FARM CREDIT POLICY IN THE EARLY STAGES OF AGRICULTURAL DEVELOPMENT*

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This paper discusses the farm credit policies pursued by governments in low-income countries. It is argued that, in the early stages of development, peasant attitudes to debt are such that cheap credit is unlikely to be a useful growth stimulus. It is shown that the effectiveness of credit depends on the ability and willingness of the peasants to devote such additional funds to productive uses. The poor performance of many government rural credit programmes in low-income countries is discussed and criteria for a successful programme are presented.

Introduction

There is a growing literature on how to turn a static agriculture into a developing one. Unfortunately, the literature grows more rapidly than the incomes of the peasants. This paper will discuss only one aspect of development, the farm credit policies pursued by governments in low-income countries. The thesis of this paper is that what most governments do to overcome the so-called rural debt problem wastes resources and fails to spur development.

The majority view on the debt problem is summed up in the following excerpts. Harsoadi of Indonesia expresses a typical view when he writes "Since the vast majority of farmers are smallholders . . . the raising of the economic level should be attained by developing and organizing the credit to the smallholders" [8]. A Marxist economist, Baran, writes "The subsistence peasant's obligations on account of rent, taxes and interest in all underdeveloped countries are very high. They frequently absorb more than half his meagre net product" [1]. The conclusions of three well-known development economists, Lewis, Higgins and Leibenstein, are: "Farmers need much more capital than they can afford to save" [12]; "Credit may be necessary for expansion in some areas, especially small agriculture and small industry" [9]; and "if capital, labour, entrepreneurial facilities, technical knowledge, *and credit facilities* available increase, the income per head will rise" [11], (my emphasis).

Governments in most low income countries have vigorously followed the advice given in these and similar writings, but their programmes of more and cheaper credit for farmers have done little to encourage agricultural development. The reasons for their lack of success will be made clear below.

This introduction would be incomplete, however, without brief consideration of some minority views. Writing in 1952, Galbraith said that credit systems "can be an instrument of progress and of stagnation and repression" [5]. He also noted that credit can become an instrument for progress only after there has been some development. Li [13] has argued

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that farmers should be on the road to becoming commercial farmers before governments start their credit programmes; while Mellor has said that "co-operative credit programmes might better accompany or follow programmes of technological change, not precede them, as has been general in development programmes" [14]. The weight of both expert and political opinion is against Galbraith and the few others who share his views. But Galbraith, Li and Mellor are right, and government rural credit programmes will remain ineffective until governments come to a better understanding of (a) the role of credit in peasant economies, and (b) the attitudes of peasant farmers towards savings, investment and debt.

Peasants and Debt

> "Neither a borrower nor a lender be;
> For loan oft loses both itself and friend,
> And borrowing dulls the edge of husbandry."
>
> Polonius' advice to his son, Laertes, in Shakespeare's *Hamlet*.

Are farmers in debt because they want to be, or because they have to be? For commercial farmers this question is not easy to answer as there are always some farmer-borrowers in both categories. For peasant farmers who operate in static, low-income agricultures, the answer is unequivocal: they have felt compelled to borrow. Most writers on the subject would agree, and they ascribe this compulsion to the risky and uncertain nature of the process of agricultural production and/or to the nature of the social framework in rural areas. What most think they see from studies of the debt problem are "farmers who are too poor to save", "many in debt", "money-lenders", and "interest rates that are too high", and they then draw the conclusion that the solution to these problems requires the provision of more and cheaper credit. But they have rarely given adequate consideration to peasant attitudes to lending and borrowing, to how these attitudes arose, or to the implications of these attitudes to the success or failure of credit programmes.

The hypothesis to be examined here is that peasant attitudes to debt—and credit—in the early stages are such that cheap credit is unlikely to be a useful growth stimulus. Most of the data used to test this hypothesis are from a study by the writer in the Indonesian province of North Sumatra in 1962 [20]. Eight villages in different parts of the province were studied, and it was found that the farmers differed widely—from village to village—in their attitudes towards economic development and, as will be shown, to debt. In two of the villages the farmers were already economic-minded, that is, were aware of the economic opportunities that existed, and had proved that they were both able and willing to use them. In three villages the farmers remained subsistence-minded, that is, they were unaware, for the most part, of the opportunities for development and they lacked both the will and the ability to exploit them. The farmers in the three remaining villages were in an intermediate position.[1]

There is a direct relationship between the degree of economic-mindedness attained by a farmer and his willingness and ability to use credit productively for development. See Table 1.

