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Agriculture Credit and its Impact on Farm Income

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Abstract:

Agriculture credit enhances the mechanization/modernization in the agriculture that implies the use of various power sources and improved farm tools and equipment. Mechanization enhances the cropping intensity, precision and efficiency of utilization of various crop inputs and reduces the losses at different stages of crop production. The objective of farm credit is to enhance the overall productivity and production together with irrigation, biological and chemical inputs of high yielding seed varieties, fertilizers, pesticides and mechanical energy which gives contribution in enhancement in the farm income. Presently, the lending policy of the formal sector has mainly focused on irrigation, purchase of farm equipments etc. which positively enhanced income, employment and assets generation.

Introduction

One of the objectives of this study is to evaluate the impact of credit on the income of the agriculture sector viz. farmers and agriculture labours. The only way to arrive at the quantum of benefits was to conduct a survey for this purpose and accordingly a detailed questionnaire was formulated to be canvassed to the indebted respondents and ascertain the level of income after use of borrowed funds. It will be relevant to point out at the outset that evaluation of benefits of agriculture sector's investment is difficult. There are numerous factors which influence agricultural production, income, employment etc. this way or that way. Crop production in a particular agriculture region may be high because of favourable weather conditions and production may not increase inspite of massive investment if adverse weather conditions prevail. Again benefits may occur not merely by way of crop yield but several other indirect ways also. All of them may not be amenable to quantification and yet they may have made over all improvement in conditions of the farmers. One of the benefits of long-term investments for creating assets is to stabilize production and give the farmer a better sense of security than he had before he made such investments. Singh and Singh (1972) concluded that tractor farms gave higher yields of wheat, paddy and sugarcane and produced a higher overall gross output per hectare than non - tractor farms[1]. NCAER (1973) compared the values of annual farm output per hectare of net sown area under different levels of mechanization. The output per hectare was found to increase as the level of mechanization increased from irrigated non- mechanized farms to tubewell tractor, thresher farms[2]. The creation of assets either by installation of pumpsets, sinking of tubewells or acquisition of tractors and other farm implements is to raise the level of his agricultural practices resulting in better production. Such farm investment further enable the cultivator to practice extensive as well as intensive farming i.e. if a pump-set has been installed he may bring additional area in the ambit of his cultivation. Availability of water enables him to conduct more intensive farming and produce two, three or more crops than he did before. Persuing this point further one can go on to add that as a results of the investment farm activities increase providing more employment for the family as well as wage - labour. It may also generate other secondary activities. These secondary benefits no doubt increase farmers' general economic conditions, may be in a very concealed way and over a period of time, but these can only be described and no quantitative estimates can be made in this analysis to only direct benefits, i.e. increase in production, income and employment after the investment of the amount by the formal and informal sectors.

The analysis shows the impact of indebtedness on income through these three sectors.

1. Agriculture sector
2. Allied sector
3. Others

Haryana came into existence in Nov. 1966. Haryana is located in the north-west part of the country. Its climate is arid to semi-arid with average annual rainfall to 455 mm. The researcher chose the district Sonepat for this study. District Sonepat comprises of three sub-divisions namely Gannaur, Sonepat and Gohana and district Sonepat has an area of 2,13,080 Hectare. The River Yamuna runs along the eastern boundary of the district and separates it from Uttar Pradesh. Sonepat occupies an area of 2,13,080 hectares. Sonepat is the largest Tehsil in the District followed by Gohana.

Impact of Agriculture Credit on Income Generation

Productive use of debt is always expected to generate income effects have been made here to measure the generation of income for productive use of debt tehsil-wise and farm category-wise as under:

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1 Singh, Roshan and Singh B.B. (1972). Farm mechanization in Uttar Pradesh - Problems at Farm mechanization Seminar Series - IX, Indian Society of Agriculture Economics Bombay, Feb.

2 NCAER, 1973. Impact of Mechanization in Agriculture on Employment. Report National Council of Applied Economic Research, New Delhi.

