The Case For Voluntary Savings Mobilization:

Why Rural Capital Markets Flounder*

by

Dale W Adams**

I. Introduction

With few exceptions formal rural capital markets in less developed countries (LDC's) are performing very poorly. 1/ Despite the infusion of tens of billions of dollars into these markets over the past two decades, only a small portion of the rural population currently has access to formal credit-savings services. 2/ Moreover, many of the agricultural credit systems have been constantly in danger of decapitalization because of defaults, capital erosion due to unrealistic interest rates, and/or very high costs of administration and supervision. Even more importantly, capital markets are generally not helping to achieve social objectives such as increased employment and improved income distribution. In short, most rural capital markets in LDC's are floundering.

Until recently, the reasons for the poor performance of a country's capital market were thought to be unique. In various times and places political interference, wars, natural disasters, program start-up problems, faulty administration and badly behaved

---

* A paper prepared for the Spring Review of Small Farmer Credit sponsored by the Agency for International Development, Washington D.C. July, 1973. Helpful comments on earlier versions of this paper were received from Dana Dalrymple, Claudio Gonzales-Vega, A.E. Havens, Richard Meyer, Norman Rask, Richard Roberts, I.J. Singh, and Richard Wheeler.

** Professor of Agricultural Economics, The Ohio State University.

1/ The term "formal capital market" is here used to indicate institutions such as banks, savings and loan associations, credit cooperatives or associations and officially recognized credit unions.

2/ This is true in spite of the fact that many LDC's have present in rural areas very extensive credit-savings institution: e.g. Bangladesh, Brazil, Colombia, El Salvador, Kenya, and Turkey.

farmers have been identified as culprits. While it is true that some of these factors have been important in individual cases, I strongly feel that three sets of ubiquitous policies, underpined by very pernicious assumptions, are largely responsible for the debilitation which currently grips rural credit systems in most LDC's. Briefly stated these policy sets are (1) product and/or input price distortions, underinvestments in marketing facilities, and lack of public investment in research aimed at creating new agricultural technology which have resulted in very low profit margins on credit use for most farmers in LDC's. 3/ (2) Interest rates and other administrative policies on agricultural credit which force credit institutions to seriously distort the credit allocation process. 4/ And (3) interest rates and other administrative policies on financial savings which force credit institutions to continually look outside the rural area for loanable funds. Taken together these three sets of policies seriously discourage savings and investment in rural areas.

The following discussion will focus on the savings portion of the rural capital markets problem. I will argue that several fundamental policies must be changed if rural savings are to be encouraged and if capital markets are to play a positive role in rural development. Particular attention is given to how voluntary rural savings mobilization might contribute to vigorous, healthy growth of these markets. By necessity my arguments are speculative in nature; there is only a small amount of research available on rural savings behavior in LDC's.

The following discussion opens with an overview of widely held assumptions about rural savings behavior in LDC's. This includes a brief review of different types of rural savings activities. The next section of the paper lays out a modified framework for analyzing rural saving behavior, and presents fragmentary research which relates to this behavior. This is followed by a section outlining the role which voluntary financial savings might play in the growth of rural capital markets. The final two sections of the paper present ways policy makers might

---

3/ This is a point initially stressed in the literature by Hopper and Schultz [25, 64]. The numbers in brackets refer to references listed in the Bibliography.

4/ Further discussion of this point can be found in Gonzales-Vega, McKinnon, and Shaw [19, 46, 65].

provide more savings incentives, and also some suggestions on policy changes which are needed.

II. Rural Savings Assumptions and Savings Activities

Rural Savings Assumptions

Development economists carry a good deal of inapplicable intellectual baggage with them when they come to analyze rural savings. 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 [e.g. 44, 55]. 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 in LDC's were built during the past two decades [8].

It was also widely assumed that factor proportions in agriculture were badly distorted: too much labor and too little capital. Transfer of labor out of agriculture and channelling of capital into the rural areas became the rules-of-the-game for agricultural development [42]. Farmers were assumed to face profitable investment alternatives, yet needed an extra bribe in the form of concessionally priced credit, plus close supervision, in order to make these investments. In this development model capital markets played a neutral role in the growth process. With these assumptions, it is little wonder that rural capital markets in most LDC have experienced lopsided growth: heavy emphasis on credit and little attention to savings mobilization.