[1] For further explanations of these concepts, and of how the villages were ranked on an index of economic-mindedness, see [20, 21].

TABLE 1

Farmer Borrowings and Expenditure on Production Requisites

Eight North Sumatran Villages[(a)]

Average per farm 1961/62 crop year

Village, and its rank on index of economic-mindedness[(b)]	Proportion of farmers in debt	Debt per farm	Use of borrowed money: Main use	Use of borrowed money: Next most important use	Expenditure on production requisites	Expenditure on production requisites as proportion of gross farm receipts
	Per cent	Rupiah			Rupiah	Per cent
I. Tiga Nderket	24	2,100	prod'n requisites	—	15,300	10·0
II. Nagasaribu	50	1,000	prod'n requisites	housebuilding	15,200	20·1
III. Namumbelin	0	none	—	—	800	1·5
IV. Sumbul	57	2,400	prod'n requisites	consumption & education	3,200	7·1
V. "Tamiang"	5	(c)	—	—	30	less than 0·1
VI. Pematang Djohar	0	none	—	—	80	0·1
VII. Lintong ni Huta	57	14,800	consumption	ceremonies & education	2,300	3·4
VIII. Lubuk Tjemara	38	700	consumption	ceremonies and petty trade	20	less than 0·1

(a) Farmers in all villages face approximately the same set of economic opportunities: there is equal access to markets, and where land is in short supply within the confines of given villages, in this case villages I and VII, it is cheaply and freely available elsewhere.

(b) For explanation, see text.

(c) The one farmer interviewed in this village who borrowed was a net creditor.

Source: [20, Tables 3.16, 3.17 and 4.10].

Only in villages I, II and IV do farmers borrow to finance the purchase of production requisites. Borrowing to meet consumption needs and the costs of ceremonies is a characteristic of the economies of villages IV, VII and VIII. The farmers in villages III, V and VI are not in debt, and it is these villages that provide the most interesting insights on peasant attitudes to debt. These three villages are new settlements: most of the present inhabitants settled there in the 1940's and the first half of the 1950's. The villagers are either ex-plantation labourers of peasant stock, or Sumatrans who were forced by population pressure in their home villages to seek new land. Farmer committees allocated land to the newcomers on the basis of need. There are no landlords or money-lenders. In short, these men were able to create an economy where they could achieve the peasant ideal of being independent freeholders[2].

When it comes to borrowing and lending, these farmers have the same philosophy as Polonius—and they adhere to it. But they are subsistence-minded and their ideal peasant economy is therefore inherently unstable. The time is coming when some of these men will be forced to begin to borrow to meet consumption needs. The men who will most likely lend to them (that is the men who will be the money-lenders) are the farmers who have been relatively more successful. The end result of this evolutionary process will be that the most successful among the new settlers will become both landlords and creditors, and the villages will be saddled with the "problem of debt". This is the inevitable result of the economic dynamics of peasant communities if the debt-free and landlord-free farmers do not decide to use the economic potential at their command for development.

The situation in village VIII, Lubuk Tjemara, clearly demonstrates what happens in the longer period if the farmers remain subsistence-minded. Lubuk Tjemara was a new village in 1910, but the landlordism and debt that characterized the villages from which the migrants came have re-appeared on a fairly wide scale. It is possible, however, that new settlers from peasant backgrounds will come to exploit the economic potential of their resources, and the farmers in village III have begun to do so.

The data in Table 2 illustrate how the economies of new settlements may evolve.

Family incomes are most nearly equal in Pematang Djohar, a "new settlement", and a village with quite a low ranking on the index of economic-mindedness. The question then becomes whether the trend towards greater inequality that will occur over time will be a consequence of economic retrogression or advancement. For example, will village VI, Pematang Djohar, move in the direction of village VIII, or in the direction of villages I, Tiga Nderket, and III, Namumbelin, where development is taking place?