Table 1

Impact of Credit on income generation of Marginal farmer

Size group Generated Income	Income Generation for Farmers		Sector-wise Income Generation of Farmers		
(In Rs.)	No.	Yes	Agriculture Sector	Allied Sector	Others Sector
Nil	57				
Upto 5000		59	23	36	
5000-10000		55	19	34	2
10000-15000		10		3	7
15000-20000		11		5	6
20000-25000		3			3
25000-30000		5	2		3
30000 & above					
Total	57 (28.5)	143 (71.5)	44 (30.7)	78 (54.6)	21 (14.7)
Total Number of Surveyed Farmers – 200					

Source: Field Survey

Note : Figures in brackets shows percentage

Table 1 reveals the position of income generation of marginal farmer from agriculture sector, allied sector and other sector who avails the credit. Out of 200 marginal farmers, 57 farmers (28.5 percent) have reported that there is no income generation. The study finds that debt has generated income for 143 (71.5 percent) of the sample households/farmers in the marginal farmer category. Sector-wise percentage of the marginal farmers experiencing positive impact on income generation is 30.7, 54.6 and 21 for agriculture sector, allied sector and other sector respectively. It concludes that the marginal farmers keen enhance in the allied activities.

Table 2

Impact of Credi on income generation of Small farmer

Size group Generated Income	Income Generation for Farmers		Sector-wise Income Generation of Farmers		
(In Rs.)	No.	Yes	Agriculture Sector	Allied Sector	Others Sector
Nil	28				
Upto 5000		6	2	4	
5000-10000		7	6		1
10000-15000		7	6		1
15000-20000		8	6	1	1
20000-25000		4	1	2	1
25000-30000		3		3	
30000 & above					
Total	28(44.5)	35(55.5)	21(60)	10(28.5)	4(11.5)
Total Number of Surveyed Farmers – 63					

Source: Field Survey
Note : Figures in brackets shows percentage

Table 2 shows the position of income generated of the small farmers from agriculture sector, allied sector and other sector. It presents that only 44.5 percent of sample farm household reported no income generation and out of 55.5 percent farmers whose income has generated is highest i.e. 60 percent in the agriculture sector followed by allied i.e 28.5 percent from allied activities and remaining 11.5 percent from other sectors.

Table 3
Impact of Credit on income generation of Medium farmer

Size group Generated Income	Income Generation for Farmers		Sector-wise Income Generation of Farmers		
(In Rs.)	No.	Yes	Agriculture Sector	Allied Sector	Others Sector
Nil	6				
Upto 5000		6	6		
5000-10000		10	9		1
10000-15000		12	8	3	1
15000-20000		9	9		
20000-25000		3	3		
25000-30000		6	3	1	2
30000 & above					
Total	6 (11.5)	46(88.5)	38(82.8)	4(8.6)	4(8.6)
Total number of surveyed farmers – 52					

Source: Field Survey
Note : Figures in brackets shows percentage

Table 3 depicts the position of income generated of medium farmers, it shows that only 11.5 percent of sample farm households have reported no increase in agriculture. The table further reveals that it is the agriculture sector which has played a pivot around which increase of the farmer's income revolves which is 82.8 percent. The study conducted by Upendra Kunwar (1987) revealed that, a sample of 1969 households had a pre investment income of Rs. 1,00,09,322 and their post investment income was Rs. 1,85,19,065. The difference between the pre and post investment income is Rs. 85,09,743. In other words, post investment income has been 85 percent higher over the pre investment income.[3] In the study in an irrigated area of Ahmed Nagar district of Maharashtra, Patil and Sirohi (1987) reported that, on an average, the gross return were higher by about 33 to 34 percent on tractor owning farms than those on bullock operated farms.[4]

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[3] Kunwar Upendra (1987). "Banking and Agricultural Growth." Deep and Deep Publication, New Delhi - pp. 129.

