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SPECIALISED FARM CREDIT INSTITUTIONS: A MODEL OF SUPPLY-LEADING FINANCE FOR FARMERS IN LOW INCOME COUNTRIES

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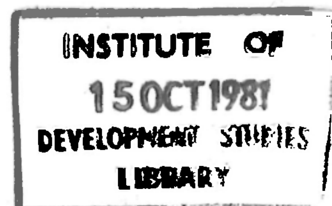

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SPECIALISED FARM CREDIT INSTITUTIONS:
A MODEL OF SUPPLY-LEADING FINANCE
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Why are specialised farm credit institutions founded in low income countries, and why do they frequently founder? This phenomenon of contemporary development finance and intervention may be explored and portrayed by a non-mathematical model incorporating basic financial logic and elements of the political economy of government credit to farmers. The model accepts technical aspects of agriculture as given. It succeeds in demonstrating major causal links constituting the financial and political bases for typical patterns of institutional performance.

Organisation and Operation of Specialised Farm Credit Institutions.

Specialised farm credit institutions are defined as a class of financial intermediary primarily engaged in the provision of loans to farmers, ranchers, and others undertaking agricultural production. This type of intermediary is distinguishable by the specialisation of its loan portfolio, and also by the reflection of that specialisation in a narrow range of financial services offered. Specialised farm credit institutions do not engage on any significant scale in deposit taking, in the provision of money transfer services, in the safekeeping of valuables or in serving as fiduciaries, for example, except as these functions are required in the processing of loan applications and in loan administration. The names of specialised farm credit institutions vary, but common examples include agricultural development bank, agricultural finance corporation, rural development bank, agricultural credit corporation, land bank, and organisations with "agricultural" and "fund" in their titles.

Specialised farm credit institutions are established by governments in low income countries to provide financial assistance for agriuultural production (FAO 1973, 1974, 1975). They may cater specifically to certain agricultural subsedtors, defined in terms of farm size or crops, and they may be linked with various land tenure classifications or reforms. Their services may be directed towards the target groups of beneficiaries of agricultural, settlement or rural development projects.

Specialised farm credit institutions in low income countries are usually expected to provide an impetus to agricultural innovation, often in the small scale subsector. Such institutions may also have an implicit or explicit mandate to contribute to certain social aspects of the process of rural development. As public sector organisations in these roles, specialised farm credit institutions are sought out and supported by development assistance agencies, which often play an important role in their design, establishment and staffing, or in their reorganisation and rehabilitation. Although no recent global tallies appear to have been made, it would appear that cumulative combined World Bank and American aid commitments for farm credit schemes exceeded the equivalent of £1,500 million by 1978 (Rice, 1973a; World Bank 1977). The lending of other OECD donors and regional development banks would increase this estimate significantly. Much of this assistance has been directed towards specialised farm credit institutions rather than diversified financial institutions such as commercial and certain cooperative banks which also customarily provide significant direct and indirect financial support to the agricultural sector in low income countries.

In their role as development finance agencies, specialised farm credit institutions are providers of supply-lending finance. This term, evidently coined by Patrick (1966), suggests the antithesis of Mrs. Robinson's observation that, "Where enterprise leads, finance follows"(Robinson, 1952). Supply-leading finance is a public sector development tactic which provides funds in advance of effective demand in an effort to stimulate enterprise - i.e., risk taking by borrowers - in a socially useful manner. Supply-leading agricultural finance is based on the assumption that the provision of credit tied to an innovation, such as improved inputs or a new cash crop, will accelerate

the adoption of the innovation by members of the target group of intended borrowers.

Specialised farm credit institutions in low income countries have a patchy record as financial intermediaries (Donald, 1976; Masini, 1977). It is perhaps to be expected that their efforts to achieve viability and to expand their clientele would encounter more complications than those of mainstream financial institutions because of the vagaries of agricultural production and prices, as well as the extent to which a certain portion of supply-leading finance and the activities it is designed to support have more in common with research and development than with commercial practice. However, the extent of their losses often appears to be in excess of what would be expected from credit institutions. For example, Miracle (1973) estimated that approximately one-third of the funds were unrecoverable which had been loaned to farmers in the programs described in the 20-volume Spring Review of Small Farmer Credit, which dealt primarily with the activities of specialised farm credit institutions. Other observers concerned with the performance of these institutions and the programmes they administer have noted that not infrequently the levels of service they provide are in general rather low (Adams, 1977). In addition they often find it difficult to achieve loan recovery levels sufficient to permit them to break even financially before the allocation of administrative expenses (Donald, 1976).