Economists are further handicapped in their analyses of rural savings behavior by the incomplete, and to some extent inappropriate, theoretical tools at their disposal. There are serious shortcomings in consumption theory when it is applied to rural behavior in LDC's. 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 [48]. As will be argued later in this paper, however, rural consumption behavior can only be explained by analyzing the firm-household as it simultaneously makes consumption, investment,

and savings decisions. It has also been concluded, largely on the basis of aggregate consumption studies in developed countries, that modest changes in interest rates paid on savings did not influence consumption-savings behavior [11, 74]. Rather, it simply caused individuals to shuffle their investment portfolios in favor of the higher return assets [48]. 5/ Moreover, consumption analysis has tended to underplay the very heterogeneous nature of production, investment and consumption possibilities faced by the consuming unit. Even more importantly, consumption analysis as well as growth theory generally has placed the marginal propensity to save (MPS) in a straight jacket. Since the MPS was generally assumed to be constant, very little research has been done on how various policy measures affect micro savings decisions.

Savings Activities

With this as background, it is not surprising to find only a handful of countries and/or programs within countries which have stressed voluntary rural savings mobilization. 6/ For discussion purposes it is useful to group rural savings activities in LDC's under three general headings: informal savings systems, forced savings, and voluntary savings.

Informal Savings: Although not extensively documented in the literature it is likely that informal systems of saving handle very large volumes of resources in most LDC's. Where financial markets are badly fragmented individual savers are forced to plow financial surpluses into operating expenses of the firm, to purchase additional land or cattle, to buy jewelry, or to hide funds under the mattress or in tin cans in the backyard [59]. Under less fragmented conditions some of these savings may be transferred to other firm-households through informal financial markets. Loans to friends, relatives, neighbors, or tenants are examples of

---

5/ Wright, Shaw and McKinnon present rather strong counter arguments to this view [75, 65, 46].

6/ Two relatively comprehensive sources of information on rural savings programs and studies are: Agency for International Development Spring Review of Small Farmer Credit volumes 1 through 12 (Washington D.C.: Agency for International Development, 1973); and Dale W Adams and others, Agricultural Credit and Rural Savings: A Selected List of References for AID Technicians, AID Bibliography Series, Agriculture No. 7, Agency for International Development, Washington D.C., December 1972.

these transactions [52]. At a slightly higher level of financial market integration, one can find various forms of rotating credit-savings associations operating in rural areas. A good deal of information is available on the social as well as economic functions which these associations perform [2, 5, 6, 17, 20, 33, 49, 54]. Little information is available, however, on the volume of savings handled, how this volume changes with growth of formal savings systems or the rates-of-return which savers realize by participating in these associations. Very fragmentary information from Korea, Taiwan, and South Vietnam hint, however, that informal savings in rotating credit associations have grown rapidly over the last several decades, and that they have allowed savers to realize attractive rates of return [2, 33, 20].

Forced Savings: Various forms of forced savings have been far and away the most common technique used in LDC's to promote savings. Almost all cooperative or credit union programs around the world require individuals to purchase share-capital in the organization in order to become members [e.g. 15, 28, 30, 35, 57]. If the organization also grants credit, a borrower may be required to own stock or to keep on deposit an amount equal to a given percentage of his loan. In a few cases cooperatives also create forced savings by withholding part of the sales proceeds from a member's sales through the cooperative. 7/

Several programs have added interesting twists to forced savings activities. In Kenya a few cooperatives deposit proceeds of member's sales through the cooperative in regular savings accounts. Despite the modest rates of interest being paid on these savings, cooperative officials have been very pleasantly surprised by the amounts of deposits which were not removed [72]. Deposits, in fact, currently exceed by a large amount total credit granted by these cooperatives.

In Bangladesh, directors of the Comilla program required individuals to make minimal periodic savings deposits in order to remain eligible for other development activities [67, 68]. Again, despite very low rates of interest paid on these savings, surprisingly large amounts of funds have been deposited in the program over the years.

7/ Several countries have attempted to be even more heavy handed in mobilizing forced savings in rural areas. In the early 1960's Nepal initiated a program which required farmers to deposit a given percent of their rice harvests with cooperative [43]. In the late 1950's Ceylon seriously discussed, and almost implemented, a program which would have withheld part of the payment made for rice as a form of forced saving.

In spite of some limited success, forced savings programs appear to be severely cramped in their ability to mobilize large amounts of rural financial resources. The very slow, stunted growth in value of deposits and share capital in most cooperatives and credit unions in LDC's over the past 20 years is strong evidence in this regard. In part this is due to the fact that most farmers view forced savings programs negatively. Farmers see share-capital-purchases and forced deposits as additional costs for securing loans or other services provided by an agency. In large part this is due to the negative or at best very low rates of return which savers realize on these stocks and deposits. Said another way, consumers are not offered a positive reward to postpone consumption.

