overlook the effects which these concessional interest rate policies have on the activities of formal lenders. This is somewhat surprising once one recognizes that much of the mischief caused

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by concessional interest rate policies occurs in the distortions it causes in lender behavior. Gonzalez-Vega, for example, has recently argued that concessional interest rates force lenders to concentrate their loan portfolios in the hands of large and experienced borrowers. He also argues that concessional interest rates discourage loans to agriculture in general and loans for medium and long-term. Research in Brazil by Adams and Tommy strongly supported Gonzalez-Vega's thesis. They found that small farmers in one area of Southern Brazil received very little of the sharp increases in formal credit experienced in Brazil during the late 1960's.

Low interest rates on financial deposits also make it very difficult for formal financial institutions to mobilize a substantial part of their loanable funds from voluntary private savings in rural areas. These lenders typically must rely heavily on funds provided by a central bank to meet most of their loans needs. Too many formal rural financial institutions are simply retail outlets for central banks. Often the word quickly gets around that the money being lent to farmers is President, or General "So and So's" money. A feeling regularly emerges among borrowers that, since the loan is "government money," there is little need to repay. In most countries it is socially acceptable to be lax in meeting one's financial obligations with government. Loan repayment problems are often much less severe where a significant part of the loanable funds are owned by local savers. It is less socially acceptable to be lax in meeting financial obligations with one's friends or neighbors.

When concessional interest rates are in effect on loans, lenders often find that loan demand exceeds the supply of loanable funds. The lenders

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are forced to use nonprice rationing to allocate the scarce funds. This typically emerges in three forms. The first is to allocate fixed loan quotas on the basis of how much land a borrower has in a particular enterprise. This might be expressed in money terms like one thousand pesos per hectare of rice, in physical terms like 600 pounds of chemical fertilizer per hectare of rice, or some combination of money and physical inputs. Under this fixed quota scheme some borrower may end up with too much or too little money or physical input.

The second technique of allocating concessionally priced credit is for the lender to place heavy emphasis on collateral or the borrower's credit rating. This results in the lender extending loans mainly to large landowners and to borrowers with whom the lender has previous lending experiences. New borrowers and persons with small amounts of collateral are generally denied formal loans under these criteria.

The third way lenders ration credit is more subtle and less obvious to the casual observer of RFMs. This rationing is done by imposing different loan transaction costs on various classes of borrowers. If the borrower already has a satisfactory track record with the lender, borrows large amounts, and provides the lender with ample collateral, the borrower's loan transaction costs often make up a very small proportion of total borrowing costs. The borrower may be able to negotiate a new loan through a simple telephone call to the lender. In this case the borrowing costs are made up almost entirely by the interest payments made on the loans [Adams and Nehman].

Typically, an inexperienced candidate for a small loan finds that a formal lender will give him or her much more hassle in the loan negotiation

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process. This usually includes meeting with the lender a number of times to complete loan negotiations and repayment, long waits in line for the potential borrower, incurring cash expenses for paperwork and forms, and in some cases paying a bribe. Many times the loan candidate may experience substantial amounts of loan transaction costs and then be denied a formal loan. Even if the loan is approved, the small borrower may find that loan transaction costs far exceed the interest charges on the loan. Their total borrowing costs on formal loans may be so high that informal loans at "usurious" interest rates, but with little or no additional loan transaction costs, may be less expensive! In all too many cases it appears that formal lenders impose unnecessary loan transaction costs on small and inexperienced loan candidates as a way of discouraging unprofitable business.

#### Overall Effects

In addition to affecting lender and farm-household behavior, concessional interest rate policies also have profund effects on the overall performance of RFMs. Most of the poor performance of RFMs in LICs cited earlier is a direct result of ill-advised concessional interest rate policies combined with substantial amounts of inflation. Three aspects of this poor performance merit additional discussion. These are the income distribution effects, the effects on efficiency of resource allocation, and the increased opportunities for corruption.