The Conceptual Basis for a Performance Model

This paper attempts to explain why specialised farm credit institutions are formed, and why such institutions and the programmes they administer frequently fail to fulfil the requirements of viability and achieve the standards to which they are designed. The point of view taken in this paper is that of the rural developer. Access is viewed as a key concept for ensuring that benefits of change are spread broadly among target populations (Lele, 1975). Good financial performance, permitting internally generated growth, is viewed as essential to ensuring that access to credit is broadly based. The criterion of good financial performance is based on the lack of any reasonable general alternative: subsidisation of bad loan losses is obviously limited by budgetary constraints in low income countries and by other fiscal implications.

The research upon which this paper is based was conducted in Kenya, where the performance of financial institutions dealing with rural finance ranges from the notable success of the cooperative banking system to the distress of the Agricultural Settlement Fund (Donaldson and Von Pischke, 1973; Von Pischke, 1977). Observations from a number of other low income countries have reinforced the interpretation developed from analysis of the political economy of the Kenyan situation to the point where the formulation of a general model appears warranted. Such a general model is applicable to the performance of a small credit scheme included in a larger project or portfolio as well as to a specialised farm credit institution as a whole. The model abstracts through a progression of what might be termed worst case assumptions. This approach is defensible on the basis of its explanatory power, its proximity to observed behaviour, and its methodological consistency. As an exercise in political economy the model identifies a trend in how situations involving the class of intermediary in question tend to develop unless checked by departures from worst case assumptions (Von Pischke, 1974a).

The model proposed here incorporates two classes of influences on the performance of financial markets and on specialised farm credit institutions. The first influence is political, which stems from government's interest in rural development, agricultural production and in the use of political power to benefit or to be seen to be benefitting various groups (FAO/CARIPLO, 1976). The second type of influence is financial, comprising not only the inexorable mathematics of the operation of financial markets but also the economic aspects of relationships forged in such markets. Political decisions influence financial market variables, while the performance of financial markets provides grist for the political mill. The interaction of these two types of influences largely determines the oft-observed lagging performance of specialised farm credit institutions.

The model begins with the assumption that the economy lacks a specialised farm credit institution, and that the bulk of rural families do not have effective access to formal sector credit. It is also assumed that the formal sector financial market, although not highly developed, is loss-avoiding, rational and workably competitive. The assumption of some degree of workable competition is warranted, as

models of market perfection are inappropriate to financial markets because of the role of risk in financial intermediation and because of the inherent contradiction in assuming access to a single price by both primary sellers and ultimate buyers in situations where markets are made by intermediaries (Clark, 1940, 1961; Myrdal, 1968; Shaw, 1973; Stigler, 1968).

It is also assumed that the public sector perceives that the provision of credit for some particular agricultural purpose or for a certain group of cultivators would be advantageous. This perception is incorporated in the model as "the public sector farm credit complex," which consists of four related assumptions or ways of viewing the state of agriculture, the requisites of rural development, and the role of government. The first is that "farmers are poor," relative to other groups in society. The second is "the farm credit need creed," which holds that little agricultural innovation or progress along desired lines can occur without increased target group access to credit (Adams, 1971; Von Pischke, 1974b). The need creed is harmonious with the concern for the alleged poverty of farmers. The third is the axiom that government should promote rural development, while the fourth is that supply-leading finance can stimulate agriculture and rural development. The public sector farm credit complex defines the rural development problem in terms of the poverty of farmers and their lack of access to credit for specified purposes, observes that the problem is one which ought to be addressed through public sector intervention, and specifies a medium through which political initiative may be exercised. Supply-leading finance responds to the perceived poverty of farmers as well as to the alleged requirements that they must have access to credit before an acceptable rate of material progress will be achieved. The provision of supply-leading agricultural credit is frequently linked with other measures designed to stimulate rural development, such as extension, but these ancilliary factors are not crucial to the development of the relationships explored here.

Interaction of Interest Rates and Access

The public sector farm credit complex produces advocacy of cheap farm credit. Proponents note that credit should be provided at a "reasonable" rate of interest for a purpose which is considered

a social and economic imperative, and for intended borrowers viewed as poor and having little alternative but to use credit if they seek to progress (Donald, 1976). Since informal sector interest rates, except on kinship and friendship loans, are high compared to those found in formal markets, the possibility of involving the informal sector in the solution to the credit problem as defined by the public sector farm credit complex is not seriously considered and would not be feasible within the low interest rate structure proposed (Bottomley, 1962).

