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RISK AND UNCERTAINTY IN AGRICULTURE IN RELATION TO CREDIT

V. Tirupati Naidu

Lecturer in Economics

Sri Venkateswara University College, Tirupati (A.P.)

It is a well-known fact that agriculture is subject to peculiar risks—natural, technical and commercial—owing to its close dependence on natural conditions and to the characteristics of farm production and organization. In general, the greater the degree of risk the greater also is the uncertainty. A useful distinction can be made between the two concepts, *viz.*, risk and uncertainty. But in this paper they are used interchangeably. This paper mainly deals with the following problem : How do risk and uncertainty considerations affect the 'demand' and 'supply' aspect of farm credit? It discusses the ways in which such 'risks' can be reduced to the credit institution, to the investor in the credit institution and the borrower.

Restricted use of capital in agriculture may be due to either of two reasons. One, 'risk aversion' representing the farmers' psychological discount of returns due to uncertainty. The other, termed 'capital rationing,' is the inability of the borrower to obtain all of the capital funds which he might desire at 'reasonable' terms. Both these aspects are present in the Indian situation. However, their importance in restricting use of capital varies from locality to locality. Risk aversion rather than capital rationing is an important factor limiting use of credit in many backward agricultural regions. A survey undertaken by the National Council of Applied Economic Research in one of the backward districts of Madhya Pradesh has revealed that the main reason for the lack of effective demand for capital in production is the unwillingness of farmers to take risks in production activity. Agricultural production depends more on nature than on farmers' inputs, and since the return to each rupee spent by the farmer on production is not constant the risk of loss is an ever present fear. Most of the farmers live at subsistence level and have little or no margin to spare for investment in production. The tendency of the farmers has, therefore, always been to minimize monetary expenses connected with farming. Poverty and ignorance prevent farmers to undertake the 'risk of investment' and without taking such risk, poverty and ignorance cannot be removed.

On the other hand, in areas which are more commercialized 'capital rationing' is the limiting factor of capital use in agriculture. The Farm Management Surveys have revealed that the average farmer badly needs credit, but he is hardly creditworthy—in the eyes of many private agencies—with his small assets. This is the contradiction which retards progress in agriculture. Risks inherent in farming influence not only the borrower's decision to invest capital but also the lender's willingness to supply capital ; for other things being equal, the greater the degree of risk and uncertainty involved in a given investment of resources the greater also is the degree of risk and uncertainty to the person who advances credit. Consequently, the lender either restricts the supply of credit and/or demands a high price for the use of credit. The farmer is prejudiced, not only by the losses which he may have to incur if the risks eventuate, but also by the higher price which he has to pay for the loans because of their probability, whether they actually occur to him or not. This accounts for the sorry spectacle of low capital investment as against the vast scope that exists for profitable application of capital in Indian agriculture. No doubt in recent years the institutional agencies of rural credit have been strengthened and there has been some improvement in their performance. But their impact on the total credit situation is not much and the private agencies still constitute a predominant source of rural credit supply.

Agencies of Credit

Private credit agencies are very unsuitable for providing credit to agriculture. The trader or moneylender must 'recoup himself for heavy risks by heavy charges.' Dealing with unorganised individuals, he is not concerned with lessening risk, but with heaping up compensation. Their risks are further increased by the limited capital at their command and the restricted location of their operations. That is why the rates charged by them is 'out of all proportion to the risks inherent in farming.' Hence there is need for institutional agencies which not only 'pool the risks of lenders but help farmer families to fully understand the opportunities which wise use of credit afford and in this way as well as by flexible repayment provision minimise the risk of losses by borrowers. The only agency which combines in itself all these functions is the co-operative agency. In its case the risks involved in any particular loan are transferred from the lender to a group of borrowers. Commercial Banks also do likewise and 'spread' the risks. The co-operative agency, however, not only reduces the risk to the lender but also lessens the risk to the borrower by making it possible close supervision over the productive utilisation of the loans borrowed. The co-operative society concerned as it is with the interests of its members—unlike the private agencies—attempts to lessen risk rather than heap up compensation by a heavy insurance against it in the gross interest charged.

This serves to emphasize the need for strengthening and developing the co-operative credit structure. Their loan policy should be such as to lessen risk of loss for them. Besides, the societies must be strong and viable economically so that they can bear the risk 'of loss if it takes place.'