Voluntary Savings: There are very few examples in LDC's where rural financial savings have been vigorously promoted and where consumers have been offered strong positive incentives to defer consumption in favor of financial savings. To my knowledge, only Japan, Korea, and Taiwan, and to a lesser extent Indonesia, have had such programs [34, 12, 29]. 8/ In the past couple of years South Vietnam has also placed emphasis on mobilizing voluntary rural savings [3]. The tremendous growth in financial savings in Japan, Korea and Taiwan under programs which offered strong incentives to save have been well documented [53, 65, 71]. Some information is also available on the aggressiveness with which rural people reacted to these incentives [50, 56]. A skeptic might argue, however, that the large increase in financial savings in these countries came at the expense of other forms of savings; individuals merely switched the form in which they held their savings. Further, that these policies did not induce net additions to real savings [69]. A skeptic might also argue that, since incentives for financial savings only causes a change in savers' investment portfolios, it is cheaper for society to supply agricultural credit systems with funds created by the Central Bank than to mobilize trickles of funds out of mattresses and tin cans. There are two key questions which relate to the skeptics position. First, do rural individuals have substantial savings capacity? Second, will rural firm-households defer current consumption in order to capitalize on profitable saving-investment opportunities? Some light is shed on these two questions in the following section.

8/ Specific details of these programs are discussed later in the paper.

III Analysis of Rural Savings

Before attempting to present partial answers to these two questions it is necessary to sketch out a more comprehensive firm-household decision-making model than has been used previously in consumption studies. 9/ This includes emphasizing the heterogeneity found among these decision-making units.

In many economic studies savings are considered to be a passive residual left after immediate consumption needs are satisfied. 10/ 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 [56, 71, 75]. Policies which significantly affect the rates-of-return to various types of savings may as a result, play an important part in determining the amount saved. An adequate understanding of how different policies affect rural savings requires an intimate knowledge of the factors which influence rural firm-households consumption, production, and investment decisions.

Firm-household Consumption Decisions

The rural firm-household decision-making process is complex and includes economic as well as non-economic dimensions. On the economic side current consumption decisions appear to play a central role. Keynesian macro consumption analysis initially focused on the relationship between current income and consumption [37]. 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 [13, 16, 48, 69]. 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; consumption and production surfaces were assumed to change only gradually over time.

Several modifications must be made in traditional consumption analysis to make it appropriate for a diagnosis of rural firm-

---

9/ Much of the discussion in this section was abstracted from [1].

10/ Several excellent reviews of consumption-savings studies and economic stability are presented in [13, 48, 69].

household decisions in LDC's. 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 [56].

In rural areas experiencing rapid change much more attention must be paid to the impact on consumption decisions of alterations in production investment incentives, as well as rapidly changing consumption bundles. A high yielding rice or wheat variety may make on-farm investment very attractive in one time period, while the availability of television sets, motor bikes, refrigerators, and sewing machines may make consumption relatively more attractive in another time period [9].

Firm-household Production Decisions

Farm level production and consumption decisions are closely related. In large measure, the production activities provide 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 most economically desirable, and they grind out the additional product which can provide part of the resources necessary to make further investments.

Firm-household Investment Decisions

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. These 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, 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 relates 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 improving the quality of child rearing in the home and investments made in improving family health.

Firm-household Heterogeneity

Economic analysis of rural savings behavior is further limited by unrealistic assumptions made about the similarities among rural firm-households. Too often, economic analysis focuses on averages which mask very heterogeneous units. The homogeneous assumption is particularly lethal in studies of rural consumption-production-investment behavior. The formulation of a successful savings mobilization program requires a clear awareness of how rural firm-households differ.

On the consumption-savings side, for example, one should not expect to find all families with identical time preference 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 purchases of consumer durables, such as refrigerators and televisions, a very attractive alternative to savings. At the same time a family without electricity may not be able to enjoy these consumption items and prefer to invest-save major parts of additional income.

Likewise, 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 Schultzian-low-return-to-investment trap. The differences in expected rates-of-return may be due to the firm-households factor endowment, market conditions faced by the firm, the household's access to various investment-savings alternatives, and the firm's position in the adoption process for new technology. Some firms may need very lumpy, indivisible inputs which require liquid capital beyond the capability of the firm to internally finance. At the same time, other firms may face 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, at the same time that 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 time and place, 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 other farmers are eager to pay high rates of interest on credit for very profitable investments possibilities.

Rural Savings Research

Only detailed empirical research can shed light on whether or not substantial rural savings capacities exist in LDC's. Aside from Japan, I know of only two countries where such research has been carried out: Zambia and Taiwan. Results from this research nevertheless, suggest that significant savings capacity does exist.

