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Some Issues in Institutional Finance for Agricultural Development: A Cross-National Review of Evidence

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INTRODUCTION

Credit is essential for agricultural development. The circumstantial evidence is clear: where agriculture has grown rapidly, there has been expansion of institutional credit. More directly, although farmers as producers have a high preference to hold their savings in physical productive assets on their own farms, they must also rely on external funds at various points in time. This arises generally from the lack of simultaneity between the realisation of income and the act of expenditure. To cite a few illustrations: A field-crop farmer harvests once or twice a year, while consumption is continuous. For a dairy farmer, the interval between the realisation of income and operating expenditure is shorter and income is more or less continuous, *provided* there are two milk animals and ready access to marketing facilities. But, there is a lumpy investment in the animals. For a tree-crop farmer, there is a vast gap between the time when expenditure is incurred and income is generated. There is also a problem of indivisibility of fixed capital (e.g., construction of wells, pumpsets, farm implements, bullocks, soil and moisture improvement works, tractors, etc.). There is also a life cycle-induced need for finance.

However, far more important are the stochastic surges in capital needs and later in savings that accompany technological innovation in agriculture. New, productivity-raising technology is virtually always embodied in increased working capital (e.g., fertiliser) or fixed capital (e.g., irrigation). External finance is needed if the technology is to spread rapidly with consequent high growth rates [Desai (1989); and Mellor (1966)]. Of course, income soon surges and savings increase. Thus Rural Financial Institutions (RFIs) should promote both credit and deposit services; the former for the deficit period as new technology is applied, and the latter for the surplus period as incomes rise. Those surges in agriculture indicate a growth in credit needs for which the elasticity provided by a national or even international credit market is required. The same applies to deposit mobilisation when savings surge following an investment surge.

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RURAL FINANCE IN PAKISTAN

Institutional rural credit disbursement in Pakistan has grown rapidly, especially after the early 1970s. In fact, the growth rate of institutional rural credit has far outstripped that of the growth of key inputs and agricultural output. This growth is largely the result of the government's concern to ensure the availability of credit for farmers, and especially small farmers, to take advantage of the gains from the spread of modern technology. This credit was historically heavily subsidised. Indeed, the mark-up free credit scheme introduced by the Government of Pakistan in 1979 was designed to provide short-term interest-free small loans to the small farmers for production purposes. These distortions in the interest rate structure coupled with the other weaknesses in the system resulted in the access to institutional rural credit being dominated by the politically influential large farmers.

The setting of mandatory lending targets by the National Credit Consultative Council (NCCC), which increased dramatically each year, often at rates in excess of 25 percent per annum, facilitated a process of rolling over of the debt to large farmers by the bank managers. The nationalised commercial banks were expected to meet the targets or be penalised. Rural Credit schemes came to be seen as one-way conduits for pumping subsidised funds into the larger land-holding classes of rural Pakistan.

Coupled with these inherent weaknesses in the structure, and in some cases arising from it, was an inability to diversify the portfolio of lending to sufficiently cover the other important linkages to the crop sector. The development of the rural credit market in Pakistan has thus been considerably distorted. The result is a fragmented market that varies in development and density by region. These aspects are extensively analysed in Malik (1993). While there is an overriding concern in the policy circles in Pakistan to provide access to rural credit, there has been no significant attempt, however, to assist in the development of appropriate rural financial institutions. Pakistan can gain enormously from the international experience in terms of the design of both rural financial policies and institutions for development.

FINANCIAL POLICY FOR DEVELOPMENT: DIFFERENT VIEWS

There is a fundamental difference between the earlier and the more recent literature[1] on finance theories in their recommendations for monetary and financial policies for economic development.

[1]The earlier literature is represented largely by Keynesians, neo-Keynesians, and development economists, including the major critics of McKinnon and Shaw [Taylor (1979, 1981, 1983); The Central Union of Agricultural Cooperatives (1971, 1980); The Norinchukin Bank (1985); The Ohio State University (1987); Thingalaya (1980); Tinnermeier (1977); Tobin (1965); United Nations Secretariat (1980); and van Wijnbergen (1983, 1983a, 1983b)]. The recent literature is largely represented by McKinnon (1973) and Shaw (1973), and their followers [Adams (1977, 1978); Fry (1980, 1988); Gonzalez-Vega (1976); and Von Pischke (1983)].

Traditional Views

For developing countries, the earlier literature considered moderately expansionary but regulated monetary and financial policy to be conducive to encouraging higher and more stable economic growth and employment [Goldsmith (1969); Gurley and Shaw (1955); Keynes (1936); and Taylor (1979)]. That literature specifically advocated expansion of this institutional finance service sector, enactment of usury laws, moderate reserve requirements, ceilings on interest rates, relatively low deposit rates, comparatively low lending rates, and credit allocation targets for socially desirable projects and sectors.

More Recent Views: A Critique

The corresponding policy recommendation from the more recent finance theories is for financial liberalisation that relies on market forces. It particularly advocates privatisation of financial institutions (including participation by money-lenders), lower reserve requirements, removal of usury laws, elimination of ceilings on interest rates and indexing them to inflation rate, raising deposit and lending rates, and removal of credit quotas [McKinnon (1973); and Shaw (1973)]. But this advocacy has been questioned [De Macedo (1988); Taylor (1979, 1981, 1983); Tobin (1965); and van Wijnbergen (1983)]. What follows here is a summary of the criticism contained in the literature which questions liberalisation, with examples from such countries as Argentina, Brazil, Chile, South Korea, Turkey, and Uruguay.

One, macro policy changes may lead to cost-push inflation–not only in an arithmetic sense but also through a process of decline in the supply of loanable funds, due to loss of public lending institutions combined with inadequate rise of private institutions, and inadequate substitution of financial deposits for other forms of saving, with a consequent restraint to growth in output.

Two, the argument that the higher interest rates on time-deposits will cause higher medium-term growth and lower inflation rate in the short run is valid only if the shift into time deposits comes out of unproductive assets like cash and commodity stocks. But, if this shift is out of productive capital and loans in the informal market, then raising deposit rates can have a negative impact on growth and lead to more rather than less inflation.

Three, financial liberalisation can also lead to hikes in lending rates, which encourage indiscriminate lending without properly assessing return-risk features of the credit projects. This, then, leads to adverse viability/efficiency of financial institutions and bankruptcy, as well as higher inflation and lower saving and output growth rates.

Four, market forces of the neoclassical economic world are notably absent in financial markets. This is because financial markets are by definition imperfect, dealing, as they do, in future transactions. Moreover, externalities are particularly important in financial markets.

If we extrapolate these criticisms to rural financial markets, and make it explicit to rural modernisation, we note a potential for RFIs to face risks and

uncertainties which they resist to undertake on their own. But, unless RFIs extend credit to encourage private investment in modern fixed and working capital, agriculture's requirements for new biological and other natural resources for shifting its production function upwards cannot be fulfilled. Consequently, the case is built for deliberate promotion of financial institutions by the government, as well as administered interest rates, ceilings on interest rate, as well as credit quotas [De Macedo (1988); McKinnon (1973); Mohnan (1986); Tobin (1965); and van Wijnbergen (1985)].

An obvious problem innate to an active government role in the development of rural financial institutions is the massive aggregate financial need in the context of very small, fragmented financial markets. That economic problem interacts with the political problem of a populist tradition of repugnance for discipline in lending and repayment fanned by political interests in using financial markets as a major means of distribution of political patronage. That political objective is clearly in conflict with economic considerations and the use of the credit system to instil commercial discipline, quite aside from the innate need for financial discipline if the financial system is to remain viable.

It is difficult to separate the anecdotal from central tendencies, but there is certainly an impression of widespread corruption, indiscipline, and poor financial management in developing-country financial systems. The last sections of this paper will show that much of this impression is based on misleading accounting systems and lack of understanding of scale economies and the time required to realise them in dispersed rural markets. Nevertheless, even the residual problem is too large to be ignored.