Vogel, Gonzalez-Vega and Kane have recently shown that concessional interest rate policies can seriously distort income and asset ownership distributions. The work by Vogel and Gonzalez-Vega on Costa Rica is particularly revealing. In 1948, Costa Rica nationalized most of its banking

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system. The government has since placed a good deal of emphasis on providing credit to small farmers. Despite this, it appears that formal rural credit distribution in Costa Rica is more heavily skewed than is landownership! Research on the performance of nationalized RFMs in India suggest similar dissappointing results [Agrawal]. It appears to be extremely difficult to provide financial services to the rural poor even when formal lenders are nationalized.

Although largely ignored by researchers, it appears that RFMs may also play an important role in concentrating incomes in certain sectors or regions. Kato is one of the few researchers to document how financial markets transfer resources between sectors over relatively long periods of time. His work on Japan showed that very large amounts of voluntary savings were transferred from rural areas to urban by financial markets. It appears that this same process is continuing in many of the LICs. Recent work in Thailand, Bangladesh and Jamaica reinforces my impression that when real rates of interest in financial markets are close to zero or negative, low income regions of an economy are drained of their financial savings by financial markets.

Shaw and McKinnon have pointed out that interest rate regulations fragment financial markets and cause very serious distortions in resource allocation. Some borrowers have access to too much credit, others are forced to take too much credit in-kind, and still others who might have productive uses for credit are denied access to formal loans. As suggested earlier, many households may be encouraged to warp their asset portfolio holdings because of concessional interest rate policies. In a few countries

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like Brazil, Argentina, and Chile (until recently), large amounts of funds borrowed for agricultural purposes have been siphoned off into other economic activities which may have relatively low payoffs for society. In some countries, financial institutions have been overbuilt in order to mobilize inexpensive rural deposits. Unfortunately, almost no work has been done on measuring the magnitude of these inefficiencies.

Likewise, almost no research has been done on the susceptibility to corruption which concessional interest rates may introduce into financial markets. As Blair points out, the lament that large farmers are able to capture most of the concessionally priced credit in cooperatives around the world is a dimension of this subtle corruption. Big people always seem to elbow out little people when bargains are being passed out. Negatively priced credit is often the best bargain around in rural areas of LICs. It is little wonder that many cooperatives which handle loans do not function properly when a small number of powerful individuals can capture most of the concessionally priced loans and thus most of the useful services which the institution provides to society. What incentive does the little person have to become involved?

The Wall Street Journal and Fortune Magazine have recently featured articles about this corruption on a much grander scale. In several lowincome countries the availability of large amounts of concessionally priced credit, plus some high level pressure to channel these funds to friends of the regime, have made a few people in these countries very wealthy, very quickly. Concessional interest rate policies combined with inflation create very large implied income subsidies to borrowers. These subsidies are allocated by the financial system to borrowers in proportion to the

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amount of money borrowed. As suggested earlier, it is in the interest of the lenders to concentrate these loans in order to minimize lender costs. When loans are negatively priced, it is very much in the interest of the economically and politically powerful to get as much of the concessionally priced loans as possible. The beautiful part about this whole process is that the "robbery" of the public is done entirely legally. (Why radical intellectuals in capitalist societies have not jumped on this issue puzzles me.)

## Policy Adjustments

I have become firmly convinced that most small farmer credit projects and RFM activities in general in LICs are not helping significantly to resolve problems of rural poverty. In most cases RFM activities, under current policies, are a welfare program for the politically and economically powerful. It is also clear that a number of the so-called "successful" small farmer credit programs are not successful if appropriate social criteria are used to evaluate project performance. The rural poor are not materially aided by a credit project which draws most of its new clients from the loan portfolios of other formal lenders [Adams, 1966]. The rural poor are also not aided materially if a small farmer credit program's loan repayment performance is improved by switching loans from small to medium and large sized borrowers. A small farmer credit project also should not be judged a success when it provides a few nickles to the rural poor while the rest of the financial system pours millions into loans for the economically powerful. A project should only be counted successful in

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serving the rural poor if substantial "additionality" is not achieved. That is, a substantial increase in the amount lent to the rural poor and number of poor serviced by the RFM in total must occur.