[4] Patil, A.S. and Sirohi, A.S. (1987). Implications of Tractorization on Employment, Productivity Ahmed Nagar District.

Table 4
Impact of Credit on income generation of Large farmer

Size group Generated Income	Income Generation for Farmers		Sector-wise Income Generation of Farmers		
(In Rs.)	No.	Yes	Agriculture Sector	Allied Sector	Others Sector
Nil	7				
5000-10000					
10000-15000		2	2		
15000- 20000		6	5	1	
20000-25000		7	7		
25000-30000		6	5	1	
30000-35000		1		1	
35000-40000		1	1		
40000-45000					
45000-50000		1	1		
50000-55000		2	2		
55000-60000					
60000-65000		1	1		
65000-70000					
70000-75000					
75000-80000		1	1		
Total	7(20)	28(80)	25(89)	3(11)	Nil
Total number of surveyed farmers – 35					

Source: Field Survey
Note : Figures in brackets shows percentage

Table 4 depicts that the position of income generated of the large farm class in rural areas. It shows that there are 80 percent of the sample farm households whose income has been increased. It further reveals that in this category agriculture sector has played an important role to increase income of the large farmers i.e. 89 percent and it showed that there is no contribution from the other sectors. Singh and Chancellor (1974) found that though tractor and tubewell farms had significantly higher yields than bullock farm in case of wheat much of difference was accounted for by difference in other factors such as level of irrigation. The use of tubewells was found to be associated with significantly higher yields compared to the Persian wheel irrigation[5]. And another study by NCAER (1980) showed that tractorised farms reduced their draught animal stock and increased their milch stock. Tractor owner and tractor user had 82 percent and 25 percent more milch cattles, respectively as compared to bullock farms. A tractor owner was able to increase his household income by undertaking supplementary activities such as dairying and provisions of custom hiring. A tractor owner with a land holdings

[5] Singh G. and Chancellor, W. (1974). Relation between Farm Mechanization and Crop yield for a Farming District in India.

of 6.28 hectares. had an average gross income of Rs. 47,534 which exceeded that of bullock farms and tractor user household by 285 percent and 132 percent respectively.[6]

Table 5
Impact of Credit on income generation of Landless Labour

Size group Generated Income	Income Generation for Farmers		Sector-wise Income Generation of Farmers		
(In Rs.)	No.	Yes	Agriculture Sector	Allied Sector	Others Sector
Nil	52				
Upto 5000		37	10	27	
5000-10000		40	15	18	7
10000-15000		8		5	3
15000-20000		4		1	3
20000-25000		6		1	5
25000-30000		3		1	2
30000 & above					
Total	52(35)	98(65)	25(25.5)	53(54)	20(13.5)
Total number of surveyed farmers – 150					

Source: Field Survey
Note : Figures in brackets shows percentage

Table 5 shows the position of income increased of the agriculture labour in rural area from different sectors. It reveals that 35 percent of the sample households have reported no income increased. The study finds that rural credit has generated income for 65 percent of sample households in the labour class category. Sector-wise percentage of labours experiencing positive impact on income is 25.5, 53 and 13.5 for agriculture sector, allied sector and other sectors respectively.