Earlier it was stated that subsistence-minded farmers would prefer to stay out of debt. It is clear that the new settlers are able to do so—for a period of years at least. From his debtless position, the peasant can move towards the creative use of credit or into the toils of debt. Which path he follows depends, as we have said, on his willingness and ability to exploit the resources at his disposal.

[2] For an extended discussion of the economics of these new settlements see [20, 22].

TABLE 2

Family Income of Farmers

Four North Sumatran Villages
1961/62

Village, and its rank on index of economic-mindedness	Top half in sample	Lower half in sample[(a)]	Incomes earned by lower half as proportion of those earned by top half
	Rupiah	Rupiah	%
I. Tiga Nderket	159,600	45,300	28
III. Namumbelin	74,800	30,000	40
VI. Pematang Djohar[(b)]	52,300	33,000	63
VIII. Lubuk Tjemara	58,100	29,400	51

(a) All farmers in these four villages earned more than enough in 1961/62 to meet their basic consumption needs: none would be regarded as being poor by local standards.

(b) Javanese farmers only.

The farmers in these new settlements earn incomes that are ample to finance the purchase of fertilizer, new tools, improved seeds or other modern inputs *if they want to.* Clearly, there is no need to provide these farmers with credit to get development under way. Where new settlements have undergone economic retrogression, as in Lubuk Tjemara, merely to provide credit is even less likely to result in the farmers becoming development-minded than would be the provision of credit to farmers in Pematang Djohar: a debtor's first thought is to pay off his old debts and to achieve the peasant ideal of being "free and clear". Such a situation no doubt makes the former debtor very happy, but it will still take time before he is ready to assume the risks and burdens of economic change. It is only after formerly subsistence-minded farmers have proved their willingness to innovate, to sacrifice present income for future, and to learn new techniques and methods that they become credit-worthy.

Let there be no mistake—profitable economic opportunities abound in both Lubuk Tjemara and Pematang Djohar, but the will to develop is absent. As long as it is absent farmers will not wish to borrow to finance productive investment, nor will they try to ensure that any such borrowings (for governments often coerce farmers, for their own supposed good, into borrowing) are used in a developmental way.

This conclusion is supported by the results of an analysis of farmer response to the following questions: "How would you use money gifts of Rp 1,000, Rp 10,000 and Rp 50,000?" A condition of the gift was that it should be used for productive investment. If farmers are accustomed to using cash capital in their farm operations, one would expect them to give economically rational answers to this question. If, on the other hand, the farmers are basically subsistence-minded, they will not know how to use cash capital in a profitable way because they have never, or rarely, considered the possibility of using the resources they have for productive investment. See Table 3.

Farmer responses to the question differ greatly from village to village, but the response pattern revealed should not be surprising given

TABLE 3

Farmer Response to Hypothetical Question on How They Would Use a Cash Gift of Rp 50,000 in Agriculture[a]

Uses to which money would be put[b]

Village, and its rank on index of economic-mindedness	Uses assisting development		Uses not assisting development		Notes
	modern production requisites	commercial perennial crops or commercial livestock prod'n	land purchase	other, not profitable[c]	
	per cent	per cent	per cent	per cent	
I. Tiga Nderket	41	56	3	—	
II. Nagasaribu	38	62	—	—	
III. Namumbelin	—	45	43	12	Most farmers own more land than they are currently using (III and IV)
IV. Sumbul	17	8	75	—	
V. "Tamiang"	—	62	29	9	
VI. Pematang Djohar	—	—	83	17	Double cropping of current holdings would be highly profitable
VII. Lintong ni Huta	—	—	60	40	Farms are small, but no land locally available
VIII. Lubuk Tjemara	5	—	75	20	Most farmers own more land than they are currently using

(a) The questions about "gifts" of Rp 1,000 and Rp 10,000 produced the same general pattern of response.

(b) If farmers suggested, say, two possible uses for this amount of gift capital both possibilities would be recorded in the appropriate category and given an equal weight of 0·5. Single answers were given a weight of 1.