The concern to bring discipline to rural financial markets interacting with an orientation to market mechanisms has brought about the more recent views discussed above. The argument is that past agricultural credit policy has neither facilitated agricultural development nor enabled rural financial institutions to be viable [Adams (1977, 1980); Adams and Kato (1978); and Adams, Graham and Von Pischke (1984)]. The recommendations of the critics are based on such an assessment [Adams (1977); and Gonzalez-Vega (1976)]. Thus, real interest rates in developing countries are seen as typically low and leading to reduced savings and hence investment rates, inefficient use of credit, more unequal distribution of income, and endangered financial viability of institutional lenders. These rates, in their judgment, are too low and have not reflected true scarcity of capital; are lower than in informal markets, and have not covered the costs associated with the administration of credit; and hence have adversely affected the quality of services of institutions. These critics suggest raising nominal interest rates and freely indexing them with inflation rate; these rates to be determined by free operation of market forces. These analyses also, in effect, take a demand-following approach to financial development, which we discuss below

in the context of brief presentations on each of the four broad approaches to the role of financial markets in development.

In the early history of the United States, in much of populist literature and in many socialists works, the role of finance, especially rural finance, has been perceived to be negative and inconsistent with democracy. Usury has been viewed with hostility and suspicion. Such ideas were prevalent in present developing countries during their stagnation phase in the colonial and monarchy era. This school of thought may be termed as the negative and hostile approach to development of a formal financial system [Adams (1980); Higgins (1959); Illy (1983); Lee, Bohlje and Nelson (1980); and Williamson (1968)]. That view is now little in vogue.

A second approach, the supply-leading-finance policy perceived finance to play a proactive role in economic development. It visualised "the creation of financial institutions and extension of their financial assets, liabilities, and related financial services in advance of demand for them, especially the demand from entrepreneurs in the modern, growth-inducing sectors" [Patrick (1966), p. 175].[2] According to this view, "financial intermediation which transfers resources from traditional sectors, whether by collecting wealth and saving from these sectors in exchange for its deposits and financial liabilities or by credit creation and forced saving, is akin to the Schumpetarian concept of innovation financing" [Patrick (1966), p. 176].

Patrick (1966, p. 17) further considers that "it cannot be stated that supply-leading finance is a necessary condition or precondition for inaugurating self-sustained economic development. Rather, it presents an opportunity to induce real growth by financial means. It is, thus, likely to play a more significant role at the beginning of the growth process than later". In other words, finance is perceived to play a catalytic role in inducing development of commodity-producing sectors.

The third approach of demand-following finance perceived finance policy to play a mainly neutral and passive role in overall development. Patrick (1966, p. 174) views this conceptualisation as "...where enterprise leads, finance follows," and refers to it as the demand-following financial policy. According to this, the evolution of the financial system is a consequence of economic development.

A fourth, hybrid approach, of supply-interacting-demand financial policy perceives the role of finance in promoting economic development as resulting from both the demand for and the supply of financial services. Patrick (1966, p. 177) articulate this as follows:

> In actual practice, there is likely to be an interaction of supply-leading and demand-following phenomena. Nevertheless, the following sequence may be postulated. Before sustained modern industrial growth gets underway, supply-

[2]Patrick's paper has at times been classified as advocating demand-following finance and at others as recommending supply-leading finance [Adams (1977); Olu (1985); and Vogel (1981)].

leading finance may be able to induce real innovative-type investment. As the process of real growth occurs, the supply-leading impetus gradually becomes less important and the demand-following financial response becomes dominant.

Mellor (1966, 1976) has synthesised the supply-leading and demand-following role of finance for economic development and agricultural development in particular. In his perception, institutional finance should accompany or closely follow programmes of technical change. He is clear, however, that institutional finance will fail if it is not closely associated with factor productivity increasing innovation in agriculture. In this context, it must be kept in mind that developing rural financial institutions takes time and that need must be anticipated and early action taken.

From the above discussion, there is a need to move to a system of institutionalised credit, which alone can provide the large sums needed to modernise agriculture. Consistent with that, in most developing countries, there has been a gradual evolution of the credit system away from non-institutional sources to institutional ones. However, the high hopes that were held out for the institutional system in the period after the Second World War have not been borne out in practice. That is because too much was expected of these markets. In particular, institutional credit systems cannot be expected to directly meet the problems of poverty and underemployment. In poor countries, those problems can only be solved in the context of fast economic growth. Second, institutional credit systems require very large numbers of trained people who are likely to be in short supply in most developing countries. Rapid expansion often leads to deteriorating oversight and management.

THE INCREASING IMPORTANCE OF INSTITUTIONAL RURAL FINANCE

The relative importance of formal[3] institutional finance increases in the process of economic development, for the following reasons.

a. advantages of monetisation [Bhatt (1983); Long (1983); and Reserve Bank of India (1954)];
b. increased demand for and supply of capital induced by widely dispersed agriculture with uneven availability of new technology [Mellor (1966, 1976); and Rosen (1975)],
c. weather instability, and low and static income of farmers [Bauer (1952); Government of India (1928); and Habibullah (1982)];
d. financial requirements for redemption of old debt during the inter-war period and Great Depression [Agabin (1985); Asian and Pacific Regional

[3]Institutional lenders include government, public institutions, and private institutions, such as commercial banks. Non-institutional lenders include shopkeepers/merchants, middlemen, landlords, money-lenders, relatives, and friends.

Agricultural Credit Association (1983); Bauer (1952); Desai (1989); Johnston and Kilby (1975); and Rosen (1975)] which may even have relevance, though on a smaller scale;

e. financial requirements for conferring ownership rights to erstwhile tenants under land reform [Agricultural Finance Corporation (1988); Asian and Pacific Regional Agricultural Credit Association (1983); Bauer (1952); Belshaw (1959); Cooperative Promotion Department (1979); Desai (1989); Donald (1976); Firth and Yamey (1964); FAO (1973, 1974, 1974a, 1975, 1976); Mears (1974); Murray (1961); Reserve Bank of India (1945, 1992)];

f. growth inelasticity of informal lenders as their resources are inadequate and ill-suited for modernisation [Bauer (1952); Belshaw (1959); Lele (1974, 1989); Mears (1974); Mellor (1976); Rosegrant and Siamwalla (1988); and Rosen (1975)], which results from their inability to lend for longer period for acquiring productive assets, and also for market purchased modern yield-increasing inputs;

g. inability of traditional lenders to mobilise financial deposits on account of their deposit facilities being inadequate, unsafe, untrustworthy, and less remunerative [Desai (1989); Donald (1976); Von Pischke, Adams and Donald (1983)]; and

h. fragmented, imperfect, and isolated nature of informal credit market [Bauer (1952); Belshaw (1959); Desai (1976); Firth and Yamey (1974); Nesbet (1969); Reserve Bank of India (1945, 1951).

The extent to which each of these reasons hold for different countries would vary, but three conclusions are clear. One, these reasons are essentially universal. Two, these have emerged from the three basic policy goals of RFIs, namely, rural growth with equity, integration of rural financial markets, and scale and scope economies for their viability. And three, a universal experience of secular increase in the relative role of institutional loan[4] and the consequent decline in non-institutional

[4]Institutional loans are from (a) special banks, ordinary commercial banks, insurance companies, individual cooperative associations (agricultural cooperative associations), simplified insurance system of government, government, etc., in the case of Japan; (b) agricultural cooperatives, rural banks, commercial banks, mutual loans and savings bank, credit associations, insurance companies, etc., in the case of the Republic of Korea; (c) government, government-owned banks, agricultural cooperatives, farmers associations, etc., in the case of the Republic of China; (d) government-owned bank, agricultural cooperatives/farmers' associations, commercial banks, mutual loan and savings banks, credit associations, insurance companies, etc., in the case of Thailand; (e) government, government-owned bank, rural bank in the case of Philippines; (f) agricultural cooperatives, nationalised commercial banks, and regional rural banks in the case of India; (g) government, government-owned bank, etc., in the case of Pakistan; (h) government-owned bank, agricultural cooperatives, commercial banks, etc., in the case of Nepal as well as Sri Lanka; and (i) commercial banks, federal land banks, insurance companies, farmers' home administration, cooperatives, and commodity credit corporation in the case of the United States of America.

loans[5] in a wide variety of countries in both developing and developed regions. See Figures 1 and 2.