Roberts found, in a 3 year study of 239 rural families in Zambia, a surprisingly high savings capacity [59]. His study showed that farmers in the sample, on the average, saved more than 30 percent of their income over a two year period [59, p. 140]. At the same time, a sample of rural villagers had average propensities to save which were almost identical to the farmer sample. He concluded from his analysis that the volume of cash recources within many of these

households was greater than could be productively applied to on-farm investments [59, p. 191]. 11/

In a recently completed Taiwan study, Ong argues that attractive rates of return to on-farm investments, plus incentive interest rates on financial savings, played a key role in inducing substantial rural savings over the 1960-1970 period [2, 56]. 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 hint that Taiwanese farmers may have followed "U" shaped average as well as marginal propensity to consume (APC and MPC) schedules over the past two decades [9]. In the early 1950's the APC's may have been quite high, but gradually dropped during the next 10-15 years. In the late 1960's the APC have increased, though probably still at a lower level than in the early 1950's. Initially, farmers were apparently slow to adjust 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 1960's rates-of-return to on-farm investments may have been relatively less attractive as more alluring consumption items were available for purchase in the rural areas. 12/

11/ In the early part of 1973 Uganda required all old currency to be exchanged for a new issue. Policy makers were overwhelmed by the amount of currency which appeared in rural areas for exchange.

12/ Deborah S. Freedman argues that the availability of modern consumer durables in Taiwan in the early 1960's provided additional incentives for families to generate more income. She suggests therefore, on the basis of cross sectional data, that purchases of consumer durables did not reduce total family savings. See: "The Role of the Consumption of Modern Durables in Economic Development", Economic Development and Cultural Change, Vol. 19, No. 1, October 1970, pp. 25-48.

IV. Voluntary Savings and Rural Capital Markets

The above cited savings data is strongly suggestive that voluntary savings capacities do exist in LDC's. It also suggests that aggressive programs to mobilize these savings could energize rural capital markets.

If one sets the assumption aside that little voluntary savings capacity exists in rural areas, an important question becomes, why do rural capital markets not mobilize more voluntary savings? As suggested earlier, in most LDC's a large portion of the funds in rural credit programs are provided by the public sector or through foreign assistance. Only in a handful of cases do rural voluntary or involuntary savings play a significant role in the supply of credit. In major part this is due to the heavily administered interest rates which are typically applied to the formal portions of rural capital markets. Interest rates on voluntary savings deposits are usually well below rates placed on agricultural credit. In turn, this credit is often lent at concessional rates below the opportunity costs of capital. Interest rates on credit usually place a low ceiling on rates which can be offered for savings deposits. 13/ One might conclude that interest rate policies in LDC's have resulted in a self-fulfilling prophecy. Typically, rural savings are assumed not to exist. 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. This, plus the generally limited supplies of funds, may sharply restrict the realization of economies of scale by lending agencies [57, p. 85]. Further, the overall lack of savings mobilization may hinder a lending agency from earning a profit and/or remaining financially solvent. In the Taiwan case, at least, surpluses generated from credit-savings activities have provided a solid financial foundation on which other service activities of Farmers Associations were built [2]. Might this also be true in other countries under appropriate interest rate policies?

13/ For short periods of time in Korea in the mid-1960's and in Indonesia in the late 1960's, interest rates on some types of savings deposits were higher than on some types of credit. A particularly interesting discussion on the Korean Case is given by Gilbert Brown, "The Impact of Korea's 1965 Interest Rate Reform in Savings, Investment, and The Balance of Payments", (an unpublished paper presented at the CENTO Symposium on Central Banking Monetary Policy and Economic Development, Izmir, Turkey, April 1971.

Low interest rates also seriously affect the way credit institutions allocate funds [19, 47]. At low interest rates, credit demand often exceeds the supply of loanable funds. Lending agencies, therefore, select only those borrowers who have excellent credit ratings. In this environment small farmers are often denied access to regular channels of credit. Denied participation in credit, farmers find it less attractive to make savings deposits with credit agencies; farmers have one less reason to go into the bank or cooperative. Low interest rates on credit-savings, therefore, penalize farmers two ways: They sharply limit his access to regular channels of credit, and also deny him access to financial saving instruments which would pay a significant rate-of-return. In short, the few individuals who can obtain access to concessionally priced credit benefit from these policies, while all potential financial savers are penalized by being blocked from making deposits. Potential financial savers are forced, therefore, to opt for investments in activities which have low rates-of-return, or to increase their consumption.

V. Incentives for Voluntary Savings Mobilization

Fortunately, in most LDC's, financial systems are already in place which could physically handle major increases in voluntary savings. If significant rural savings capacities exist, the missing link in mobilizing some of these savings are appropriate incentive. This includes incentives for banks etc. to aggressively seek voluntary deposits, as well as incentives for individual savers to respond by deferring consumption. Higher interest rates on rural credit and savings are a fundamental element in incentives for both groups.