The exact nominal rate proposed will depend upon local circumstances, but is often defined in relation to the prime or base lending rate applicable to loans by commercial banks to commerce and industry (Donald, 1976). Arguments raised against an agricultural interest rate structure different from those applied to industry and commerce often contend that it is objectionable to charge borrowers from disadvantaged elements in society a rate which is higher than that charged borrowers who use formal sector credit in the normal conduct of their business affairs. In many cases the result is an agricultural interest rate below or roughly equal to the going rates of interest on loans to commerce, industry and to individuals not dependent upon agricultural incomes who borrow from commercial banks. The crucial point of analytical interest is that a rate structure applied to borrowers already having access to formal sector credit is not significantly different from that proposed for a loan portfolio intended to encompass potential borrowers currently beyond the margin of formal sector finance (McKinnon, 1973).

Low formal sector interest rates on the types of loans most useful to rural people tend paradoxically to restrict their access to formal sector financial services (Adams, 1971; Adams, Davis and Bettis, 1972; Gonzalez-Vega, 1976; Von Pischke, 1977). The mechanism of access limitation is most easily demonstrated through the impact of lending rates applied by the intermediaries comprising the formal financial sector prior to the establishment of a specialised farm credit institution. Low rates tend to place the intermediary in a disadvantageous position relative to his concerns for loss avoidance (McKinnon, 1973; Shaw, 1973). The basis for this position is seen in the operating or administrative costs of providing rural financial services of the usual formal sector type, as well as in the degree of

risk aversion constrained by low returns on loans outstanding. (The effect of interest rates on competition for deposits, and hence on access to deposit services by rural people, is problematic and is not dealt with here.)

Rural customers, especially target group members having low levels of financial activity, are a costly market to serve (Adams, 1971). They tend to deal in small transactions, which are relatively costly for a formal sector intermediary to process. They frequently are scattered geographically, making loan administration difficult. These two factors preclude economies of scale in intermediation because of the small size of the market around a rural office. Rural people may not be accustomed to modern commercial practice and hence not be so concerned about loan due dates as other customers would be who are more conditioned to the conventions of modern finance and more dependent on continued access to it, which raises the lender's costs of loan and liquidity portfolio management. The propensity for small actors on the financial stage to conduct their business in cash,rather than by some form of payment order, requires that intermediaries in rural areas maintain relatively higher levels of liquidity, usually in the form of cash on hand, than similar operations in urban areas. Cash balances earn no interest for the lender. The necessity of maintaining relatively high levels of cash relative to deposits in order to meet the demands made by deposit holders adds to the cost of servicing these clients.

The primarily agricultural economy in which rural people are engaged may be more subject to seasonal and cyclical variability than many other types of economic activity. The marketed or income-producing portion of agricultural produce is subject to even greater variability as a residual after relatively constant subsistence requirements are satisfied (Allan, 1967). Variability in income tends to reduce the formal sector lender's evaluation of the debt capacity of the target group (Von Pischke, 1976). The prudent lender in effect bases his calculation of prospective borrower debt capcity only on that portion of expected future income which would be available for loan repayment in situations of reasonably expected adversity. In effect, the lender looks for the ocean below the waves, which makes him extremely selective in storm-prone shallow waters. His rationale rests on the desire to assure a steady or highly certain stream of loan repayments and interest

inoome, which is consistent with the lender's objective of maintaining sufficient liquidity to meet on a timely bsis the demands of depositors and other creditors. Variability may make it difficult for the lender to plan his future course with a degree of accuracy consistent with considerations of loss avoidance and solvency. Variability of returns is more appropriate to equity or risk capital than to debt capital.

Variability in return is viewed by the lender as a credit risk. One determinant of his willingness to bear this risk is the interest and other income which is likely to be realised from the class of transaction concerned. Unprofitable types of business, defined to include those involving substantial degrees of uncertainty from the perspective of the intermediary, tend to be avoided. When interest rates (used here as a generic heading referring to all financial charges levied by lenders) are repressed in the sense of being kept low, intermediaries are restricted to low margins. They are not encouraged to expand their markets into activities involving higher costs, which typically include the costs of greater uncertainty. Low rates keep the margin between those who are served and those who are not served closer to the area of "prime" customers whose relationships are most highly valued by lenders. Lenders stringently ration credit according to commercial criteria of creditworthiness in low interest rate regimes, *ceteris paribus*.

The situation which evolves from low interest rate regimes, both in terms of low levels of access and in terms of low levels of liquidity, is aptly summarised by McKinnon (1973):

> Organized banking has a sorry record in penetrating the economic hinterland or less developed countries, in serving rural areas in general, and in serving small borrowers in particular. Bank credit remains a financial appendage of certain enclaves: exclusively licensed import activities, specialized large-scale mineral exports, highly protected manufacturing, large international corporations and various government agencies, such as coffee marketing boards or publicly controlled utilities. Even ordinary government deficits on current account frequently preempt the limited lending resources of the deposit banks. Financing of the rest of the economy must be met from the meager resources of moneylenders, pawnbrokers, and cooperatives. The failure of banks to earn high equilibrium rates of return from their priviledged borrowers is reflected back in an unduly low return to depositors - one that may well be negative in real terms if inflation is at all significant. Scarce capital is underpriced by the banks although not by the moneylenders. It is hardly surprising that savers respond to low real returns by reducing their holdings of money and nearmonies far below what might be considered socially optimal; and, of course, outstanding bank credit is reduced commensurately.