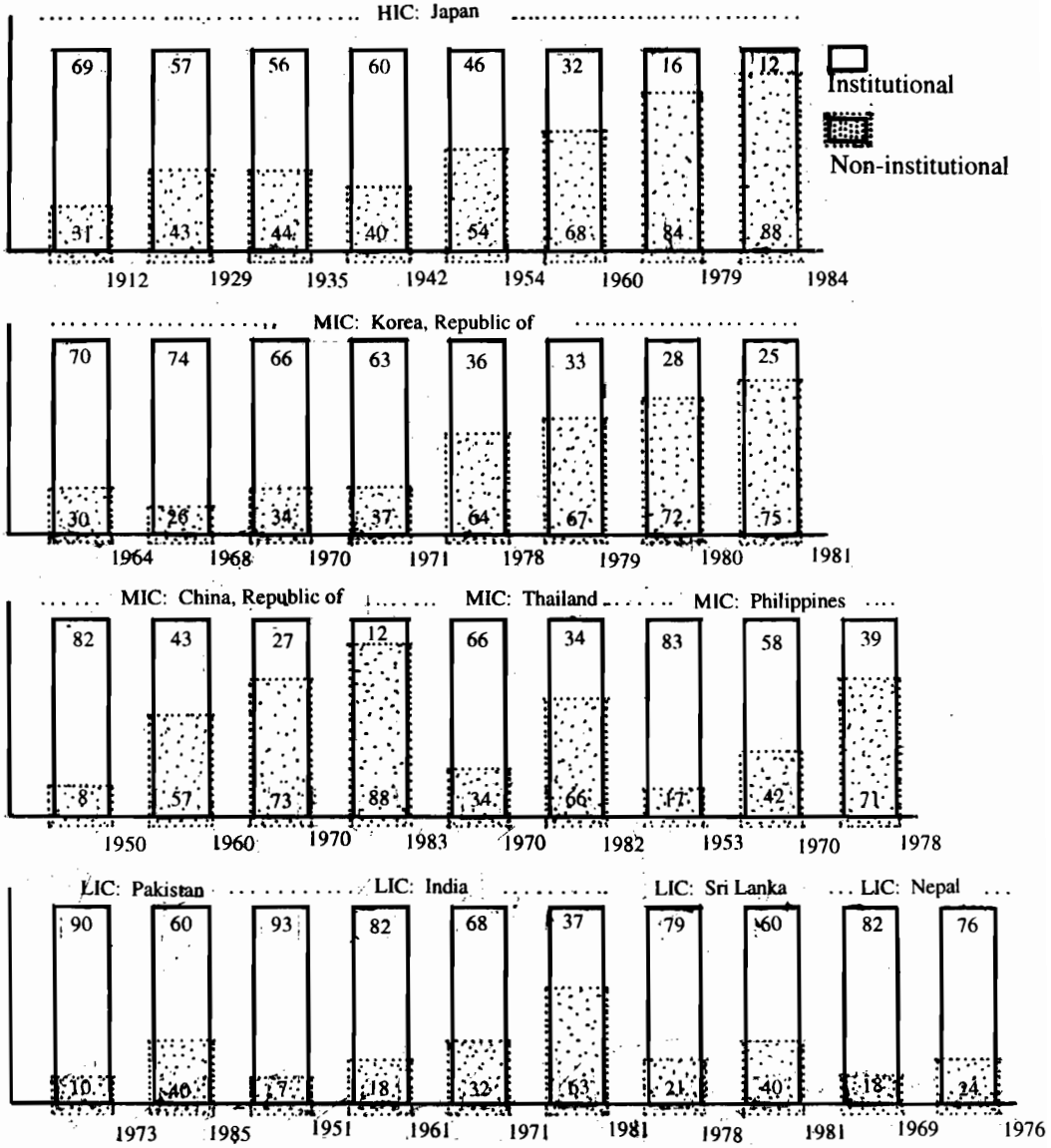
Figure 1 is based on time-series data for nine major Asian countries. Three findings are highlighted. One, the percent share of institutional loans in total amount of loans to farm households increased over time in high-income (HICs), middle-income (MICs), and low-income (LICs) countries in Asia. Two, considering these nine Asian countries at a comparable stage of development, the share of institutional loans in presently higher income countries was higher in the early 1950s and 1960s (around 31 percent in such countries as Japan, Taiwan, South Korea) than in presently lower income countries in early 1970s (around 19 percent in the remaining 6 countries), except South Korea in the former category, and Philippines in the latter category. Three, increase in the percent share of institutional loans over time was much higher in Asian MICs (except Taiwan) and Asian LICs than in Japan or Taiwan. This is because the former group of countries had a much lower share of institutional loans to begin with. Moreover, between Japan and Taiwan, this share increased at a higher rate in the latter. These data suggest that initial conditions related to RFIs in Japan were much more favourable than the present-day in low-income countries. This is the case also in Taiwan, followed by South Korea and Philippines.

Figure 2 shows cross-national shares of institutional loans in mid- to late-1970s. It reinforces the above conclusions. The percent share of institutional loans increases with the increase in opportunities to raise per capita real national and especially rural income within a given region. This is found for African LICs (7 percent) versus African MICs (40 percent), as well as for Asian LICs (20 percent) versus Asian MICs (44 percent) versus Asian HICs (86 percent).

The share of institutional loans across countries and regions is positively associated with the opportunity to raise per capita real national income and institutional development. This follows from the comparison of this share among African LICs (7 percent), Asian LICs (20 percent), MICs (44 percent), HICs (86 percent), Near East and Mediterranean Basin MICs (49 percent), South American

[5]Non-institutional loans are from (a) individual money-lenders, pawn shops, merchants, loan companies, mutual savings associations, individuals and others in the case of Japan; (b) professional money-lenders, relatives, friends, informal groups, individuals, *kye*, traders and merchants, agriculturalists, and manufacturers and processors in the case of the Republic of Korea; (c) merchants, informal groups, *Hui*, individuals and others in the case of the Republic of China; (d) landlords, merchants, professional money-lenders, individuals, and others in the case of Thailand as well as the Philippines; (e) agricultural money-lenders, professional money-lenders, traders and commission agents, landlords and tenants, relatives, and others in the case of India; (f) landlords, merchants, professional money-lenders, pawn shops, individuals, and others in the case of Pakistan, Nepal, and Sri Lanka; and (g) merchants, dealers, small business administration, individuals, etc., in the case of the United States.