Some additional gimmicks can also be used to make financial savings more attractive to rural residents. Several countries, including the Philippines and Uganda, have insurance programs on savings deposits which eliminate the savers' risks of agency failure. Several countries, including Brazil and Chile, value-link some savings so that the principal value of the deposits are adjusted upward with inflation. Several countries have used mobile banks as a way of reaching rural savers: East Pakistan, Uganda, Costa Rica. Several savings programs have offered automatic life insurance on saving deposits. In case of death the beneficiaries of the depositor receives some multiple of the savings on deposit: e.g. East Pakistan and credit unions in Latin America. In Colombia depositors are eligible for educational scholarships which are drawn daily from the list of savers in the Agricultural Bank.

Still other countries like France, El Salvador, Iran, India, and South Vietnam have lotteries in conjunction with savings accounts. Also, a number of countries offer tax concessions on income derived from savings deposits: e.g. South Vietnam and Taiwan. Some rural private banks in South Vietnam have been particularly effective in mounting savings mobilization programs. This includes door-to-door solicitation of deposits, savings promotion among school children, lotteries, and pretty girls in the front office of banks to strongly encourage visitors to open savings accounts.

VI. The Case For Voluntary Savings Mobilization

A substantial reorientation in current development strategies is necessary if rural capital markets in LDC's are to make a positive contribution to development. To date, these markets have been administered, twisted, and distorted to the point that private capital formation in rural areas is discouraged rather than facilitated. Further, current policies cause cheap capital to substitute for labor, result in large income transfers to the influential because of their access to concessionally priced credit, cause inefficient resource allocation among producers, stimulate consumption, and also result in substantial fragmentation of vital capital markets. It is unfortunate that policy makers find capital markets so flexible and amenable to change. 14/ The repurcussions from changes in the price of capital are much more serious and far reaching than distortions introduced into prices of individual products or inputs.

14/ For example, a policy maker can double the amount of funds in the loan portfolio of an agricultural bank, as has recently occurred in South Vietnam. He can also cut the nominal interest rates on agricultural credit in half, as was recnelty done in Ecuador. Or he can drop the nominal interest rate on credit for certain types of agricultural inputs to zero, as has recently happened in Brazil. He can also nationalize the entire banking system and direct it to loan more to agriculture in general and small farmers in particular, as has occurred in Costa Rica, Bangladesh, and India. He can also acquiesce to bank regulations which require relatively high minimum deposit levels, as is the case in Kenya. He can also set up lines of credit or rediscounting privileges with the central banks which make it foolish for financial institutions to try to mobilize voluntary savings.

Current cheap credit policies and the spoon feeding of funds into agriculture through rural capital markets must be phased out. This should be replaced by a self-help, grass roots, financial liberalization approach which places major emphasis on providing appropriate incentives for rural capital formation. 15/ In the short run this should include major adjustments upward in interest rates charged on rural credit. 16/ This, in turn, would allow substantially higher rates to be paid on savings. 17/ It should also include aggressive programs aimed at providing additional incentives for savings mobilization, as well as providing secure places for rural residents to deposit their funds.

Vigorous mobilization of rural savings has several potential advantages. Initially, additional incentives to save would provide rural residents with consumption and savings signals which are more in line with social objectives. Savings and not consumption should be rewarded. Secondly, voluntary savings could help rural capital markets move toward self-sufficiency, as well as expand the volume of loanable funds. Thirdly, profitable credit-savings activities in farmers' service organizations (credit-unions, cooperatives, farmers associations etc.) may provide the financial cornerstone on which these organizations can be built. Lastly, higher interest rates would allow both formal and informal portions of the rural capital market to grow and to better service small farmer interests.

In contrast to the early 1960's, it is relatively easy in the 1970's to find development economists agreeing that farmers in LDC's know how to "play economics" in factor and product markets. It has been less clearly seen that these same farmers also react rationally

---

15/ See [46 and 65] for further details on this approach.

16/ Longer run policy adjustments would include much more emphasis on making credit use highly profitable in rural areas. Sharply expanded expenditures for development of new high pay-off technologies and market improvements would be main elements in these policies.

17/ A prominent argument against raising interest rates is that it is politically very difficult. In many LDC's politicians support low interest rates on agricultural credit as a means of buying rural support. They often forget that only those few who receive the concessionally priced credit are benefited. It is probable that higher rates on savings would buy even more support; there will likely be more individuals benefited by high rates on savings than by low rates on credit.

to rural capital markets. Perverse farmer behavior is not the main problem in rural capital markets. Rather, the culprit is the widely used "cheap" credit-saving pricing signals (interest rates). Because of varying country conditions no hard-and-fast rule on levels of interest rates can be put forward here. It is clear to me, at least, that current rural interest rate policies used in most LDC's should be stood-on-their-heads. Interest rates plus other incentives to save should be raised to levels sufficient to elicit substantial amounts of voluntary financial savings. Interest rates on credit should be set enough above the rates on savings to provide the financial institutions strong incentives to mobilize and lend funds in a socially desirable manner. Altering the "interest rate illusions" which politicians and policy makers have could be one of the most important results of this "Spring Review".