(c) For example: more traditional tools (of low productivity), livestock where there is already over-grazing.

what has already been said about differences in farmer attitudes to economic development. If government credit were made available to farmers in villages I or II they would both be willing to use it for production and know how to use it profitably. In villages III, IV and V, some farmers would use credit in a profitable way, while in villages VI, VII and VIII few would do so. One can only conclude that many writers who advocate easier credit have not fully analyzed the likely effects of their recommendations: they appear to take for granted that farmers already possess the right mental attitude for development.

Most peasants in the early stages of development are like those in villages VI, VII and VIII. Panikar [18] has noted that the actual net savings of Indian farmers are far more than most people think, at least 8 per cent of income, but the bulk of these savings go into unproductive uses. He cites the result of a study made in Hyderabad in 1949/50: 25 per cent of savings were used to repay debts, 48 per cent for consumer durables and ceremonies, 9 per cent for land purchase, and only 18 per cent for agricultural production. For India as a whole, farmer spending on life-crisis ceremonies equals their total annual borrowings [24]. It is not lack of capital in agriculture that inhibits development, but lack of farmer motivation to use for development the capital sources they already have.

The same basic pattern of economic behaviour is found among the farmers in the area served by the Comilla Project in East Pakistan. The Project has an elaborate supervised credit programme[3], but Rahim states that "much of the loan amount has been used to release land and to repay old debts" [23]. He also reports a high desire to use savings or borrowings to purchase land, a similar situation to that diclosed by the data in Table 3 above.

Peasant unwillingness to use capital—from any source—for development in the early stages can be further illustrated from the ways in which savings generated in rotating-credit associations are used. In both Java [6] and Karoland [27], members of these associations save regular amounts which they pay to the treasurer of the association. Regular disbursements are made, by lot in Java and by auction in Karoland. In Java most members of these credit associations use the money to buy larger consumption goods; in Karoland most use it to finance trading activities or the purchase of agricultural production requisites. The Karo must do this because the man who gets the capital is the one who bids the highest for it. In Java, as in Hyderabad, savings are used mostly to meet social or consumption needs: in Karoland they are used mostly for productive investment.

To sum up: the peasant ideal is to be an independent freeholder. "Ideal" peasant societies, like those in the new settlements described above, evolve in time into rural economies characterized by debt and landlordism. In an era when the need for development was not urgent, this decay did not matter as long as new land was fairly readily available, for when the situation became too difficult at home, farmers could migrate to other areas and set up new farms. In areas where new land is no longer freely available, in India and Java, for example, debt and landlordism become more intractable. The peasants' ideal, however,

[3] See next section for further details of this credit programme.

remains unchanged and, if peasants have the chance, as the Javanese plantation workers did in 1942, they will establish new settlements which allow each man to become economically independent—for a time at least.

It is not capital—or credit—they lack, but the motivation to use resources for development. Until governments realize this point, and act accordingly, money will continue to be lent to farmers without a corresponding increase in production and with a consequent brake on development.

It is not difficult to discover whether farmers need additional (borrowed) capital from outside in order to undertake profitable investments: simply ascertain whether farmers could afford to buy fertilizer, new tools, etc., *and* whether they have begun to buy them[4]. If they cannot afford to buy modern production requisites or to finance the cash component of any other investment the situation is desperate and calls for far more drastic action than a mere credit programme. However, governments do not often need to provide credit as many peasant farmers can afford to finance some investments from their own resources. Once peasants have shown themselves willing to do this and have also shown an ability to invest wisely, even if only on a small scale, credit may then serve a useful purpose. If governments are unwilling to wait they will surely misallocate scarce capital resources through their credit programmes.

Government Credit Programmes

Most governments in low-income countries have tried to improve their agricultural credit systems. They have been induced to make the attempt by their feeling that development is inhibited because farmers are too poor, lack capital, and must pay high interest rates when they borrow. Their goal is more and cheaper credit for farmers, but it is rare that the resources used in credit programmes give a satisfactory profit compared with the returns that could be earned from investments in agricultural research and extension or in social capital (roads, harbours, etc.).

Two of the best known and reputedly most successful agricultural credit programmes are the A.C.A.R. (Association of Credit and Rural Assistance) Programme in the state of Minas Gerais in Brazil, and the rural credit programme of the Comilla Academy in East Pakistan. In both programmes credit has been linked with extension and tied, for the most part, to farmer production plans. In the Comilla programme no credit is made available, moreover, unless the farmer becomes a member of the village co-operative and makes regular deposits.