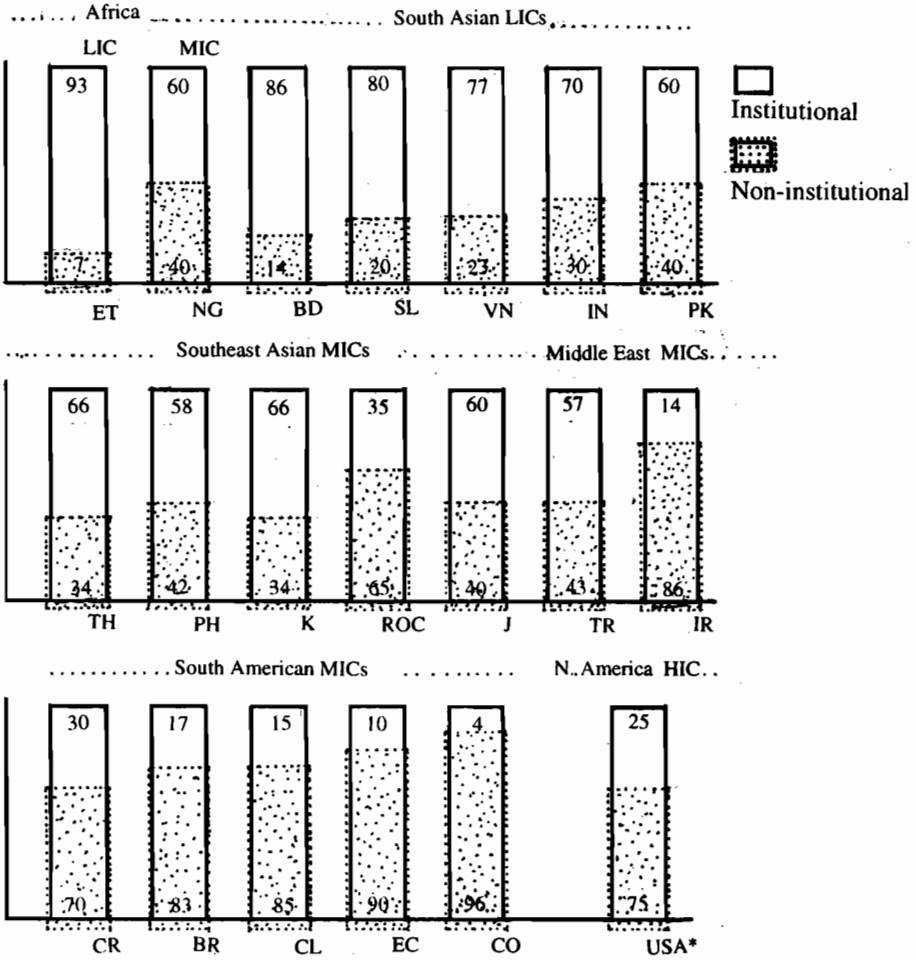
Fig. 1. Percent of Farm Households Borrowing from Institutional and Non-institutional Sources, Various Years, Selected Asian Countries.



Source: Brake *et al.* (1971); Donald (1976); Government of Pakistan (1974); Kato (1984); Lee (1984); Malik (1989); Reserve Bank of India (1992).

HIC = High-income country.
MIC = Middle-income country.
LIC = Low-income country.

Fig. 2. Percent of Agricultural Loans from Institutional and Non-institutional Sources in Selected Countries, Six Geographic Regions.



Source: As in Figure 1.

Note: As in Figure 1.

*In this case, the share of NILS includes loans made by the Small Business Administration Association, which is a formal autonomous government agency.

Names of Countries:

ET	=	Ethiopia	J	=	Japan
NG	=	Nigeria (West)	TR	=	Turkey
BD	=	Bangladesh	IR	=	Iran
SL	=	Sri Lanka	CR	=	Costa Rica
VN	=	Republic of Vietnam	BR	=	Brazil
IN	=	India	CL	=	Chile
PK	=	Pakistan	EC	=	Ecuador
TH	=	Thailand	CO	=	Colombia
PH	=	Philippines	USA	=	United States of America
K	=	Republic of Korea			
ROC	=	Republic of China			

MICs (79 to 85 percent),[6] and North American HICs (over 75 percent). Very small share of non-institutional loans in some South American countries is perhaps due to the lack of tradition of informal money-lending in these countries.

The percent share of institutional loans is significantly higher in Asian LICs as compared to African LICs. This may be due to early development of institutional framework for rural finance, which became possible because of larger and better trained human capital in the former group of countries. It is also due to an earlier emphasis on promoting the role of agriculture for economic development in Asian LICs than in African LICs.

CHARACTERISTICS OF MODERN RURAL FINANCIAL SYSTEMS

There are five characteristics of a successful modern rural financial system: more than one formal financial institution in any one area, nationally and even internationally integrated, high density of coverage, and competitive and sufficiently large-scale components to allow economies of scale.

The third characteristics is particularly important since most surveys find that ease of access is the single most important factor in people's decisions to deposit and borrow. One way to achieve ease of access is by opening many rural branches, as in Pakistan after the nationalisation of banks.

It is also important to promote competition. Especially between co-operatives and commercial banks which offer somewhat different kinds of service. The main advantage that co-operatives have over commercial banks is their knowledge of local conditions and the fact that they are operated by local people. However, this may not be true if co-operatives are under government control. The record of government-run co-operatives (in any case a misname) is quite bad. The comparative advantage of commercial banks lies in their trained staff and the greater commercial discipline that they can impose on their clients. But, once again, government interference, especially in the workings of nationalised banks, may lead to a loss of these advantages.

Unfortunately, realising the five characteristics stated above is fraught with problems. The most important is the clash between objectives (iv) and (v). The means to resolve this conflict are considered below, as are the means of achieving each of the characteristics.

Integration of National and International Institutions

Nationally, or even internationally, integrated financial institutions are necessary and desirable to accomplish financial intermediation between surplus and deficit units, seasons, years, regions, and economic subsystems for agricultural

[6]This extremely high share may not be interpreted to suggest that the South American RFIs have reached a larger proportion of farmers. In fact, this is not the case, as will be shown in the next chapter. Nor is it true that these countries have lower transaction costs, as will be shown in Chapter 5.

development [Adams (1980); McKinnon (1973); Mellor (1976); Rosen (1975); and Von Pischke, Adams and Donald (1983)]. This is done by vertically integrated firms, e.g., commercial banks at the national level having a tiered structure running from the head office to the villages, or for cooperatives the structure might run from the village level to an apex body. It may also be achieved by giving individual firms access to national markets through intermediation.

Proportion of Rural Households Reached

The importance of covering a high proportion of rural households cannot be questioned. This is not only for their needs for credit, but also for depositing excess liquidity whenever it arises during their production and consumption cycles. The available evidence [Desai and Mellor (1993)] indicates that the proportion of rural households reached by the RFIs is higher in high-income countries than in LICs. It is so irrespective of the four regions in which the developing countries are located. Two, it is the highest in Asia, followed by South America, the Near East and Mediterranean Basin, and Africa. Three, this ordering of the four regions remains unchanged when countries with very high percentages are excluded. And four, two recently more developed Asian MICs (i.e., Taiwan and South Korea) have an RFI system that reaches the largest proportion of rural households.[7] Available data on 17 countries suggest that the proportion of small farmers reached is the highest in the Asian MICs (particularly Taiwan), followed by the Asian LICs, African MICs, South American MICs, and lastly South American LICs. It must, however, be noted that these data are incomplete and do not define small farmers uniformly. Nonetheless, the conclusions derived are unlikely to change dramatically in the face of more data.

Economies of Scale

The fifth characteristic of a successful modern credit system, achieving economies of scale, is so important that it needs to be considered at length. To set the scene, it is necessary to consider the role of interest rates. This is because the empirical evidence shows that the demand for loans, i.e., the demand from borrowers, is quite elastic with respect to the interest rate, whereas the supply of deposits from savers is quite inelastic. The implication is that a fall in the interest rate will stimulate demand, increase scale economies, and thereby speed up agricultural growth, without affecting much the supply of deposits from savers.

[7]This is, however, lower in South Korea than in Jamaica and Peru. This may be because the year to which data refer may have extraordinarily low and high figures. Moreover, South Korean RFI system is widely acclaimed to be successful, but not that of the Jamaica and Peru [Adams (1988); Agabin (1985); Asian Productivity Organisation (1984, 1985); Brake (1971); Chu (1988); Donald (1976); FAO (1974); Kato (1984); Lee (1984); Olin (1975); and Ong Adams and Sahani (1967)].