The persistence of the concessional interest rate policies, despite a good deal of evidence that they are anti-developmental, cannot be explained by conventional neo-classical economics. I am becoming increasingly convinced that interest rate reforms are as difficult to effect as land reform. They may be even more difficult, in fact, because the people injured by current interest rate policies are only hurt a small amount each. Land invasions are possible to pressure land reform. Nothing similar seems possible to build grass roots pressure for interest rate reform.

It is clear to me that RFMs in LICs are not being used properly to achieve widely-held development goals, especially those related to equity. In large part this is due to incorrect policies built on faulty assumptions. I am firmly convinced that far too much emphasis is currently placed on providing formal production credit at concessional interest rates to small farmers. I also feel that informal RFMs can play a much more positive role in rural development than is generally recognized.

A more enlightened approach, I feel, would be to place much heavier emphasis on using RFMs to mobilize voluntary financial savings in early stages of development. More flexible interest rate policies will be needed to facilitate this. Savers must be offered positive real rates of interest on their deposits, secure and convenient places to deposit, and easy and quick access to their deposits if they want to make withdrawals.

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It would also be useful to mount major savings mobilization programs once interest rate policies are appropriate. A larger number of rural poor would benefit from attractive savings facilities than can benefit from realistically priced credit.

At the same time, I would institute flexible, nominal interest rates on agricultural credit so that positive real rates of interest would be expected in most years. These higher and more flexible rates would discourage current large users of credit, stimulate formal lenders to seek out new loan business among the rural poor, and force lenders to reduce loan transaction costs imposed on small and new borrowers in order to attract more loan business. Small and new borrowers may even find that their total borrowing costs were reduced when higher and more flexible interest rates are in force.

The adjustments in interest rate policies will not be the only change needed to make small farmer credit projects more successful. I strongly feel, however, that without substantial changes in current assumptions and policies, major improvements in the performance of RFMs will be impossible.

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## Bibliography

- Adams, Dale W and Gerry I. Nehman, "Borrowing Costs and the Demand for Rural Credit," The Journal of Development Studies forthcoming.
- Adams, Dale W and others, "Farm Growth in Brazil," unpublished manuscript, Department of Agricultural Economics and Rural Sociology, The Ohio State University, Columbus, Ohio, June 1975.
- Adams, Dale W and others, "El Credito Supervisado En La Reforma Agraria Colombiana: Un Estudio Evaluativo," Instituto Interamericano de Ciencias Agricolas, Centro Interamericano de Reforma Agraria, Bogota, Colombia, 1966, 104 p.
- Adams, Dale W and Joseph L. Tommy, "Financing Small Farms: The Brazilian Experience 1965-69," <u>Agricultural Finance Review</u>, Vol. 35, October 1974, pp. 36-41.
- Agency for International Development, <u>A.I.D. Spring Review of Small Farmer</u> <u>Credit</u>, 20 volumes (Washington, D.C.: Agency for International Development, 1973).
- Agrawal, Ramesh Chandra, "An Analysis of the Contribution of Nationalized Banks in Financing Indian Agriculture," <u>Zeitschrift Fur Auslandische</u> Land Wirtschaft, Vol. 14, No. 2, April-June 1975, pp. 144-158.
- Barton, Clifton G., "Credit and Commercial Control: Strategies and Methods of Chinese Businessmen in South Vietnam," unpublished Ph.D. dissertation, Department of Anthropology, Cornell University, 1977, 385 p.
- Blair, Harry W., "Rural Development, Class Structure and Bureaucracy in Bangladesh," <u>World Development</u>, Vol. 6, No. 1, pp. 65-82.
- Donald, Gordon, <u>Credit for Small Farmers in Developing Countries</u> (Boulder, Colorado: Westview Press, 1976).