Both programmes have been considered successful, yet until 1963/64 A.C.A.R. was getting a grant of $80,000 a year from abroad to cover administrative costs, and was able to get much of its capital funds from overseas at 2 per cent interest. A.C.A.R. lent this money at 8 per cent, a negative real rate as general price increases far exceeded 8 per cent a year. A.C.A.R. reports a high repayment rate, over 99 per cent, but more than one half of its loans have been made to farmers who operate more than 30 hectares of land. Increases in production have not been

[4] It is difficult for government officials to do this cheaply or reliably. But if there is a viable credit co-operative in the village, its officers can make quick and cheap estimates of the credit-worthiness of individual farmers.

spectacular: in the four size groups considered the average percentage increase in value of production over a two-year period ranged from a high of 15 per cent to a low of minus 1 per cent [26].

The Comilla programme is also assisted from abroad, while some of the administrative costs of the credit programme are also covered by government subsidy. The farmer borrowers in turn are indirectly subsidized because the central co-operative association is able to borrow at a low rate of interest.[5]

It is the rare credit programme that has as impressive an economic record as the A.C.A.R. or Comilla programmes. In Honduras farmers were able to borrow at 8 per cent in a programme of supervised credit, even though total costs of the credit were 40 per cent [4]. In India, the government-subsidized co-operative credit programme had a repayment rate of 50 per cent [25]. De Guzman observes that in the Phillipines the repayment rate for farmer loans from the subsidized FaCoMas was 58 per cent [7]. He notes that most delinquent farmer-borrowers are able to repay but unwilling to do so, preferring instead to meet their debts to landlords and merchants. In Australia in 1951/52, soldier settlers were in arrears on their mortgage payments to the government—the interest rates charged were much below the rate of inflation—but not on their debts to the private companies that dealt in livestock [19]. In Indonesia large sums have been lent to farmers at negative real interest rates through credit co-operatives. This programme failed: farmers did not increase their rate of saving, they rarely used the borrowed funds for production, and repayment rates were low even though the value of principal borrowed was heavily reduced by the rate of inflation. In the big Rice Production Programme (1959–1962) less than a quarter of the funds lent to the farmers was repaid. The unpaid amounts were 3 per cent of the money in circulation in 1961, and fully 12 per cent of the increase in the money supply in that year. In the successor programme (Bimas-SSBM, 1964 and following years) all participating farmers were provided with credit whether they requested it or not.[6] And the inflation continues—prices are still rising at more than 10 per cent per month.

All the government programmes mentioned above have some elements in common: costs exceed returns (for the government); interest rates are below market rates, and real rates are often negative, partly because of inflation, and partly because governments are lenient creditors. Frequently these credit programmes also add to inflationary pressures.

No attention has been given to *other* problems of government credit programmes often noted in the literature: that such programmes often provide too little credit too late and that there is too much red tape. These are merely administrative problems and not the main causes of failure. It is the economic and sociological problems that are overlooked or assumed away.

Why then are credit programmes advocated and pursued so vigorously when it should be clear from the experience of so many countries that

[5] The annual rate of inflation in East Pakistan over the seven-year period, 1958-65, was 2·8 per cent per annum. Funds were made available to the project at 5 per cent p.a.

[6] In recent years demand by peasants for fertilizer has always exceeded supply at the government price even in the province, Central Java, where peasant incomes are lowest [16]. It is not credit or capital they need but adequate supplies of fertilizer and other production requisites.

they are an expensive and wasteful way of encouraging agricultural development? There appear to be at least four reasons. The first, and most important, has been noted in the previous section, namely, that governments, and apparently many economists, are unaware of the attitudes of peasants to debt and credit, and that farmers are not willing to use credit developmentally at this stage. Second, governments see credit programmes as an easy way to increase the flow of capital to the rural sector, but they forget that credit does not necessarily represent capital: capital is *not* created merely by increasing the supply of money, nor can capital be used developmentally if farmers are permitted to use their borrowings for consumption.[7] Third, governments in many low-income countries seem to feel that modern financial institutions to serve farmers can be created at a stroke of a pen, but it is not realized that the growth of such institutions is as much a result as a cause of development. The data in Table 4 show that there is a direct relationship between per capita incomes and the role played by new and sophisticated financial institutions: in high income countries, for example, Japan, such institutions operate effectively, whereas in low income countries, for example, India, most lending and borrowing takes place in "face-to-face" transactions.

