

Sources of agricultural finance, risk and mitigation by farming community in Kandaghat Block of Solan district, Himachal Pradesh, India

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ABSTRACT

Finance plays a vital role in every business activity. Since agriculture is moving toward commercialization, so the credit needs become crucial. Finance is required for various purposes throughout the year, and this need is met via different sources. Agriculture involves many risks which led to instable income to producers which led them to face many problems and requires adequate strategies to minimize these problems. Therefore, it's important to study sources of agricultural finance, risks and how risks are controlled. For this purpose, the data was collected from 60 farmers with the help of structured questionnaire through personal interview. From the analysis of data it was found that the formal institutions were considered as main source of microcredit, but the high interest rate and demand for collateral were the main barriers in taking loans from formal institutions. It was further observed that reduced consumptions and borrowing from relatives and friends were used to mitigate the financial risks. It was found that farmers in the area were risk averse. Study suggests government intervention, changes in credit sanctioning processes and procedures, promoting cooperative farming.

Keywords: Financial risk, farming community, risk mitigation, agriculture finance, socioeconomic

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1. Introduction

Agriculture plays a vital role in Indian economy. About 54.60 per cent of the population is engaged in agriculture and allied activities for their livelihood and production of raw material for industrial sector (Lakshmi, 2016) [1]. Agriculture is the main occupation of the people of state of Himachal Pradesh. Agriculture with total contribution of 45 per cent plays an important role in the state economy of Himachal Pradesh (Lakshmi, 2016) [1]. Agriculture is a risky economic activity. Risks associated in agriculture are associated with processes of production as well as at delivery of product to final consumer. This risk is owned by farmers and other stakeholders performing input and supply of product, credit delivery, marketing and processing of products (Achary, 2006) [2].

Financial risk occurs when money is borrowed to finance the farm business. This risk can be caused by uncertainty about future interest rates, a lender's willingness and ability to continue to provide funds when needed, and the ability of the farmer to generate the income necessary for loan repayment. Smallholder farmers who borrow money at high interest rates may have particular difficulty making debt repayments. Lower than expected prices, combined with low yields, can make debt repayment difficult and even lead to the sale of the farm (Kahan, 2008) [3]. Microfinance institutions loan are used for agricultural production, trading, processing and transport, resulting in an increase in the use of agricultural inputs and increased agricultural production. This leads to enhanced employment opportunities and reduction in the prices of products due to increased supply (Zohir et al., 2004) [4]. The decisions of

adopting risk management tools are correlated and the adoption of one risk management tool induces farmers to adopt other risk management tool(s) at the same time. Furthermore, the risk management tools adoption decisions are influenced by variety of factors including farm and farm household characteristics, farmers' perceptions of catastrophic risk sources, their attitude towards risk and their access to information and credit sources (Ullah et al., 2010) [5] .

The objectives of this study are: firstly, to identify the effective source of finance for the farming communities. Secondly, to identify financial risks and their mitigation strategies. The findings of the research create knowledge about the sources of agricultural finance, their risks which affect farmers' socioeconomic status and the way of managing financial risks, which will be used by policy makers for providing better way of financing to farming communities.

2. Material and Methods

Kandaghat block of Solan district's farming communities are more diversified farmers, which were selected for the present study. Primary and secondary data were used for the study. Primary data was collected through structured questionnaire by personal interviews during the year 2017-18. A 12 number of villages were randomly selected, in the sample size of 60 farmers, who were financed through different sources. For the measurement of different statements, a 5 point Likert scale was used. Weights were assigned 1 for strongly disagree (SDA), 2 for disagree (DA), 3 for neutral (N), 4 for agree (A), 5 for strongly agree (SA).

The ranking score of a respondent was calculated by summing up the weights for responses against all statements as follows:

- Total weighted score of a respondent = $1*SDA + 2*DA + 3*N + 4*A + 5*SA$
- These weighted scores were further categorised into four groups (Table 1)

Table-1
Weighted score categorization of the risks mitigation strategies

Possible Range of Weighted Scores	Score Classification	Category
12-60	Less than 24	Highly Unfavourable
	24 to 36	Unfavourable
	=36	Neutral
	36 to 48	Favourable
	More than 48	Highly favourable

**Upper limits non inclusive*

- Mean and standard deviations were used to establishing the statistical significance of the results

3. Result and Discussions

Many studies have been done on the source of agricultural finance, financial risks and their management in different parts of the world. FAO (2000) [6] stated that rural people need credit to allow investment in their farms and small businesses. Schreiner and Colombet (2001) [7] defined agricultural finance as an attempt to improve access to small deposits and small loans for poor households. Therefore, microfinance involves the provision of financial services such as savings, loans and insurance to poor people living in both urban and rural areas. Mayoux and Hartl (2009) [8] observed microfinance as contributing not only to poverty reduction and financial sustainability, but also to a series of virtuous spirals of economic empowerment, increased well being and social and political empowerment for women themselves, thereby addressing goals of gender equality and empowerment. Bhende (2012) [9] found that income of the farm households from semi-arid tropics engaged predominantly in rain fed farming was positively associated with the level of risk. Hence, the availability of formal instrument for diffusion of risk like crop insurance will facilitate farmers to adopt risky but remunerative technology and farm activities, resulting in increased income. Ghandimathi and Vanita (2010) [10] carried out the study to compare the determinants of borrowing behavior of farmers between commercial and cooperative banks. The study revealed that the number of accounts in crop loans were higher for small farmers; however, the total of loan sanctioned was higher for medium farmers. Due to dominant cropping pattern of coconut and turmeric, the higher loan was provided for these two crops. The per hectare crop loan for the borrowers of commercial banks has been found to decline with the size of landholding.