Lessening Risk to the Credit Institution

Since a credit institution must cover itself against risk by the cost and condition of loans, it is in the interests of the borrower as well as of the investor in it, that its own risk should be reduced as far as practicable and provided against as economically as possible. Important aspects of the problem are the assessment of the value of security, supervision of the use of loan monies and provision for repayment and receipt of loan monies. The co-operative societies should follow such criteria in their loan policy as will raise production and promote rural betterment. By doing this they will be not only lessening 'the risk of loss' for themselves but also avoid the risk of excessive indebtedness to the borrower. The primary criterion should be repayment capacity, which implies ability to maintain assets and output and meet charges and repay a loan without reducing living standards. This can only be satisfied if credit is given on the security of crops grown and is integrated with marketing and with satisfactory arrangements for supervision of the use of loan monies. Further, the co-operatives must be made very strong and viable units to withstand the problems arising out of risks and uncertainties in agriculture. At the present stage of their development and the limited reserve funds with them, the co-operatives require an outside partner who can not only lend the finance they initially require but also share the risks. The Committee of Direction of the Rural Credit Survey has suggested such an 'Integrated Credit Scheme.' But the suggestions, as revealed by the Follow-up Surveys, are honoured more in precept than in practice.

In the case of exceptional hazards which may arise either from a drastic fall in prices or from natural causes, the stability of the credit institution itself may be threatened. The problem in such cases is to meet losses which actually occur. The strengthening of the National Agricultural Credit (Stabilization) Funds and the creation of them wherever they do not exist will serve to lessen the rigours of such losses.

Safeguarding Investors in a Credit Institution against Risk

Here the problem is mainly one of ensuring 'liquidity' to the investor in the credit institution. In the field of long-term credit, some steps have already been taken in this direction. The issue of rural debentures, and the recent decision of the State Bank to provide loans on the security of the debentures floated by the Central Land Mortgage Banks, are instances in point. In the field of short-term credit, insuring the deposits with co-operative societies is worth exploring.

Reduction of 'Financial Risks' to the Borrower

The quantum of credit and the manner in which it is made available has an important bearing on the risks to the borrower. Insufficient and untimely credit may force the borrower to divert the borrowed funds for unproductive purposes. The time of repayment is also important. It should fall at such a time or times as the income from the project for which the loan was made will be available. If this 'time of payment' principle is not followed the farmer will not have funds to repay the loan when it is due. Under such circumstances, he will be obliged to renew the loan; which usually adds to its cost; or failing in this he will find himself in an embarrassing situation. Often poor timing of loan leads to further indebtedness, which may ultimately make the farmer bankrupt. Linking of credit with marketing will enable the coincidence of time of payment and receipt of income. Therefore, credit provision must be coupled with organized provision of marketing information and development of orderly marketing arrangements. This incidentally will go to reduce the 'price risks' to a certain extent.

Conclusion

Provision of adequate credit at reasonable rates though essential may not stimulate investment. An increase in farm investment will take place only when 'the risks and uncertainties' in the minds of the farmers are removed. Along with credit supply steps must, therefore, be taken to reduce natural and technical risks in farming. Natural causes of loss include those due to pests and diseases and to the perishability of products as well as to weather. Technical risks arise, *inter alia,* from the failure in farming methods, storage and processing. Credit itself may reduce risks by providing the means to obtain improved seed, plants, livestock and implements, or undertake farm improvements. But the relationship between techniques and credit again warrants the reiteration of the importance of associating with provision of credit, agricultural extension and the organization of the supply of improved seed, plant, implements, etc. In short, credit should form an integral part of an overall economic development programme of agriculture.

RISK AND UNCERTAINTY IN AGRICULTURE: IMPLICATIONS FOR AGRICULTURAL CREDIT

B. L. AGRAWAL*

Agricultural Economist

Indian Agricultural Research Institute

New Delhi

INTRODUCTION

A great many problems faced by both farmers and lenders in financing agriculture are closely associated with risk and uncertainty. Unfortunately, little serious attention has so far been given to these problems by either research or service institutions in India. The objective of this paper is to examine some of the possible effects of risks and uncertainties on financing of agriculture and indicate the nature and type of research and services needed to help farmers and lenders in their decision-making framework, and Governmental agencies in the formulation of policies and programmes pertaining to financing of agriculture.

The two terms 'Risk' and 'Uncertainty' have been defined and differentiated in the writings of Frank H. Knight, Earl O. Heady, and others.[1] Under the present Indian conditions, however, it is generally not possible to make an empirical distinction between risk and uncertainty due to lack of adequate quantitative research.[2]

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* The views expressed herein are personal and do not reflect those of the Department or the Government.

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1. For further details, please see Earl O. Heady: Economics of Agricultural Production and Resource Use, Prentice-Hall, Inc., New Jersy, 1952, pp. 439-443 ; and Frank H. Knight: Risk, Uncertainty and Profit, Kelley & Millman, Inc., New York, 1957, pp. 233.

2. No distinction is made, in the next part of the paper, between risk and uncertainty except as is evident from the discussion. The distinction between the two terms is, however, important for the last part of the paper where suggestions with a view to convert certain uncertainties into risks are made.