TABLE 4

Sources of Loan Funds to Farmers

	Japan 1951/52	Thailand 1953	India 1951/52
Source	per cent	per cent	per cent
Government and co-operatives	42	14	6
Relatives	46	55	14
Moneylenders (merchants, landlords and wealthy farmers)	6	29	77
Other	6	2	3

Source: [30, p. 8], table abridged.

Fourth, governments fail to realize that there are some powerful economic reasons for the high nominal rates of interest charged in the so-called unorganized money-markets. Loanable funds are in short supply in low-income countries, and at first glance, it is not surprising to find that interest rates are higher than they are in high-income countries. What is rarely realized, however, is that the nominal rates exceed the actual rates received by private lenders. They are, of course, the actual rates paid by conscientious borrowers, but the men who control this scarce capital, the moneylenders of all sorts, do not earn by any means as much as the nominal interest charges suggest. It has been shown by analysis of data in the All-India Rural Credit Survey [24] that private moneylenders grossed only 11 per cent on their lendings: the net return on capital is therefore lower than this. It is also often forgotten that high rates on short-term loans do not mean high annual rates of

[7] Tun Wai [29] has said that governments should not increase the supply of loanable funds to farmers and lower the rate of interest if there has been no corresponding increase in the resources coming into the hands of the Government through taxation or non-inflationary borrowing.

return on capital as part at least of the moneylenders' funds are idle for six months or more [3, 29].

As Tun Wai notes, the cost of using capital for development in agriculture will remain high as long as there is a "disproportionately large demand for loanable funds coupled with a limited supply of funds" [29]. The cost of capital cannot be lowered merely by creating new credit institutions that are willing to lend at nominally low rates of interest. Tun Wai writes: "Experience . . . indicates that an increase in supply (of loanable funds) merely stimulates demand (mainly for financing consumption) and does not lower the general level of interest rates." He adds: "The rates charged by governments and government owned agricultural banks are often much lower than warranted. It would be better to increase the supply of institutional credit by ploughing back the earnings obtained by charging higher interest rates than to give tremendous windfall benefits to a few borrowers."

Of all the cheap credit schemes outlined above only the Comilla programme has made a determined effort to increase the savings of rural borrowers. The savings potential exists, but governments remain obsessed with the "poverty of the farmers", the "high interest rates charged by moneylenders", etc., etc., and will not take steps to mobilize these savings, but prefer instead to waste resources, with the best of intentions, on cheap credit programmes.

There are so many criteria that must be satisfied before a government credit programme, cheap or not, can be economically successful that it is not surprising that most such programmes in low-income countries have failed. A government credit programme will be profitable—to the government itself, and to the economy as a whole—only if (1) there is unexploited productive potential in the farming areas where the loans are to be made; (2) the farmer-borrowers *and* the lenders know what the economic opportunities in each locality are; (3) the farmers are willing to borrow and to use the loans productively; and (4) steps are taken to raise the propensity to save.[8]

In some parts of the world there are few unexploited economic opportunities. The Gunung Kidul region of Central Java is a case in point [22]. In such areas emigration is the only solution for rural poverty.

In many other areas so little is known about the most profitable way to exploit the potential of the local resources that credit programmes are almost certain to fail. The extent to which farmers are willing to borrow to finance development expenditures is much less in the early stages than is generally realized: until governments make sounder assessments of the willingness of farmers to use borrowed money for development, and of their willingness to repay, scarce capital resources will continue to be wasted.