The Level of Interest Rates

The interest rate reflects three factors: the *'pure' rate*, set in the national and international markets; the *transactions costs*; and the bad debts and consequent *risk premium.*

The pure interest rate is determined by factors beyond the rural sector. Suffice it to say that reducing the pure interest rate is in the interest of scale economies in rural financial institutions and of agricultural growth. Having said that, one can state that interest rates to depositors and other providers of funds should not be negative in real terms. That is to ensure that depositors *not* prefer hoarding financial resources to depositing them, and to provide some positive incentive to defer consumption. However, the objective is not to draw funds from investment in productive resources. Financial systems generally, and rural financial systems in particular, suffer from imperfect competition and knowledge. Finance by definition deals in the uncertain future. In any case, governments continually intervene in financial markets: at the level of the Central Bank influencing the general interest rate, perversely or otherwise; in setting deposit rates; in influencing transaction costs; and in specifying financial availability in one manner or another to various sectors and sub-sectors. Thus, there remains a set of important issues with respect to interest rates in the rural sector. Transaction costs need to be covered to ensure the viability of financial institutions. Finally, more important than the interest rate is operation of the system to provide growth by investment in productivity-increasing innovation so that the tax base is increased, as well as the base for mobilisation of deposits. For both of these functions, the rural financial system needs to grow rapidly.

Empirical evidence shows that the average cost associated with a new branch is very high and then falls quite rapidly. There are two implications. First, a rapidly expanding system is likely to be loss-making as new branches are added. Second, if transaction costs are to be kept down, existing branches must expand. There is a conflict between the objectives of large volume per unit and maintaining competition. The dilemma can at least be partially resolved by (a) increasing the intensity of coverage and (b) exploiting economies of scope by serving customers with related needs.

For the first, each branch is to serve more customers, especially middle-sized farmers. This group is often under-served by existing institutions because commercial banks, for example, prefer to deal with larger, more credit-worthy farmers who take out larger loans without costing the bank much more than its smaller customers. Small farmers, on the other hand, often manage to create enough political pressure to force financial institutions to lend to them.

The second alternative involves having the bank serve institutions that also serve farmers, or having the bank mobilise deposits in an aggressive way, or having it

combine credit with input supply–the latter is particularly attractive for co-operatives. In particular, the interests of farmers and growth are served by lending for working capital to private traders.

Bad debts and hence risk premiums are unacceptably high in most developing countries. First of all, there is the possibility that *loans may become overdue.* Secondly, borrowers may be unable to repay because of *natural calamities*, e.g., drought. The first overdues are not synonymous with bad debt. The lending period is badly defined: if loans come due at the end of the banking period, even a marginal delay in repayment will cause the loan to be classified as overdue. Overdues also arise from rapid expansion of the system leading to poor administration. Yet another reason is that politicians seeking votes may compel financial institutions to write off even good loans. Overdues and bad debt can be reduced by well-trained staff that can help borrowers, monitor loan performance, and define profitable projects. It cannot be too strongly stressed that rural credit must be provided within the context of economic growth so that the poor too can have a chance to increase their earning opportunities without blighting the prospects of others only slightly better off than themselves.

Then there is the question of how to deal with defaults caused by natural calamities. This risk applies particularly to people living in semi-arid areas with a fluctuating and uncertain rainfall. One way of "dealing" with the problem is to do nothing so that eventually people migrate out of the drought-stricken areas. This is difficult nowadays for even the most moderately publicity-conscious government. Another solution is crop insurance. This may not work either because the scale of the problem is so large that the premiums required to make it viable would be too much for the poor to pay. Loan forgiveness is also a bad idea because it does nothing to instil a sense of responsibility. The best solution is credit coupled with some sort of employment guarantee scheme so that incomes can be maintained even in the face of drought.

Another problem with bad debts arises because there is usually enough discipline in banking systems to restrain lending when the ratio of deposits to loans outstanding falls. The result is that deposits end up exceeding loans so that the system transfers funds out of rural into urban areas when in fact it ought to be lending to non-agriculture in rural areas. This is ultimately due to a lack of investment opportunities.

A large proportion of the studies reviewed, as well as the supplementary analysis, provides information relevant to determining interest rates for rural financial institutions. We have no quarrel with the principle of rural financial markets operating in a pure neo-classical framework of perfect knowledge and perfect competition with interest rates at all levels to be determined by the market. In such a regime, discussion of interest rates would be irrelevant to our analysis.

Note, in particular, the emphasis we place on the need for a dense pattern of rural branches, a major step towards perfect knowledge and access; our concern for the effect of density on transaction costs, which affects interest rates in a competitive system; and our arguments for multiple systems for rural financial service provision, as a means of providing at least some competition, despite our repeated concerns about scale economies.

For developing countries, three implications can be drawn for the development of formal RFIs. First, promotion of a nationally integrated formal rural financial market with sustained government support is important to transfer of new technology for agricultural development. Second, in so doing, improvements in vertical organisation, density, proportion of rural clients reached, and the functional structure of formal RFIs are central to their clients' well-being and to their own. And third, these improvements, together with maintaining conducive interest rates, are far more important to achieving the objectives than presently recommended financial liberalisation.

Virtually, throughout the literature reviewed, agricultural credit policy is analysed from the three points of view of facilitating rural growth with equity, integrating rural financial markets, and enlarging the economies of scale and the scope for viability of those institutions whether they be public or private. The cross-national analysis underlines the importance of both organisational measures and interest rate policies in pursuit of these objectives.

Policies to develop RFIs have worked best in the context of new technology that reduces the cost of production per unit of output. The analysis concludes that supply of credit interacts with cost-reducing technology, arguing for simultaneity in their provision. In each case, the lack of the other leads to lowered returns and constrained growth.

Thus, modern forms of capital and an efficient capital market influence not only prices but also growth and employment. Rural financial market development is a complex process. This is because agriculture is small-scale, geographically widely dispersed, weather-dependent, highly complementary in its production process, and operates initially at a low level of commercialisation and is deprived of basic infrastructure and education.

A developing rural credit system may be subject to political abuse, because of its dispersed character, the nature of rural politics, and inappropriate interest rate policies. As a consequence, discipline is reduced, loan quality deteriorates, and loan delinquency becomes widespread. Eventually, such conditions bring collapse of the RFI system. However, other reasons for the viability problem of rural credit institutions are far more important. They relate directly to inappropriate features of the policy of promoting formal institutions. A more appropriate strategy for the development of RFIs that stresses developing multiple financial agencies that

compete with each other, are functionally and vertically integrated, and have high coverage of farmers and geographic areas is outlined here.

PROMOTING APPROPRIATE FORMAL INSTITUTIONS

Historical patterns of economic development in both low- and high-income countries show that formal lenders have played an increasingly large role relative to informal lenders. There has been a strong secular increase in the relative role of institutional credit and a consequent decline in non-institutional credit in Asian high-income, middle-income, and low-income countries. Cross-national data on various countries in six different geographical regions suggest a similar conclusion. The share of institutional loans in total loans of farmers is 28 percent in South Asia, 33 percent in Southeast Asia (excluding South Korea and Taiwan), 65 percent in the Near East and Mediterranean Basin, and 85 percent in South America. The corresponding number for developed countries like Japan, the United States, South Korea, and Taiwan is over 85 percent.

Organising Principles

Given the rationale for RFIs on both deductive and inductive grounds, how should their development be structured? There are six organising principles which need consideration.

First, should there be only one or more than one RFI? Although, there is little or no empirical evidence on duplication of loans for the same purpose; logic and observation favour a multi-agency approach which provides a choice to farmers. Because, RFIs have major problems with economies of scale, a large number of competing agencies may be undesirable. However, unlike a single-agency approach, a multi-agency approach has the potential to generate competition. Other reasons for a multi-agency approach are shifts in the term structure of demand for and supply of financial services; the lack of comparative advantages of the existing RFIs due to their ill-suited term structure of financial resources and their inability to serve the rural poor, especially in more difficult agricultural areas; and increasing availability of trained manpower over time. Historical experiences of countries around the world show that the multi-agency approach is common in both developed and developing countries. The average absolute number of different types of RFIs is higher in high- and middle-income countries than in low-income countries in all the major regions of the world.