In the basis of the above studies the present study was conducted and it has found the following results:

- **Socio-Economic Characteristics of the Households:**

The study conducted on sample size of 70 percent male and 30 percent females. From the analysis of the data the socioeconomic characteristics of the households are summarized in terms of age group, education, income, source of income, family size, cooperative or SHG membership, physical assets sharing and land holdings.

The study showed that 78.34 percent of the total respondents were in the age group of 35 to 55 years. It indicated that 67.70 percent of the respondents were educated through formal education system. About 75 percent of the respondents were having annual income in the range of between 1 to 3 lakhs and the agriculture was the main source of their income. The family size of up to 5 members was observed on 50 per cent of the respondents. It was revealed that majority of the respondents (60 %) maintained joint families. It shows that the joint family system prevails in the study area, possessing thereby better potential for the mitigation of agricultural risks. It was observed that 28.33 per cent of the respondents were member of cooperatives/SHGs. It was further observed that all the women respondents were members of the SHGs. It can be derived that 52 percent of the total respondents in the study area had good attitude of asset sharing and helping each other.

• Source of Agricultural Finance:

Since finance is important factor for agriculture production, it is important to use the source of finance that provides adequate finance conveniently. It's obvious from (Table 2) that the formal institutions were the major source of agriculture finance. Majority of the respondents (73.33) used formal institutions such as cooperative/SHG societies, regional rural bank, commercial bank as source of finance, and rest used non formal sources such as individual moneylenders, friends relative etc.

Table-2
Source of agricultural finance used by respondents

Source of finance	Frequency	Percent	Cumulative Percentage
Formal institution	44	73.33	73.33
Informal institution	16	26.67	100
Total	60	100	-

• Sources of Financial Risks:

Table 3 summarized the responses of the respondents with respect to different sources of financial risks. It is inferred from the table that higher interest rate, high demand for collateral and mode of repayment were the main sources which got the 1st, 2nd and 3rd rank with total weighted score of 263, 220 and 157 respectively. Insufficient amount of loan provided by institutions and complicated process, and high documentation cost have received the lowest ranks of 5th, 6th respectively. It can be concluded that higher interest rate and demand for collateral were main barriers in taking loans, and respondents were satisfied with the process and amount they receive against their collateral.

Table-3
Ranking of Different Sources of Financial Risks

Problems	Percent	Cumulative Percentage	Total Weighted Score	Rank
Higher interest rate	29.22	29.22	263	I
The mode of repayment is not flexible	17.44	46.66	157	III
Insufficient amount of credit	16.33	62.99	147	IV
High demand for collateral	24.45	87.44	220	II
Complicated process and high documentation cost	12.56	100	113	V
Total	100			

• Attitude Scores about Financial Risks Management:

Table 4 shows the perception of the respondents according to financial risk management. It was observed that the financial risk management strategies were favoured or highly favoured by the major group of respondents, with the percentage of 33.33 and 15.00, with the total weighted score range of 36 to 48 and above 48. Thus, it can be concluded that the farmers of the studied area have better attitude towards financial risk management strategies.

Table-4
Attitude Score of Respondents Regarding Financial Risk management

Range		Categories of Respondents	Respondents		Mean	SD
Possible	Observed		No	%		
12-60	15-65	Highly Unvavourable (<24)	1	1.67	40.52	9.21
		Unfavourable (24-<36)	14	23.33		
		Neutral (36)	16	26.67		
		Favourable (36<48)	20	33.33		
		Highly Favourable (>48)	9	15.00		
		Total	60	100.00		

Table 5 summarizes responses of the respondents with respect to different financial risk mitigation strategies. It can be noted that reduced consumption pattern has got the highest mean value i.e. $M = 2.78$, followed by deferred/low key social and family functions and borrowing from friends or relatives with mean values of 2.18 and 1.85 respectively. It can be further observed that respondents were against selling assets for credit needs. Hence, it can be concluded that in order to avoid financial problems most families tend to reduce their consumption.

Table-5
Ranking of Different Mitigation Strategies Used by Respondents

Strategies	Percent	Cumulative Percentage	Weighted Score	Rank	Mean	Std. Deviation
Reduced consumption pattern	35.38	35.38	167	I	2.78	0.454
Deferred/low key social and family functions	27.75	63.13	131	II	2.18	0.676
Sale of assets	13.35	76.48	63	IV	1.05	0.22
Borrowing from friends or relatives	23.52	100	111	III	1.85	0.577
Total	100	-	-	-	-	-

4. Conclusion

Agriculture is a risky economic activity. Risks associated in agriculture are associated with natural calamities, market, and finance. The forming communities of the studied area have had better socioeconomic status, which gave them more ability regarding financial risks. Majority of the respondents were used formal institutions as a source of agricultural finance. Higher interest rate and demand for collateral was main barrier in taking loans while they were satisfied with process and amount they receive against their collateral. It was observed that the farmers of the studied area have better attitude towards risk mitigation strategies adopted in the area, and farmers in the area do not favor selling assets for credit needs but to avoid financial problems, most families tend to reduce their consumption. Therefore, the Government should provide better financing schemes based on the requirement of the farming communities.

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