The Specialised Farm Credit Institution as a Response to Credit Rationing by Commercial Criteria

Stringent credit rationing by commercial criteria restricts rural access to financial services, as suggested by a relative paucity of rural offices of banks and other formal sector financial intermediaries. It is usually also reflected in service rationing devices which exclude large numbers of rural people. Loan security requirements may be beyond the capacity of most rural households. Minimum balance requirements applied to deposit accounts and minimum transactions sizes may be high in relation to the sizes of transactions and incomes normal for rural areas.

Restricted access to formal financial services provides grounds for remedial intervention, in the form of establishment of a specialised farm credit institution, under the public sector farm credit complex (Reserve Bank of India, 1954). The formation of a specialised farm credit institution is deemed appropriate because it meets a perceived need for a deserving group in a socially desirable or politically expedient way (Tardy, 1938). The perceived need is credit at low rates of interest, including credit to support agricultural innovation. Such an institution is intended to overcome weaknesses in market performance, and is therefore usually not designed to be dependent upon market resources (World Bank, 1975). It is funded through the national treasury as a public sector entity, frequently with support from external non-market sources such as aid agencies. (That specialised farm credit institutions are good foreign exchange earners, often opening new avenues of access to soft foreign loans through donors' preferences for dealing with such institutions, may also help to explain their popularity in low income countries.)

By definition, a specialised farm credit institution is quite selective in the mix of financial services it provides, operating on one side of the rural financial market only. Credit access is considered the primary problem according to the public sector farm credit complex, and deposit taking and money transfer services are typically not developed. Rural savings capacities and liquid resources are usually thought to be small (CARIPLO, 1971). Institutions already in place, such as post office savings banks or rural branches of commercial banks and cooperatives, may be thought to be providing adequate financial services outside the credit sphere. Policymakers may not perceive any advantages in replicating

facilities or stimulating competition for rural deposits or money transfer services. In addition, the managerial and accounting demands of operating deposit services and money transfer systems are much greater than those of a lending agency, and there are obviously merits of opting for simplicity initially.

Effects of One-Sided Intervention in Rural Finance

One-sided intervention in rural financial markets has several consequences which are frequently overlooked. It tends to fragment these markets further. It provides credit unrelated to savings channels, and makes little direct contribution to stimulating rural savings. Such intervention may translate the public sector farm credit complex into a popular belief that formal sector credit is essential, or at least the most feasible means of securing material advance (Lele, 1973; Schatz, 1965; Vasthoff, 1968), at the expense of the tradition of self-help and self-finance and of the continued strength or heightened development of informal financial mechanisms such as rotating savings and credit associations.

But, most importantly, one-sided intervention limits the access of a specialised farm credit institution to market funds and information. This limitation is implicit in dependence upon the national treasury and external donors. Lack of such access results in alienation of the specialised farm credit institution. Alienation stems from the inability to act as a rural financial intermediary, rather than merely as a link between the government or fat side of the dual economy and the rural or lean side. Rural people are not perceived as a constituency or market to be developed, but rather as poor, exploited or economically incompetent elements requiring assistance (Kratoska, 1975). Rural people, in turn, do not view the specialised farm credit institution as something of their own, but as an intrusion. In these circumstances a specialised farm credit institution does not have access to information about rural financial flows, behaviour and priorities which is available only to those who operate on both sides of rural financial markets. Denied such information and insight, the specialised farm credit institution's decision making expertise is limited because its managers are divorced from the context required to view finance broadly or creatively (Von Pischke, 1974a). They are not in a position to be stimulated by the discipline imposed and opportunities offered by market forces.

Lacking essential information and also limited by budgetary and operating constraints imposed by Government sponsors, specialised farm credit institutions generally are forced to ration credit stringently. This stringency is different from that based on commercial criteria applied by other formal sector intermediaries, because it is based on considerations which are fundamentally political, reflecting the genesis of specialised farm credit institutions. Political criteria, broadly defined, are inherent in farm credit programme design, in the allocation mechanism employed by national governments and by development assistance agencies seeking to promote the welfare of certain target groups selected on the basis of extra-market considerations.