Second, should rural financial institutions be government, autonomous public agencies, private agencies, or cooperatives? There is no *a priori* reason for any one of them to perform better. Moreover, historical experience shows that all these forms are found the world over. However, the process of promoting RFIs typically begins with government departments or cooperatives, because commercial banks are

reluctant to enter the rural financial market–perhaps largely due to initial problems of scale and the difficulty of supervising widely dispersed small branches. In the process of rural financial market development, other forms of organisations also emerge. Nevertheless, government programmes are ubiquitous even in the later stage of development as in Japan, the United States, Taiwan, and South Korea. But, in successful systems, the governing programmes are well-integrated with the rest of the formal RFIs, including government-supported autonomous banks or corporations, cooperatives, and private commercial banks.

Third, should RFIs be vertically organised? The evidence is clearly that vertical integration is necessary to achieve integration of national and regional financial markets, provision of human know-how to lower-level units, and decentralisation of decisions on rural financial operations. Such capability is weak in Africa, the Near East and Mediterranean Basin, and South America, compared with Asia. The proportion of RFIs which are not vertically organised is higher in Africa, followed by South America, the Near East and Mediterranean Basin, and then in Asia excluding Japan, South Korea, and Taiwan, where all RFIs are vertically organised.

Fourth, how dense a system of field-level offices of RFIs should be promoted? A high density of RFIs (i.e., number of field-level offices of RFIs per 1,000 hectares of arable land) is critical to the development of the rural financial market. Although scale economies may be affected adversely increasing density is still important because it improves accessibility for both rural households and the formal lenders and lowers farmer's transaction costs of borrowing. Increased density also enables intensification and widening of the coverage of farmers and the scope of operations to develop scale economies, which are crucial for spreading lenders' common transaction costs. Moreover, it facilitates effective competition with informal lenders. Density of RFIs is the lowest in Africa, followed by the Near East and Mediterranean Basin, South America, and, lastly, Asia. Density is the Highest in Japan (4.6), followed by China (3.7), Taiwan (1.3), South Korea (1.1); India (0.7), two Southeast Asian middle-income countries (MICs) (0.39), and four South Asian low-income countries (LICs) (0.3).

The *fifth* organising principle is whether to cover a larger number of farmers and other rural clients. This is both necessary and desirable to achieve the scale and scope economies. Such a feature is essential to achieving the other two objectives of agricultural credit policy, namely, higher rural growth with equity and better integration of rural financial markets. Moreover, it is required not only to institutionalise rural credit but also rural financial savings. Another reason is related to the last but not the least important principle for organising RFIs. This is that there is also a need to cover such rural clients as farm input distributors, farm-produce processors, and even consumer goods and repairs services stores. Data on coverage of these types of rural clients are not available, but coverage of farmers is the lowest

in Africa (7 percent), followed by the Near East and Mediterranean Basin (9 percent), South America (18 percent), and, lastly, Asia (24 percent). The share of small farmers in total number of farmers reached by RFIs is also higher in Asia as compared with the other regions.

Sixth, should RFIs have multi-product and diversified operations which are mutually reinforcing so that horizontal integration can be attained? Multifunctional RFIs directly and indirectly undertake operations of farm-level loans (both in cash and kind, and in short and longer terms for crop and other enterprises), extension, input sales, produce marketing, consumer goods sales, deposits and/or share capital collection, other borrowings, and loan recovery. Not all RFIs have to be multifunctional in explicit and direct terms. For example, land development banks may not be able to lend short nor undertake auxiliary services like produce marketing. Similarly, a government department will not have comparative advantage in collecting deposits. But both of these RFIs can effectively coordinate with other RFIs and thereby indirectly become multifunctional. Among other RFIs, vertically organised (non-land) cooperatives can directly play a multifunctional role by promoting financial services for farm inputs sales, farm produce marketing, and consumer goods sales by their field-level constituents. RFIs, like commercial banks and specialised agricultural banks, can make available their financial services not only to farmers but also to farm inputs distributors, farm produce marketers, and consumer goods shopkeepers.

The Need for Multifunctional Institutions

A multifunctional RFIs system is advantageous for more than one reason. *First*, it facilitates promotion of both working and fixed capital whose optimum combination is necessary to fully exploit the potential of new technology.

Second, such a system, by making loans for dairy-farming, sheep-rearing, fishery, forestry, and rural sideline occupations besides field crop-farming, facilitates diversified and more robust agriculture, in addition to reaping scale economies in its own transaction costs.

Third, farm-level credit acts as an impetus to investment in real resources, which must be matched by supplies, which in turn could be encouraged by loans to input and produce marketing agencies. Through these types of agricultural credit, RFIs can forge the much-needed backward and forward linkages among agricultural production, agricultural input distribution, and agro-marketing and processing subsystems. These linkages improve the efficiency of agricultural productivity and the economies of scale and scope, and thereby increase viability, besides promoting larger non-inflationary production and saving linkages of agriculture.

Fourth, multifunctional RFIs will also accelerate the consumption linkages of technological change because they have a larger impact on rural incomes as a result of stronger and non-inflationary production and saving linkages.

Fifth, such RFIs will be an effective alternative to informal lenders who undertake a range of functions. In most developing countries, informal private lenders' operations are characterised by a horizontal integration of local commodity, land, labour, and credit markets.

Both horizontally and vertically organised RFIs are found widely in developed countries, such as Japan, the United States, South Korea, and Taiwan; in developing countries, like China, and to some extent in other Asian countries, such as Bangladesh, India, Malaysia, and Thailand; and to a much lesser extent elsewhere. The share of countries with a unifunctional RFI system is the highest in Africa, followed by South America, the Near East and Mediterranean Basin, and then Asia.

Transaction costs, as a percentage of all assets plus the liabilities of RFIs, are lower where their density, coverage, and multifunctional roles are better; they average 1.1 percent in Taiwan, 1.5 percent in South Korea, 1.7 percent in the Near East and Mediterranean Basin, 2.4 percent in Asian LICs, 2.8 percent in South American MICs, and 3.1 percent in African MICs.

A successful example of a diversified agency is the Grameen Bank of Bangladesh, which not only makes farm-level loans but also lends to local agroprocessing businesses, paddy trading, and repair shop services. It also collects deposits, recovers loans, and borrows from other agencies. This bank has encouraged investment, employment, and occupational diversification, in addition to increasing incomes and lowering poverty among the rural poor. It has also achieved viability, high rates of loan recovery, scale economies in financial costs, and constant returns to scale in transaction costs. Its rural branches achieve substantial scale economies in transaction costs within three years of their inception. Moreover, this bank has been an effective alternative to non-institutional lenders whose operations are similar to those described earlier.

Regional Rural Banks (RRBs) in India have also diversified, to some extent, their operations in a manner similar to the Grameen Bank. In the late 1970s, they lowered their unit transaction costs and improved profitability. In a case study, farmers under the purview of a multifunctional village cooperative in India have larger investments, more optimal allocation of resources, better technology, and higher productivity and incomes than those served by a less diversified village cooperative in the same agroclimatically backward area. Moreover, the multifunctional village cooperative fully recovered its loans, and had lower unit transaction costs and higher profitability. A sample of mostly rural branches of the nationalised commercial banks in India shared major scale economies in costs once their operations exceeded Rs 1 million, and continued to be substantial until operations grew to about Rs 30 million.

Furthermore, the adoption rates of high-yielding varieties and agricultural productivity were higher and the loan delinquency rates were lower in states of India

where the density of RFIs was higher. In these states, loans to farmers and those to input distribution agencies were also higher and more diversified. Village cooperatives in these states were multifunctional and achieved scale economies in their transaction costs.