Bibliography

1. Adams, Dale W and I.J. Singh, "Capital Formation and the Firm-Household Decision Making Process", unpublished Economics and Sociology Occasional Paper No. 111, Department of Agricultural Economics and Rural Sociology, The Ohio State University, October 27, 1972.

2. Adams, Dale W and Others, "Rural Capital Markets and Small Farmers in Taiwan 1952-1972", unpublished country paper prepared for the Spring Review on Small Farmer Credit sponsored by the Agency for International Development, Washington D.C., October, 1972.

3. Agricultural Development Bank, Republic of Vietnam, "The Rural Banking System in Vietnam with Credit for Small Farmers", unpublished country paper prepared for the Spring Review on Small Farmer Credit, sponsored by the Agency for International Development, Washington D.C., November, 1972.

4. Amogu, Okwara O., "Some Notes on Saving in an African Economy", Social and Economic Studies, Institute of Social and Economic Research, University of the West Indies, Vol. 5, No. 2, 1956, pp. 202-209.

5. Barcom, William R., "The Esusu: A Credit Institution of the Yoruba", Journal Royal Anthropological Institute, Vol. 82, Part 1, 1952, pp. 63-69.

6. Barton, Clifton G., "Credit and the Small Farmer: Case Study of the Mekong Delta, South Vietnam", unpublished paper prepared for the Spring Review on Small Farmer Credit, sponsored by the Agency for International Development, Washington D.C., November, 1972.

7. Bohannan, Paul, "The Impact of Money in an African Subsistence Economy", Journal of Economic History, Vol. 19, No. 4, December, 1959, pp. 491-503.

8. Bruton, Henry J., Principles of Development Economics (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1965).

9. Chin, Lein-In Amy, "Changes In Rural Consumption Patterns in Taiwan 1960-1970", unpublished Masters Thesis, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 1973.

10. Clark, Colin, The Conditions of Economic Progress, 2nd edition (London: MacMillan & Co. 1952).

11. Eckaus, R.S., "Notes on Financial Intermediation, Savings and Monetary Controls", unpublished paper, Department of Economics, Massachusetts Institute of Technology, Cambridge, Massachusetts, no date but circa December 1972.

12. Emery, Robert F., "The Korean Interest Rate Reform of September 1965", unpublished paper, Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C., October 3, 1966.

13. Evans, Michael K., Macro-economic Activity: Theory, Forecasting and Control (New York: Harper & Row, 1969).

14. Firth, Raymond and B.S. Yamey (eds.), Capital Savings and Credit in Peasant Societies (Chicago: Aldine, 1964).

15. Frederickson, D.C., "The Cooperative Credit Scheme in Uganda", unpublished country paper prepared for the Spring Review on Small Farmer Credit, sponsored by the Agency for International Development, Washington D.C., October, 1972.

16. Friend, Irwin and Paul Taubman, "The Aggregate Propensity to Save: Some Concepts and Their Application to International Data," The Review of Economics and Statistics, Vol. 48, May 1966, pp. 113-123.

17. Geertz, Clifford, "The Rotating Credit Association: A Middle Rung in Development", Economic Development and Cultural Change, Vol. 10, No. 3, April 1962, pp. 241-263.

18. Goldsmith, Raymond W., Financial Structure and Development, (New Haven: Yale University Press, 1969).

19. Gonzales-Vega, Claudio, "Interest Rate Policies and Small Farmer Credit Programs in LDC's", unpublished analytic paper prepared for the AID Spring Review of Small Farmer Credit, sponsored by the Agency for International Development, Washington D.C., July, 1973.

20. Hai, Nquyen Ha and V.L. Elliott, "Viet-Nam's Non-Bank Credit System: Discussion on The Vietnamese Hui, A Rotating Credit Association" unpublished paper prepared for the Spring Review on Small Farmer Credit, sponsored by the Agency for International Development Washington D.C., July, 1973.

21. Harris, James John, "Development of The Brazilian Capital Market" unpublished Ph.D. Dissertation, Department of Economics, The University of Iowa, May 1972.

22. Heyer, Judith, "Small Holder Credit in Kenya Agriculture", unpublished working paper No. 85, Institute for Development Studies, University of Nairobi, Nairobi, Kenya, April 1973.