Credit Rationing by Specialised Farm Credit Institutions

Credit rationing by farm credit institutions tends to take two forms which depart from a financial optimum at which the borrower's level of indebtedness achieves a privately desirable harmony between repayment capcity, debt service obligations and the stimulation of enterprise. These departures reflect the innovative and political dimensions of the assumptions comprising the public sector farm credit complex and of the developments determined by the policies and actions inspired by the complex as outlined above. The two types of credit rationing commonly employed by specialised farm credit institutions may be termed intensive and extensive. These deviations from traditional financial practice reflect the political-*cum*-development orientation of the public sector farm credit complex, and may be termed credit rationing according to political criteria.

Intensive credit rationing involves identification of a specific target group, and the provision to members of that group of amounts of credit which are large in relation to the existing scope of their operations. For example, a farmer with two local cows may be given a loan to buy two specimens of an exotic breed. A small farmer planting local maize and using organic fertilizer may be issued a loan, possibly in kind, to enable her to plant her entire maize plot with a high yielding variety nourished by chemical fertilizer. A farmer using bullocks for draught power may be accorded credit for the purchase of a tractor.

Intensive credit rationing has technological and innovative features which make it a very attractive approach from the perspective of aid agencies, and it is often found in the externally funded activities of specialised farm credit institutions. The usual objective of intensive credit rationing is to increase agricultural production and the incomes of borrowers through innovation employing a more complex technology. Because the size of the loan is such that borrowers could not reasonably be expected to repay in full and on time out of their pre-loan cash flow, loan repayment must come from the additional cash flow to be created by the loan-supported investment. Credit allocation under these circumstances tends to be quite selective. Elaborate access mechanisms using farm plans or budgets are frequently employed by lenders in the allocation process (Adams and Nehman, 1977). An assumption underlying intensive credit rationing is that lack of access to finance is a binding constraint to the realisation of increased production and augmented farmer incomes through innovation, economies of scale, or other avenues. This in turn implies that all other elements essential to the realisation of the objectives of the programme, including the ability to accommodate the risks involved, are in place and can be rendered operative by finance. Intensively rationed credit is supply-leading finance _par excellence_.

Extensive credit rationing is motivated by considerations of access as well as of production. Credit is rationed extensively to large numbers of farmers in broadly defined target groups. For example, all members in good standing of a cooperative may have access to seed and fertilizer loans. All commercial growers of wheat having title to more than ten hectares of land may be eligible for production loans. Within the budget or balance sheet constraints of specialised farm credit institutions, broad access implies relatively small loans to numerous borrowers. Loan limits under extensive rationing are frequently specified in terms of rules of thumb or standard factors as loan limits per hectare of credit-supported enterprises, and the access mechanism is relatively simple. Extensive credit rationing is most frequently found in seasonal input credit programmes. These are consistent with the small amounts which are available to each borrower, the production-oriented bias of the lenders, and the broad appeal essential to the political justification of the activity. Credit schemes using extensive rationing techniques are usually funded directly by governments in low income countries, without the support of donors. Exceptions are found in donor-supported area development projects and certain aid schemes for cooperatives.

Each variety of stringent credit rationing to political criteria contains the seeds of its own financial destruction. These seeds germinate and take root to the extent that political or welfare motivations overwhelm financial considerations. Programmes with extremely intensive or extensive rationing self-destruct more rapidly than schemes with moderate doses, assuming other things equal.

Intensive credit rationing tends to attempt to use credit to perform the function of equity capital. That function is to absorb the impact of uncertainty. In financial terms, the return to equity or ownership capital reflects a variable, residual claim after permitting a steady flow of resources back to the lender according to the agreed loan terms. Intensively rationed loans, large relative to the financial status of the borrower, are intended to change the borrower's onfarm factor mix significantly. Intensive credit rationing contains the inherent danger of permitting the borrower's finances to outrun his managerial and risk-bearing capabilities, especially during the critical initial period of adaptation to credit-supported change. When this occurs, the borrower may not be able to generate sufficient cash flow from his new activity to repay the loan which permitted him to undertake it. By indebting borrowers deeply, intensive credit rationing tends to impose relatively large debt service burdens. In times of reasonably expected adversity - which are common both to agriculture and to the implementation of new technologies - borrowers find it difficult to carry such burdens (Von Pischke, 1976). Delinquency in repayment easily results. Borrowers may not regard transgression of loan contracts very seriously: they are willing to accept the tenets of the public sector farm credit complex, and they view the lender as an alien institution with access to the tremendous resources of the government.

Extensive credit rationing also tends to lead to financial default. Casting their nets widely, lenders using the extensive approach provide credit to some borrowers who are not in a position to use it prudently, or who have little intention of repaying, or who are so exposed to uncertainty or who are so close to the margin of subsistence that even small repayment obligations assume major proportions. In these cases, accumulation of arrears on the lender's books is probable.