Governments anxious to promote agricultural development would do well to keep these four criteria in mind whenever they consider establishing or expanding a credit programme for farmers. Much of the wastage of resources could be avoided, however, if policymakers

[8] One possible way to increase savings is to get farmers to repay loans in full (in a well planned and executed credit programme). But the government must be sure beforehand that farmers are able and willing to make a commitment to repay and that the programme officials have the administrative capacity to enforce repayment.

would not set up credit programmes until after they had determined with some accuracy the most profitable ways to use the scarce resources under their command. There are many possibilities in addition to credit programmes: agricultural research and extension, roads, processing facilities, a market information service, administering a land reform, land settlement, and fertilizer factories. In the early stages of development one or most of these alternative ways of using scarce capital will almost certainly give higher returns than a cheap credit programme for farmers. Only after development has been under way for a number of years will the use of government capital for production credit become profitable.

Most farmers do not have to be bribed with cheap credit to adopt profitable innovations if there is a satisfactory market for the additional output and if the extension workers recognize that, if they try, they could induce the farmers to finance the purchase of the new input or the new tool from their own resources. In other words, try to get farmers to adopt these innovations without offering credit. If it is clear, after a number of years, that lack of capital is the main factor preventing adoption then, and only then, a government and the economy may benefit from the establishment of special credit facilities.

Should policymakers feel that it is politically essential to have a credit programme, then no doubt they will have one. If so, perhaps all an economist can advise is "keep it small, relatively even smaller than your research, extension, road-building, etc., programmes are now".

The Role of Credit in Agricultural Development

Capital, and the ability to organize and manage modern economic institutions (such as government credit programmes) are the two scarcest factors in the early stages of development. A large part of the capital needed to finance industrialization and infrastructure investment can, moreover, only come from agriculture. Why use these all-too-scarce resources inefficiently by establishing government credit programmes before farmers are willing to use credit productively and before the relevant government officials have learned to act as responsible lenders?

The main tasks of a government bent on development are to mobilize capital, in both the agricultural and the non-agricultural sectors, and to ensure that it is used in the most economic way, on-farm and off. Indeed in most low-income countries in which agriculture is by far the predominant sector the farmers themselves would supply most of the capital indirectly through taxation and other transfers. The government or other "extractive agency" may well bear in mind that their actions could restrict farmers' ability to finance the purchase of fertilizer, pesticides, improved seeds, new tools, and so on.

No consideration has been given in this paper to the possible need for changing the socio-economic structure of rural society in a low-income country. Suffice to say that if there are landlords, moneylenders and monopolists their existence and strength will further reduce the effectiveness of any unsophisticated credit scheme. A non-revolutionary government can, however, induce development in a number of ways without directly overturning the old system (and without credit). Effective and profitable extension work can be undertaken in such circumstances. See Mosher [15] for an example. If, on the other hand, a revolutionary land reform is undertaken, there is still no immediate need for the government to provide cheap credit to farmers. China is a case in point. The growth of credit co-operatives has been encouraged, but very little credit is made available to farmers from outside the agricultural sector [17, 28].

To sum up: there is much literature on the "need for credit" and on the need to improve credit institutions, but this literature rests on a mainly untested assumption that credit is a necessary, or even sufficient, condition for economic advancement. There is little analysis of reasons for any "need for debt" or of the need to improve debt-creating institutions. Yet lending is borrowing and borrowing, lending—there are always two sides in debt-credit transactions. There is an imbalance, or prejudgement, in the thinking of many people—farmers, government officials, and many influential development economists as well—on the role that credit plays in agricultural development in low-income countries. An examination of the attitudes of peasant borrowers to debt shows that, in the early stages at least, peasants are little aware of how much capital they can themselves mobilize for investment or of how to use such capital productively. They feel also that debt is something to be avoided, but if the government wants to provide cheap credit they are usually willing to take the handout.

Policymakers over-estimate the importance of providing cheaper credit to farmers which, if undertaken, usually results in a wasteful use of scarce capital resources. Policymakers often feel that credit *is* capital, which leads them in many instances to extend credit by inflationary means. Much of the economic wastage caused by credit programmes could be avoided if policymakers made sure they knew, as far as is possible, how much capital could be mobilized, and how this capital could be best used for development. That they fail to study these two important matters sufficiently is because they are attracted to schemes that are superficially easy. Creating credit, decreeing lower interest rates, and establishing new credit institutions, like land settlement schemes, are "non controversial ways" of tackling the problem of development [10]. Such preferences are symptomatic of an inadequate will to take the necessarily strong measures, often highly unpopular in the short term, that will be effective to stimulate development.

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