23. Hicks, John, Capital and Growth, (London: Oxford University Press, 1965).

24. Holmberg, Johan, "The SIDA assisted Chilalo Agricultural Development Unit (CADU) in Ethiopia," an unpublished country paper prepared for the Spring Review on Small Farmer Credit, sponsored by the Agency for International Development, Washington D.C., September, 1972.

25. Hopper, W. David, "Investments In Agriculture: The Essentials for Payoff", in Strategy for the Conquest of Hunger, proceedings of a Symposium Sponsored by the Rockefeller Foundation, Rockefeller University, New York, April 1 and 2, 1968.

26. Houthakker, H.S., "On Some Determinants of Savings in Developed and Underdeveloped Countries", in Problems in Economic Development, edited by E.A.G. Robinson, (London: MacMillan & Co., 1965), pp. 212-227.

27. Hübner, G., "Private Saving in Uganda", in Financial Aspects of Development in East Africa, edited by Peter Von Marlin, (Munich, Weltforum Verlag-Zfo-Institute Für Wintschaftsforschung 1970), pp. 93-174.

28. Ingle, Marcus D., "Bank For Agriculture and Agricultural Cooperatives (BAAC)", unpublished country paper prepared for the Spring Review on Small Farmer Credit, Sponsored by the Agency for International Development, Washington D.C., October, 1972.

29. Irvine, J. Reed and Robert F. Emery, "Interest Rates as an Anti-Inflationary Instrument in Taiwan," The National Banking Review, Vol. 4, No. 1, September 1966, pp. 29-39.

30. Johnson, William F., "Agricultural Credit: The Local Mutual Credit Union System and Small Farmer Credit in Tunisia", unpublished country paper prepared for the Spring Review on Small Farmer Credit, Sponsored by the Agency for International Development, Washington D.C., December, 1972.

31. Joshi, Madhusudan S., "The Role of Contractual Savings", Finance and Development, Vol. 9, No. 4, December 1972, pp. 43-48.

32. Joshi, V.H., "Saving Behavior in India", Indian Economic Journal, Vol. 17, April-June 1970, pp, 515-528.

33. Kang, Chang Kyu, The Influence of 'KE' Societies Upon Ri-Dong Agricultural Cooperative Associations, (Choong-Puk National College, Cheung-Ju, Korea, 1969).

34. Kato, Yuzuri, "Mechanisms for the Outflow of Funds From Agriculture into Industry in Japan," Rural Economic Problems, December 1966, pp. 1-20.

35. Keeler, R. Hayes and others, "Evaluation of the Directed Agricultural Credit Program in Ecuador", unpublished country paper prepared for the Spring Review on Small Farmer Credit, Sponsored by the Agency for International Development, Washington D.C., October 1972.

36. Kelly, Allen and Jeffrey Williamson, "Household Saving Behavior in the Developing Economies: The Indonesian Case," Economic Development and Cultural Change, Vol. 16, No. 3, April 1968, pp. 385-403.

37. Keynes, John Maynard, The General Theory of Employment, Interest, and Money, (London: MacMillan & Co., 1936).

38. Kuznets, Simon, Economic Growth and Structure: Selected Essays, (New York: W.W. Norton, 1965).

39. Landau, Luis, "Savings Function For Latin America", in Studies In Development Planning, edited by Hollis B. Chenery, (Cambridge Mass.: Harvard University Press, 1971) pp. 299-321.

40. Larson, Donald and others, "Rural Savings In Brazil" unpublished Research Note No. 14, Capital Formation and Technological Change Project, Department of Agricultural Economics and Rural Sociology, The Ohio State University, April 30, 1972.

41. Leff, Nathaniel H., "Dependency Rates and Savings Rates," The American Economic Review, Vol. 78, December 1969, pp. 886-896.

42. Lewis, W. Arthur, The Theory of Economic Growth, (London: George Allen & Unwin. Ltd., 1955).

43. Lindsey, Quentin W., "Budabari Panchayat: The Second Year After Reform", Land Reform In Nepal, published by the Nepal Land Reform Department, May 1966.

44. Marx, Karl, Capital: A Critique of Political Economy, (New York: The Modern Library, 1906).

45. Mauri, Arnaldo, "The Mobilization of Savings in African Countries", unpublished paper, Department of Economics, University of Genoa, Milan, Italy, 1972.

46. McKinnon, Ronald I., Money and Capital in Economic Development, (Washington D.C.: The Brookings Institution, 1973).

47. Meyer, Richard L. and others, "Rural Capital Markets and Small Farmers in Brazil 1960-1972", unpublished paper prepared for the Spring Review on Small Farmer Credit, Sponsored by the Agency for International Development, Washington D.C., December 1972.