Even for those fully willing to repay who borrowed in the expectation that their incomes would be increased, the small sums of credit extended under extensive credit rationing may involve certain difficulties. The prescribed husbandry practices which lenders often intend to support may involve indivisibilities in technical linkages. Improved seeds without fertilizers, for example, may not perform significantly better than traditional varieties. Even if all inputs are provided in kind, the new adopter may not use them in the prescribed proportions for reasons of risk aversion. If loans are disbursed in cash, the amount provided to each borrower may be small relative to the financial requirements of improved inputs packages, leading to their incomplete adoption. The farmer using only a portion of an innovation may fail to achieve the yields which the complete package could deliver, enhanced levels of production fail to materialise, and the borrower has insufficient incremental cash flow for loan repayment. Access to extensively rationed credit does not necessarily stimulate the pace of adoption of superior production techniques.

On the other hand extensively rationed loans may be so trifling as not to engender any commitment to their productive use by the borrower. Small sums may more conveniently be used for consumption purposes, perhaps for luxury items or entertainment. If the recipient does not take credit use very seriously, it is unlikely that credit repayment would be accorded a very high priority. Default occurs.

Credit rationing by political criteria easily leads to poor loan discipline, defined to include delinquency, deceit and diversion. All of these constitute default according to the technical use of the word in finance to indicate any breach of a loan contract. Delinquency denotes the failure to repay according to schedule, and reasons of inability and of unwillingness have been discussed under the headings of intensive and extensive credit rationing. Deceit arises because borrowers have an incentive to circumvent the rules of the game, especially when the rules are made by a lender which is alien to them and which is thought to have access to hugh amounts of public sector resources which it is prepared to ration according to political criteria. One means of circumventing the loan limits per hectare often imposed

under extensive credit rationing is to apply for credit for a larger parcel than will be cultivated. Another means is to borrow under a different name each year, keeping ahead of lenders' efforts to enforce repayment terms. If loan repayments are duducted at source from crop delivery proceeds, there is an incentive to attempt to deliver under a different name front that in which borrowing was undertaken, or to use family members, friends and others as delivery agents. This tactic is often successful when the lender's record keeping system is not finely tuned. The relatively large sums disbursed under intensively rationed loans may tempt the borrower to divert a portion of the proceeds, especially if he is not entirely comfortable with the quantum leap in risk and managerial demands which loan use may involve. Loan-supported purchases or receipts in kind may be resold for immediate cash, or fictitious invoices may be submitted with the connivance of accommodating suppliers of loan-financed goods. Diversion is probably even more common under extensive rationing, especially when loans are disbursed in cash.

While possibilities of these types of abuse are found wherever credit exists, increasingly stringent rationing of credit under what may be called political criteria increase borrower incentive to engage in abuse, because the borrower's repayment capacities are over-burdened or because borrower rationality and financial responsibility are not positioned to coincide under the terms on which credit is extended.

Repercussion of Poor Loan Discipline

Poor loan discipline poses several problems for those implementing credit programmes through specialised farm credit institutions. The poor collection performance which it entails tends to impair the development of the intermediary concerned. In financial terms, funds which would become available for relending as outstanding loans mature are locked up as arrears. Potential new borrowers find their access to loans delayed or denied because of the declining liquidity of the lender. In order to maintain broad access to extensively rationed credit, the lender is forced to reduce the amount of the average loan because the amount of loanable funds declines with each lending cycle as arrears accumulate. At the same time the borrower finds that the effects of inflation increase the costs of modern husbandry. The forces which cause the accumulation of arreas in portfolios of extensively rationed credit are strengthened as borrowers find the amounts available increasingly trivial. As portfolios slide increasingly into arrears, whether the credit the intensively or extensively rationed, the revolving fund of resources fails to complete the full circle, which may eventually lead to decapitalisation of the lender.

In managerial terms, attention to overdues has an opportunity cost to the specialised farm credit institution. Day-to-day collection problems consume the scarce managerial resources of the intermediary, often at the expense of activities requiring a longer time horizon, such as planning, staff training, and designing more effective services for rural people. In addition, the accumulation of arrears and associated poor financial performance communicates to staff having a financial or accounting outlook that their energies are not yielding satisfactory results, which is easily demoralising. If no staff have such outlooks, or if those who do are rendered ineffective or leave because of the working environment created by growing arrears, it is unlikely that the institution could become an efficient intermediary.