In India, fertiliser use, irrigation, other agricultural investments, and agricultural productivity have increased over time, with the increase not only in the density of RFIs and farm-level credit, but also in loans for distribution of agricultural inputs, cooperative marketing of produce, and to processing agencies. Nevertheless, in general, loan deliquency is high and scale economies in transaction costs have not been fully achieved. Had the institutions sustained the increases in their density, coverage of farmers, scale and scope of farm-level loans, and multiproduct operations more continuously, institutional credit would have a much larger impact on agricultural investments and productivity, profitability, and loan recoveries.

RURAL FINANCIAL INSTITUTIONS AND SAVINGS

Factors Influencing Rural Savings

The literature on rural financial institutions has underemphasised the importance of resource mobilisation through the promotion of household savings. Rural or, for that matter, even economy-wide savings include both physical productive resources and financial forms. This is so in any country. In the early stage of development, physical product saving dominates total saving. This is especially the case in an agriculture that lacks commercialisation and improved investment opportunities through new technology. Even when these constraints are relaxed, farmers' preference for physical productive saving remains high. This is because they acquire new forms of real resources associated with technological change which act as an altogether different source of capital formation, and hence income stream. Farmers' higher preference to hold savings/assets in physical productive resources is found in such countries as Bangladesh, India, Philippines, Thailand, South Korea, Taiwan, and Japan [Desai and Mellor (1993)].

The available literature considers price and non-price factors as determinants of saving. In this context, the former is represented by some measure of the expected real rate of return, and may be termed as the incentive to save. Conceptually, this should be the weighted average of rates of return on different forms of saving minus the expected rate of inflation. This entails many complex methodologically-demanding and time-consuming problems of conceptualisation and data availability which are difficult to resolve. Most studies, therefore, utilise nominal interest rate on one or the other form of financial saving minus the expected inflation rate. This implies a perfectly competitive capital market which equalised marginal rate of return on each different form of saving. But capital market, by definition, is imperfect as it

deals in future transactions. Moreover, in the agricultural production process, many forms of capital are complementary and some of them even augment labour use, and thus render it difficult to measure marginal rates of return to capital/saving. And lastly, drawing policy implication from the result of the impact of real interest rate on saving needs care.

Non-price factors in the 10 studies reviewed in Desai and Mellor (1993) include such determinants as permanent and transitory income, wealth, family size, dependency ratio in the family, farm size, source of income, liquid assets, foreign savings, and inflation rate. These essentially represent the ability to save.

In terms of the relative importance of price and non-price factors in influencing rural and economy-wide savings, the evidence indicates that in Asian LICs, as well as MICs, and HICs, the former is less important than the latter. This is also the case in the United States. The ability to save is more important than the incentives to save.

Response to Interest Rate

When present value of net income after the rise in rate of interest/return increases, the savers would decrease saving and increase consumption. If, on the contrary, this value decreases, then they would increase saving and reduce current consumption. The former scenario may occur when there is surplus in the earlier period, but deficit in the later period. In this case, income impact would be negative, and hence positive substitution effect can be fully or more than fully or partially offset. When the total impact can be positive or negative or zero in this scenario cannot be predicted. It is an empirical question. The latter scenario can occur when there is deficit in the earlier period and surplus in the later period, leading to a positive income impact, which will reinforce (pure) the positive substitution effect of the rise in real rate of return. Here, the total impact is positive.[8]

Empirical evidence shows that overall improvement in incentives to save on rural savings is positive. The positive impact of incentives to save on rural savings is likely because of very high positive substitution effect, which may have more than offset any possible negative income impact or been reinforced by a positive income effect. These may have been induced by rapid and widespread technological change in agriculture in these countries or in the sample areas. This may hold even in the case of the estimated positive impact of interest rate on gross domestic savings reported for South Korea. It may also be the case for private economy-wide savings

[8]Despite these complexities, some studies contend that when the interest rate increases, saving invariably increases and is elastic to this rate [Adams (1978)]. What probably they consider saving is saving in financial deposits, which is obviously positively related to the interest rate. But, even this saving is not interest rate-elastic [Sahani (1967); United Nations Secretariat (1980); Vardachary (1980); Wiseman and Hitiris (1980)].

in the United States, where technological change has occurred in all the sectors. All the available studies show that the response of savings to the real rate of return is not elastic; elasticity being 0.00005 to 0.50 at the most.[9]

In order for rural savings to respond positively to the incentives to save, what is needed is rapid and widespread technological change which accelerates the ability to save and the rates of return. The higher rates of return associated with technological change would make saving more attractive and thereby would enlarge its positive substitution effect to overpower any growth in its negative income impact. This would result in higher capital formation, besides income growth in the agricultural sector, which in turn would enlarge its financial services needs. Through this mechanism, the scale and scope economies for the viability of rural financial institutions would also improve. To accomplish this, agricultural credit policy should aim at improving vertical organisation, density, coverage of farmers, and the multifunctional role, besides maintaining such interest rates as are conducive to investment.

CONCLUSIONS

The development of appropriate rural financial institutions in Pakistan can greatly facilitate the process of economic development. Such institutions, if developed along the lines outlined above, would enable the mobilisation of savings deposits, thus providing banks with the necessary resources to undertake rural lending. This would also enable transactions costs to be reduced by spreading overheads. Increased competition will lead to better administration and hence reduced overheads and improved repayments on loans. The greater access by the small farmers would allow for high volume and high branch density. The easing of the credit constraint of the small farmers will have a positive effect on efficiency, employment, and equity. A well-functioning rural financial sector will also reach out to the private sector operating in the distribution of inputs and the processing and marketing of outputs. The increased volume of activity will result in reducing the overheads of the rural financial institutions while increasing the level of economic activity in the rural sector both directly and indirectly through the linkage effects.

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[9]Iqbal (1982) estimates that this elasticity is less than 0.25 for a large sample of rural households (2,739 in number) in India. It also shows that the ability to save influences rural saving more than the interest rate. This study is not reviewed in greater detail because it estimates this elasticity for nominal interest rates.

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Comments

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It has always struck me as odd that "credit" is good, has nice connotations, is a hurrah word. Professor Yunus, the founder of the Grameen Bank in Bangladesh, has even gone so far as to call credit a basic human right. On the other hand, debt is bad, has nasty connotations, is a boo world. Would anyone advocate that imposing more debt on poor people (whether small farmers, micro-entrepreneurs or women) is part of an appropriate development strategy? Yet the two are inevitably the same. It is sometimes forgotten by the enthusiastic advocates of more credit that loans at fixed interest present risks to the borrowers, including the risk of not being able to repay the loan. And small farmers are notoriously and rightly risk-averse, since they live near the subsistence minimum. Lowering interest rates, on the other hand, will discourage the mobilisation of savings in the form of deposits. We would all agree that, however important agricultural credit may be for farmers, other things are also necessary and may be more important; without them credit can do no good, or with them credit may not be necessary: land tenure and the distribution of land holdings, infrastructure, particularly irrigation and roads to take the crops to markets, fertiliser, seeds and other inputs, adequate prices for the produce, research into new varieties, information, training, education and extension services, the correct macro-economic policies, particularly for exchange rates, and so on.

I suggest putting the place of credit into a wider framework of desirable pre-conditions for success. These will be different according to the level of income and the stage of economic development. At very low levels of income, the most essential need is for food and health. An under-nourished, ill, inert, apathetic, unmotivated worker cannot use credit or any other input. In order to make use of the credit, the person has to be adequately fed and healthy. For the ultra-poor, the food-health nexus is the first priority.

At a somewhat higher level of income per head, credit on reasonable terms is probably a high priority. It enables poor men, and even more so poor women, to pull themselves up, to get access to the necessary inputs for their production and to buy the wage goods, and particularly food, before they earn the money from the sales of their production. It can also buy them free time for training and education, which equip them to return as more productive workers. Any of us who have benefited from student loans will understand this.