48. Mikesell, Raymond F. 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, Vol. 11, No. 1, March 1973, pp 1-26.

49. Miracle, Marvin P., "Rotating Credit Associations in Latin America", Caribbean Studies, Vol. 11, No. 3, 1971.

50. Mizoguchi, Toshiyuki, "Consumption Functions and Saving Functions for Japanese Farmer's Families in Post-war Japan," Rural Economic Problems, Vol. 4, No. 1, December 1967, pp. 20-35.

51. Morrow, Robert B. and Paul E. White, "Farm Credit In Korea," an unpublished country program paper prepared for the Spring Review on Small Farmer Credit, Sponsored by the Agency for International Development, Washington D.C., October 1972.

52. Nisbit, Charles, "The Relationship Between Institutional and Informal Credit Markets In Rural Chile", Land Economics, Vol. 42, May 1969, pp. 162-173.

53. Noda, Tsutomu, "Savings of Farm Households", in Agriculture and Economic Growth: Japan's Experience, edited by K. Ohkawa (Tokyo: University of Tokyo Press, 1970) pp. 352-373.

54. Norvell, Douglass G. and James S. Wehrly, "A Rotating Credit Association In The Dominican Republic," Caribbean Studies. Vol. 9, No. 1, April 1969, pp. 45-52.

55. Nurkse, Ragnar, Problems of Capital Formation In Underdeveloped Countries and Pattern of Trade and Development, (New York: Oxford Univ. Press, 1967).

56. Ong, Marcia Min-Ron Lee, "Changes In Farm Level Savings and Consumption In Taiwan 1960-1970", unpublished Ph.D. dissertation, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 1972.

57. Owens, Edgar and Robert Shaw, Development Reconsidered, (Lexington, Mass.: Lexington Books, 1972).

58. Porter, Richard C., "The Promotion of the 'Banking Habit' and Economic Development," Journal of Development Studies, Vol. 2, No. 4, July 1966, pp. 346-366.

59. 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.

60. Rozental, Alek A., Finance and Development in Thailand, (New York: Praeger, 1970).

61. Sacay, Orlando J., "Small Farmer Savings Behavior (Philippines)," unpublished country paper prepared for the Spring Review on Small Farmer Credit, Sponsored by the Agency for International Development, Washington D.C., October 1972.

62. Sacay, O. J. and others, Strategies In Rural Economic Development: A Case Study of Five Philippine Villages (Silang, Cavite: International Institute of Rural Reconstruction, 1971).

63. Sahni, Balbir S., Saving and Economic Development, (Calcutta, India: Scientific Book Agency, 1967).

64. Schultz, Theodore W., Transforming Traditional Agriculture, (New Haven: Yale University Press, 1964).

65. Shaw, Edward S., Financial Deepening in Economic Development, (New York: Oxford University Press, 1973).

66. Shinohara, Miyohei, "The Structure of Savings and the Consumption Function in Post-war Japan," The Journal of Political Economy, Vol. 67, No. 6, December 1959, pp. 589-603.

67. Solaiman, M. and Azizul Huq, "Small Farm Credit in Bangladesh" an unpublished country paper prepared for the Spring Review on Small Farmer Credit, Sponsored by the Agency for International Development, Washington D.C., September 1972.

68. Stepanek, Joseph F., "Comilla Cooperative Production Loans: A Note on the Cost of Capital", unpublished special paper prepared for the Spring Review on Small Farmer Credit, Sponsored by the Agency for International Development, Washington D. C. , November 1972.

69. Suits, Daniel B., "The Determinants of Consumer Expenditures: A Review of Present Knowledge" in Macroeconomics: Selected Readings, edited by Walter L. Johnson and David R. Kamerschen (New York: Houghton Mifflin, 1970) pp. 59-92.

70. Taylor, Lester D., "Savings out of Different Types of Income," Brookings Papers on Economic Activity, Vol. 2, 1971, pp. 383-407.

71. Tuan, Chyau, "Mobilization of Rural Savings in Taiwan - Farmers' Choice Among Financial Assets", unpublished Ph.D. dissertation, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 1973.

72. Von Pischke, J. D., "A Description of the Cooperative Production Credit Scheme", unpublished Working Paper No. 80, Institute for Development Studies, University of Nairobi, Nairobi, Kenya, December 1972.

73. Weber, Warren E., "The Effect of Interest Rates on Aggregate Consumption", The American Economic Review, September 1970, pp. 591-600.

74. Williamson, Jeffrey, "Personal Saving in Developing Nations: An Intertemperal Cross-Section from Asia", The Economic Record, June 1968, pp. 194-210.

75. Wright, Colin, "Some Evidence on the Interest Elasticity of Consumption", The American Economic Review, September, 1967, pp. 850-855.