As damaging as these effects are within the specialised farm credit institution, they may be dwarfed by external repercussions. Steps toward effective access to rural financial services provided by formal sector intermediaries other than specialised farm credit institutions may be retarded by the poor record of the specialised farm credit institution. The tradition of poor loan discipline started under government schemes may be dismantled only at a cost, and profit-oriented formal sector intermediaries may be deterred from serving the rural poor because of that cost. They may be increasingly reluctant to extend credit in innovative ways to rural target groups because of the heightened political sensitivity of enforcing rural loan contracts engendered by levels of performance achieved by specialised farm credit institution.

Achievement of certain rural development targets may also be more difficult because of poor loan discipline. The defaulters themselves, originally considered as poor people deserving of financial assistance, are placed in an adversary position against their former financial partner in development. The flow of communication between borrower and lender is constricted. A basis for distrust is created between rural people on the one hand and rural development administrators, extension agents and staff of the public sector lending institution on the other. Distrust raises the costs of rural development administration and initiatives taken by the government by making consensus more difficult to achieve, or by requiring the exercise of greater force by authorities for the successful implementation of programmes involving rural participation.

Widespread default also demonstrates to rural people that government is not able or not willing to enforce contracts, in this case the loan document, to which it (or an official institution) is a party. Cases taken to court by specialised farm credit instiution may strain the ability of courts to dispense or to be seen as dispensing justice, especially if defaulters are numerous (Lele, 1975). Litigation of this type may also impair the ability of the courts to deal promtly with routine cases, such as boundary disputes, cattle theft and inheritance, because the queue of litigants is increased. The legal force of formal sector contracts may be compromised by the types of situations which arise out of default on specialised farm credit institution loans. Deterioration in contract enforceability retards commercial advance and the contribution which commerce and commercial practice make to rural development.

The accumulation of arrears also subjects the specialised farm credit institution to increased political pressure and intervention. Those who formed the specialised farm credit institution to assist the rural poor are not likely to be enthusiastic about seeing their creation turn into an expropriator of rural property or the architect of a black list of defaulters to be denied further access to credit. Political interference in collection activities may be exercised across the board, permitting all defaulters to take a longer free ride, or it may be selective in favour of certain groups or individuals. Pressure may be applied whether the specialised farm credit institution must look to the courts for redress, or whether under its charter it is permitted extra-legal administrative recourse as an official corporation. This power, often accorded, heightens the possibility of arbitrary action by government agents against the rural poor or specific segments of the rural poor.

In addition to the possibility of creating costly tension between rural people and the government's administrative activities, widespread default may also be a divisive factor among rural people. The selective nature of credit access

may be magnified by default and by selective efforts to enforce loan discipline. Those borrowers who succeed most well in defaulting may incur the animosity or envy, depending upon the case, of those who are caught or who are timid in their default. To the extent that the structure of default mirrors the rural power structure, considerations of equity are violated by collection activities which are subject to some degree of control or manipulation by the power structure. Thus, the initial concern for access, expressed through an inappropriate channel, ends by violating the parallel concern for equity (Blair, 1973).

As the development of this model suggests, the public sector farm credit complex does not contain the basis for the correction of the many unfortunate direct and indirect effects that it so easily engenders. In addition, the traditions of poor loan discipline which it may spawn tend to be self-perpetuating (Rice, 1973b) In this respect credit programmes are probably less tractable than most non-financial activities undertaken by the public sector in an effort to assist rural people. Credit programmes are less tractable because they leave a track — arrears remain on the books for a very long time, debilitating the specialised farm credit institution. It may be argued, but not within the scope of this paper, that the lagging performance of a specialised farm credit institution requires much more time and effort to correct than would be required with respect to faltering or ineffective performance of an extension service or input supply or produce marketing system. Such activities have a shorter turnover cycle than credit schemes burdened by arrears, and are administratively more flexible because of the primarily current nature of the bulk of their activities. It may also be argued that the costs of lagging performance of a farm credit system are higher, from almost any perspective other than that of political expediency, than those associated with the poor performance of many other types of activities within the usual ambit of public sector initiatives in rural development

The Utility of the Model and of Lagging Performance

The model outlined here describes, in worst case terms, the problems which to some degree affect most specialised farm credit institutions in low income countries. Where the model stated in worst case terms appears superficially not to apply or not to offer a valid analytical approach, several exogenous factors may be at work. However, the exogenous factors of greatest importance vindicate the analytical framework provided by the model. (The model is similar to the cobweb theorem in that it can show cycles of contraction as well as of expansion, depending upon the assumptions used.)