-18-

- Gonzalez-Vega, Claudio, "Interest Rate Restrictions and Income Distribution," <u>American Journal of Agricultural Economics</u>, Vol. 59, No. 5, December 1977, pp. 973-976.
- Gonzalez-Vega, Claudio, "On the Iron Law of Interest Rate Restrictions, Agricultural Credit Policies in Costa Rica and in Other Less Developed Countries," unpublished Ph.D. dissertation, Department of Economics, Stanford University, 1976.
- Howse, C. J., "Agricultural Development Without Credit," <u>Agricultural Admin-istration</u>, Vol. 1, No. 4, October 1974, pp. 259-262.
- Hyun, Kong-Nam, "Aspects of Rural Household Savings Behavior in Korea, 1962-1974," unpublished M.S. thesis, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 1977.
- Johnson, Omotunde E. G., "Credit Controls as Instruments of Development Policy in the Light of Economic Theory," Journal of Money, Credit and Banking, Vol. VI, No. 1, February 1974, pp. 85-99.
- Kalla, Jagdeesh C., "Savings Investment Behavior of Farm Families Udaipur District - Rajasthan (India)," unpublished Ph.D. dissertation, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 1977.
- Kane, Edward J., "Good Intentions and Unintended Evil: The Case Against Selective Credit Allocation," Journal of Money, Credit, and Banking, February 1977.
- Kane, Edward J., "Short Changing the Small Saver: Federal Government Discrimination Against Small Savers During the Vietnam War," <u>Journal of</u> Money, Credit and Banking, November 1970, pp. 513-522.

- Kato, Yuzuru, "Mechanisms for the Outflow of Funds From Agriculture into Industry in Japan," <u>Rural Economic Problems</u>, Vol. 3, December 1966, pp. 1-20.
- Lee, Tae Young and others, "Savings Deposits and Credit Activities in South Korean Agricultural Cooperatives 1961-1975," <u>Asian Survey</u>, Vol. 17, No. 12, December 1977, pp. 1182-1194.
- McKinnon, Ronald I., <u>Money and Capital in Economic Development</u> (Washington, D.C.: The Brookings Institution, 1973).
- Meyer, Richard L. and others, "Mercados de Credito Rural e os Pequenos Agricultores do Brasil," in <u>Desenvolvimento Da Agricultura: Analise de</u> <u>Politica Economica</u> edited by Paulo Fernando Cidade De Araujo and G. Edward Schuh (Sao Paulo, Brazil: Livraria Pioneira Editora, 1977), pp. 151-204.
- Ong, Marcia L. and others, "Voluntary Rural Savings Capacities in Taiwan, 1960-70," <u>American Journal of Agricultural Economics</u>, Vol. 58, No. 3, August 1976, pp. 578-582.
- Roberts, R. A. J., "The Role of Money in the Development of Farming in the Mumbwa and Katete Areas of Zambia," unpublished Ph.D. dissertation, Department of Agriculture and Horticulture, University of Nottingham, October 1972.
- Shaw, Edward S., <u>Financial Deepening in Economic Development</u> (New York: Oxford University Press, 1973).
- Singh, Karam, "Structural Analysis of Interest Rates on Consumption Loans in an Indian Village," <u>Asian Economic Review</u>, Vol. 10, No. 4, August 1968, pp. 471-475.

- Stitzlein, John N., "The Characteristics and Significance of the Non-Institutional Credit Market in Rural Ecuador," unpublished M.S. thesis, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 1967, 85 p.
- Tinnermeier, Ronald L., "Rural Financial Markets: A Critical Problem Area," Savings and Development, Vol. 1, No. 3, 1977, pp. 150-165.
- Vogel, Robert C., "The Effect of Subsidized Agricultural Credit on the Distribution of Income in Costa Rica," unpublished paper, Department of Economics, Southern Illinois University, Carbondale, Illinois, 1977, 22 p. Wai, U Tun, Financial Intermediation and National Savings in Developing

Countries (New York: Praeger, 1972).