At an even higher level but still in poverty, education and training may well have higher priority than credit. A few years ago, I was asked to evaluate the efforts of a Colombian Foundation, the Carvajal Foundation, to assist the poor people of Cali in Colombia. The Foundation offered credit, but only after the potential

borrowers, largely micro-entrepreneurs from the outskirts of the city, had gone through a training course in simple book-keeping and accounting. It was found that, although these minuscule business-men and business-women were attracted to the courses only by the prospects of credit, after having taken them, they often did not need the money. They had learned to price their inputs and products correctly and to manage their business in such a way as to have become profit-making entrepreneurs who could themselves finance the expansion of their businesses. Admittedly, the time taken away from work may be thought to call for the need for credit, but at this relatively high level the people could go to evening classes or in their spare time, without affecting their production.

The Grameen Bank in Bangladesh is frequently and rightly upheld as a wonderful model of how to lift the poor out of poverty. John Mellor has considerable praise for it. It lends small sums mainly to poor rural women, it uses peer pressure in small groups of five to achieve repayments, it is a non-governmental, and therefore flexible, organisation although it derives some of its funds from governments, it teaches people to help themselves, and it has a spectacularly good repayment record: 94 percent to 99 percent have been cited. But it may not be widely known that it is difficult to find enough field workers to process the loans, that the turnover of these workers is high and more are leaving than re-entering, that the credit extended represents only a tiny proportion of total credit, and, most striking of all, that some of these record repayments are made by borrowing from the village usurer.

When I was younger and still tried to play with toys, some of which were economic models, I constructed one such model that showed that, on certain plausible assumptions, raising interest rates, far from being deflationary, can be inflationary. Since then, Lance Taylor has elaborated skilfully this argument. I detected some sympathy for this approach by John Mellor and welcome a new ally. High interest rates are also unambiguously bad for environmental conservation and protection. Some authors have argued that by discouraging investment they are good for resource conservation and reduced pollution, but this is surely wrong. One must assume that the investment is sensible, and sensible investment should be directed at economising in exhaustible raw materials, at finding technical substitutes for them, and at anti-pollution devices such as scrubbers. High interest rates encourage us to discount future well-being at too high a rate.

On one occasion, John Mellor revealed to me–it may have been in a weak moment, and I confess it was a shock and surprise to me–that he was a card-carrying member of the Republican Party. I wonder, therefore, how he would react to what I am going to say now. I suggest that we should transcend our ideological and political loyalties, exercise our institutional imagination (usually lagging vastly behind our scientific and technological imagination), and attempt to design institutions that combine the best of both words.

Thought should be given to forms of institutional innovation that combine features of efficient private, large-scale management with the objective of social responsibility. The nucleus estates of the Kulai Oil Palm project in Malaysia or of the Kenya Tea Development Authority, both pioneered by the British Commonwealth Development Corporation, may serve as examples. The basic idea is to combine the activities subject to large-scale economies, such as modern processing, marketing, credit and extension services, in a central enterprise with a group of small-holders, clustered round the nucleus estate, who grow the crops on their plots of land. This type of institution is particularly suited for agro-industrial projects, but similar arrangements can be explored for industrial firms, where production facilities calling for large capital expenditure are located in the central plant, while the manufacture of spare parts and components, items that can be produced labour-intensively, and ancillary services such as packaging, transport, and cleaning, are grouped in small firms round the central firm. The institutional innovation applies both to the form of organisation and to its financing. There is no reason why both private and public money, both domestic and foreign funds, should not be harnessed to this purpose.

Although the ideological and political divide is still between the private and the public sector, a more relevant line can be drawn between small-scale enterprises, many in the informal sector, run by single persons or families with no or only a few employees, and the larger institutions, comprising both large private firms and public sector institutions. The former harness the initiative, enterprise, and effort of individuals and spread widely the benefits of growth. The latter exploit economies of scale, are run along bureaucratic lines, and have the merit of being socially accountable and more easily regulated and taxed.

In the type of arrangements modelled by the Commonwealth Development Corporation (CDC), which combines a large-scale nucleus estate with small holder growers of crops (tea, oil palms, citrus), it is important to avoid exploitation of the small holders. The CDC, being a corporation charged with maximising not profits but development, avoids this danger but private agro-businesses have been known to be exploitative. It is for this reason that I invite you to transcend ideology. The CDC has been claimed both by the Conservatives and by the Socialists in Britain as a splendid example testifying to their creed. Conservatives have said that it is run by a board on business principles by businessmen and bankers, that it harnesses free enterprise, private initiative, and the business spirit to the task of production and exports, and that it has to cover its costs without subsidies. The Labour Party, on the other hand, has argued that it illustrates the virtues of public enterprise, since it receives a large part of its funds from the Treasury, that it is motivated not by greed but by public spirit, that it is accountable to the public, and that it is charged with maximising the impact on equitable development and on reducing poverty.

The CDC is also unique in that it does not just lend money and withdraw just when engagement and commitment become most important, namely, when the

construction of the project is completed and production begins. It manages the project with the mandate to train counterparts and hand over to local people and to sell out to indigenous funds as soon as they are ready. The funds thereby released are then used to start new projects.

I conclude on a note that, I am told, reveals an oriental cast of mind. Let us not think in terms of either ...or, but of both...and. Not: either private or public; either small-scale or large-scale; either domestic or foreign; either agriculture or industry; either credit or training; let us instead, and against the economist's emphasis on the need for choice, stress that the answer to many of these problems is: both...and.

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2.

Professor John Mellor's numerous contributions to the literature on international agricultural development are well-known because of their high quality. Given my expectations, I have been somewhat disappointed by this paper. For one thing, the paper seems to be a chapter or part of a larger study: it is too long and repetitive and contains several points (concepts) that are too elementary to repeat. A more serious problem is that there is almost no discussion of the implications for Pakistan.

Why have appropriate rural financial institutions (RFIs) not developed in Pakistan? Why have the Agricultural Development Bank of Pakistan (ADBP) and rural credit cooperatives done so badly? In Pakistan, the RFIs have not developed because successive governments have used the ADBP as the main credit institution for rural areas without making an effort to develop it into a sustainable RFI. The rural cooperative banking experience has been very bad, mainly because of the perverse domination of large farmers and government officials. Bad debts and overdues have been the major problems plaguing the ADBP and the cooperatives because of the "politicisation" of these institutions. The experience of the Aga Khan Rural Support Programme (AKRSP)–an NGO working since 1982 in the Northern Areas and Chitral District–in village banking through the Village Organisations (VOs) has been quite interesting since it has reduced the transaction cost and increased the density of coverage with few overdues or bad debts. Generally, the density, coverage, and multifunctional roles affect the transaction cost as a portion of all assets and liabilities of the RFI.

The advantages of the RFIs are well-known and are well-described in the paper. RFIs and new technology–which reduces the cost/unit of output–go together. The absence of any one of the two leads to lower returns and constrained economic growth. Robust agricultural growth promotes the development of non-agricultural industries, which act as stimulants for rural savings. The six basic principles for organising the RFIs described in the paper should have been developed in the context of Pakistan. The amount of rural savings and the form in which they are kept are affected by both price and non-price factors, e.g., interest and inflation rates, wealth and income, family and farm size, and liquid assets. The author's contention that the "ability to save is more important than the incentives to save" stands on a very fragile ground since there is much evidence that incentives do matter. How can the RFIs be insulated from interest rate policies? The issue of interest rates, reflecting returns on savings, is indeed important. There is no conclusive evidence that the demand for loans (borrowing) is relatively elastic and the supply of deposits (lending) is inelastic. Where is the evidence that the demand is but the supply is not sensitive to changes in interest rates? Why do rural savings go to urban areas: Part of the answer is the lack

of investment opportunities in rural areas; the other part has to do with the relative convenience and administration of banking in urban areas.

There is general agreement that sustainable financial institutions need public policies that create incentives to save, including liberalisation of production and trade. The interventionist policies of governments in Pakistan, as in many other underdeveloped countries, have indeed been inimical to the development of the RFIs. However, it is not enough to adopt "market-fiendly" policies without at the same time removing the direct control and political manipulation of the RFIs by governments.

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