The most positive vindication of the model in cases in which it appears not to apply is found in situations in which policy or institutional design departs from the assumptions of the public sector farm credit complex. For example, the rural poor may be viewed as a largely untapped, potential market for formal sector financial services, and initiatives to tap it may proceed along lines reasonably consistent with considerations of cost effectiveness. Likewise, low interest rate policies may be abandoned in moves towards financial liberalisation in efforts to enhance the quality as well as the quantity of the financial sector's contribution to economic development. In these cases reality may unfold in a manner consistent with but opposite to the model, in a positive or best case way which permits the development of independent, strong intermediaries and greatly expanded access to financial services by rural people (Von Pischke, 1977).

The model may also superficially appear not to apply when government or donors provide so much assistance to the intermediary that it is able to become larger and serve more people in spite of itself. Arrears may accumulate, but they many not impede new lending so long as outside funds are pouring in as subsidies, debt and equity capital. When portfolios expand rapidly the proportion in arrears may remain relatively small or stable because of the mathematics involved; although a slackening of the rate of addition to the portfolio would mean that an increasing portion of the portfolio would slip into arrears. In these cases of poor lender performance overwhelmed by access to new funds, the model is still useful. It indicates those policies and activities which require influxes of funds in order to keep the lender liquid, and provides a systematic basis for identifying the types of costs which reflect these policies and activities.

But why would new funds continue to be provided? To return to worst case assumptions, poor financial performance by a specialised farm credit institution need not put it at any real disadvantage in relation to its sponsors. Its poor loan recovery record may very well reinforce the public sector farm credit complex: not only are rural people poor, but they are too poor to repay their loans. Poor performance may actually increase the intermediary's ability to raise more funds from government, and especially from donors. Assistance agencies are often eager to shore up the operations of their client farm credit institutions so that programme continuity is maintained and country relationships solidified, and so that more farmers may be helped. Past losses or failures may be viewed as sunk development costs which offer a basis for greatly improved performance at some future time. The strategy of "more of the same, only better," can lead to a situation of "good money after bad."

At some point rehabilitation and reorganization of the specialised farm credit institution may be necessary, but this admission on the part of a government provides the possibility for increased donor leverage, which of course is accompanied by large amounts of new money. Skilful governments may attempt to create competition among donors to offset donor demands for increased controls, tighter performance commitments or higher interest rates. In any event, funds are usually forthcoming because of the strength and convenience of the orthodoxy of rural financial market intervention contained in the public sector farm credit complex. More funds enable more farmers to receive loans.

Donors or governments may also use lagging farm credit institution performance to raise the institutional stakes of rural development assistance. The cause of poor performance can be attributed to any number of shortcomings and conditions which are wothy of remedial intervention. Agricultural extension and farmer education are frequently invoked pallitives which are virtually unassailable within conventional approaches to rural development planning. Among the most attractive remedial proposals for donors are those which permit the launching of ventures considered as innovative or experimental. Crop insurance is one of these. It can contribute to the maintenance of liquidity by a specialised farm credit institution if it permits the automatic cancellation of loans outstanding in cases of distress arising from insured causes. At the same time, it provides protection to the borrower by insulating him from risk. On these grounds, crop insurance for poor farmers has the air of a panacea. It can bail out foundering credit schemes, address directly the uncertain production conditions of poor farmers, and provide a means of resource transfer which can probably operate at a financial loss with more impunity than a credit institution.

However, the probability of developing a self-sustaining and efficient crop insurance scheme serving large numbers of members of rural target groups would not appear to be of a greatly different order than the probability of creating a specialised farm credit intermediary successful under the same criteria. Is it reasonable to assume that one public sector financial institution founded for largely welfare reasons would be more successful than another? What special factors would enable an insurance scheme to be managed more efficiently, to be less vulnerable to political intervention and to be more dynamic than a credit scheme? If the causes which are insured are in fact responsible for the poor performance of specialised farm credit institutions, how would their operation or impact be essentially altered?

The Future of the Public Sector Farm Credit Complex.

Given the problems which plague specialised farm credit institutions in the public sector, what is their future course? One certainty is that they will continue to receive large amounts of funds from their sponsor governments and from donors. What is less certain is the survival of the public sector farm credit complex. In certain countries the complex will be overwhelmed by measures which go far beyond mere intervention in rural financial markets. Tightly centralised control of agricultural production and of the lives of rural people, and the reduction of the role of the formal financial sector to that of a set of accounts for the planning authority could massively outflank the concerns raised in the model developed here. In other countries the public sector farm credit complex will be isolated by trends in rural financial market research. New directions have been apparent in the literature for some time. The assumptions are increasingly challenged that rural people are unable to save and that the informal market, beyond kinship and friendship loans, is characterised by high monopoly rents derived from "usurious" rates of interest. In these countries the institutional variable of greatest interest may be the length of the lag between the realisation that present systems are based on inappropriate assumptions and the development of new responses by those responsible for the design of public sector interventions.

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