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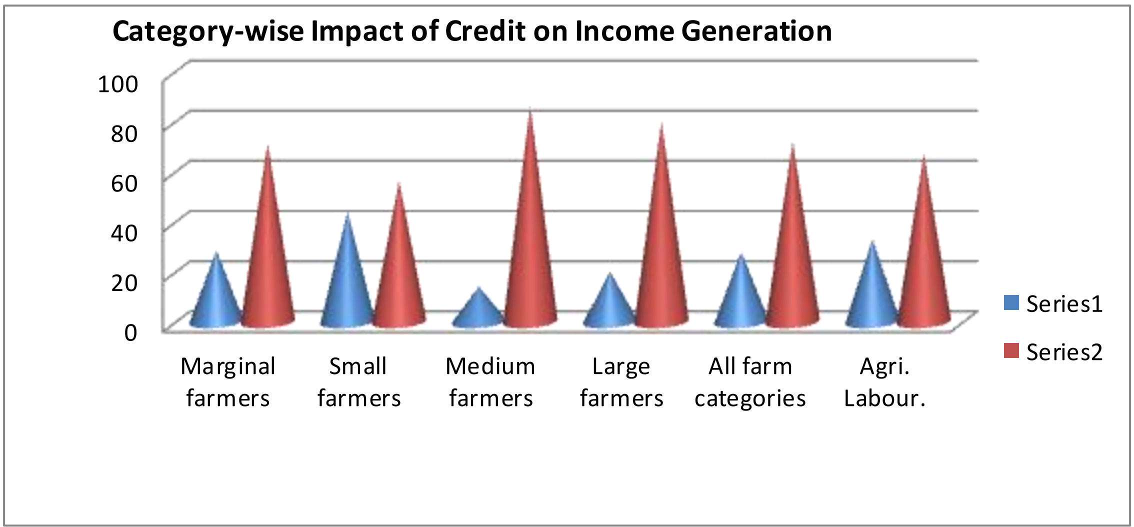
[6] NCAER (1980). Implication of Tractorisotion for Farm. Employment, Productivity and Income. National council of Applied Economic Research, New Delhi.

Table 6
Category-wise Impact of Credit on Income Generation
(Figures in absolute number)

Categories	No. of the surveyed household	Income generation for households		Sector-wise Income Generation of households		
		No	Yes	Agriculture sector	Allied sector	Others sectors
Marginal farmers	200	57(28.5)	143(71.5)	44(22)	78(39)	21(10.5)
Small farmers	63	28(44)	35(56)	22(35)	10(16)	3(4)
Medium farmers	52	7(14)	45(86)	37(72)	6(12)	2(2)
Large farmers	35	7(20)	28(80)	25(71)	3(9)	–
All farm categories	350	99(28)	251(72)	128(37)	97(28)	26(7)
Agri. Labour.	150	50(33)	100(67)	7(5)	68(45)	25(17)
All categories	500	149(30)	351(70)	135(27)	165(33)	51(10)

Note : Figures in brackets shows percentage



Series 1 for No. & 2for Yes
Fig. 4.1

Table 6 shows the position of income generated from agriculture sector, allied sector and other sector. The table analyzes the income generated of the farmers and agriculture labour category-wise in the whole District. It show that out of total marginal farmers in the district 28.5 percent of marginal farmers have no income generation by their debt and remaining 71.5 percent have income generated, in small farmers category 44 percent of the farmers have no income generation and 56 percent farmers have their incomes generated, in the medium farmers category 14 percent of the farmers have no incomes generated and 86 percent of the farmers have income generated and in the category of large farmers, 20 percent of the farmers have no income generated and 80 percent farmers have income generated. The table also shows that the percentage of the farmers whose income generated, is increasing according to their land owning. In medium and large farmers categories who have got their income has been increased, are related to agriculture sector prominently.

Conclusion:

In all, it seems medium and large farmers have been benefited from loans for agriculture sector. This may be due to their strong agriculture land base. Small and marginal farmers have been benefited from agriculture and allied sector. Agriculture labour households also seem to have been benefited from the loans for milk animal and other sector like shops etc. This may be accounted of the fact that they are dependent on allied sectors for their family income, in the absence of any strong agricultural base.

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2. NCAER, 1973. Impact of Mechanization in Agriculture on Employment. Report National Council of Applied Economic Research, New Delhi.
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4. Patil, A.S. and Sirohi, A.S. (1987). Implications of Tractorization on Employment, Productivity Ahmed Nagar District.
5. Singh G. and Chancellor, W. (1974). Relation between Farm Mechanization and Crop yield for a Farming District in India.
6. NCAER (1980). Implication of Tractorisotion for Farm. Employment, Productivity and Income. National council of Applied Economic Research, New Delhi