

**AERC STUDY No. 47**

**IMPACT EVALUATION OF FARM DEBT WAIVER SCHEME ON FARMERS  
LIVELIHOOD IN PUNJAB**

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## TABLE OF CONTENT

Sr. No.	Chapter	Page No.
<b>I</b>	<b>INTRODUCTION</b>	<b>1-11</b>
1.1	Background of the study	1
1.2	Specific objectives of the study	3
1.3	Status of Farm Debt Waiver Scheme in Punjab	3
1.4	Review of Literature	3
1.5	Study design and methodology	10
<b>II</b>	<b>SOCIOLOGICAL STATUS OF BENEFICIARY FARMERS</b>	<b>12-13</b>
2.1	Age	12
2.2	Education	12
2.3	Household Composition of Respondent Farmers	13
<b>III</b>	<b>IMPACT OF FARM DEBT WAIVER SCHEME ON BENEFICIARY HOUSEHOLDS</b>	<b>14-48</b>
3.1	Occupational Structure	14
3.2	Annual Household Income	16
3.3	Operational Holding	18
3.4	Capital Investment	18
3.5	Livestock Inventory	22
3.6	Cropping Pattern	25
3.7	Operational Cost of Cultivation	27
3.8	Production and Disposal Pattern\	29
3.9	Household Expenditure Pattern	36
3.10	Impact of farm debt waiver scheme on credit structure of beneficiary households	38
3.10.1	Institutional sources	38
3.10.2	Non-institutional sources	41
3.10.3	Nature and extent of indebtedness	44
3.11	Impact of farm debt waiver scheme on saving pattern of beneficiary households	46
<b>IV</b>	<b>CONSTRAINTS, PERCEPTIONS AND SUGGESTIONS REGARDING FARM DEBT WAIVER SCHEME</b>	<b>49-52</b>
4.1	Economic impact of debt waiver scheme	49
4.2	Difficulties/ constraints in getting benefit of loan waiver scheme	50

4.3	Perceptions and suggestions	50
<b>V</b>	<b>MAJOR FINDINGS AND POLICY IMPLICATIONS</b>	<b>53-56</b>
5.1	Impact of loan waiver on beneficiaries' livelihood	53
5.2	Constraints/ problems in availing scheme benefits	54
5.3	Perceptions/ suggestions regarding the scheme	55
5.4	Policy Implications	55
	<b>REFERENCES</b>	<b>57</b>

## LIST OF TABLES

Table No.	Title	Page No.
1.1	District-wise debt waiver beneficiary households selected, Punjab	10
2.1	Sociological profile of beneficiary households, Punjab	12
2.2	Household composition of beneficiary households, Punjab	13
3.1	Impact of farm debt waiver scheme on occupational status of beneficiary household, Punjab	15
3.2	Impact of farm debt waiver scheme on the distribution of beneficiary annual household income, Punjab	17
3.3.1	Impact of farm debt waiver scheme on operational holding of beneficiary households, Punjab	18
3.4.1	Impact of farm debt waiver scheme on capital investment of beneficiary households (Marginal), Punjab	19
3.4.2	Impact of farm debt waiver scheme on capital investment of beneficiary households (Small), Punjab	20
3.4.3	Impact of farm debt waiver scheme on capital investment of beneficiary households (Overall), Punjab	21
3.5.1	Impact of farm debt waiver scheme on livestock inventory of beneficiary households (Marginal), Punjab	23
3.5.2	Impact of farm debt waiver scheme on livestock inventory of beneficiary households (Small), Punjab	23
3.5.3	Impact of farm debt waiver scheme on livestock inventory of beneficiary households (Overall), Punjab	24
3.6.1	Impact of farm debt waiver scheme on cropping pattern of beneficiary households, Punjab	26
3.7.1	Impact of farm debt waiver scheme on operational cost of cultivation of beneficiary households (Marginal), Punjab	27
3.7.2	Impact of farm debt waiver scheme on operational cost of cultivation of beneficiary households (Small), Punjab	28
3.7.3	Impact of farm debt waiver scheme on operational cost of cultivation of beneficiary households (Overall), Punjab	28
3.8.1	Impact of farm debt waiver scheme on crop retention pattern of cultivation of beneficiary households (Marginal), Punjab	30
3.8.2	Impact of farm debt waiver scheme on crop retention pattern of beneficiary households (Small), Punjab	31
3.8.3	Impact of farm debt waiver scheme on crop retention pattern of beneficiary households (Overall), Punjab	32
3.8.4	Impact of farm debt waiver scheme on disposal pattern of beneficiary households (Marginal), Punjab	33
3.8.5	Impact of farm debt waiver scheme on disposal pattern of beneficiary households (Small), Punjab	34
3.8.6	Impact of farm debt waiver scheme on disposal pattern of beneficiary households (Overall), Punjab	35
3.9.1	Impact of farm debt waiver scheme on household expenditure pattern of beneficiary households (Marginal), Punjab	37
3.9.2	Impact of farm debt waiver scheme on household expenditure pattern of beneficiary households (Small), Punjab	37
3.9.3	Impact of farm debt waiver scheme on household expenditure pattern of	38

	beneficiary households (Overall), Punjab	
3.10.1	Impact of farm debt waiver scheme on nature and extent of institutional loans of beneficiary household (Marginal), Punjab	39
3.10.2	Impact of farm debt waiver scheme on nature and extent of institutional loans of beneficiary household (Small), Punjab	40
3.10.3	Impact of farm debt waiver scheme on nature and extent of institutional loans of beneficiary household (Overall), Punjab	41
3.10.4	Impact of farm debt waiver scheme on nature and extent of non-institutional loans of beneficiary households (Marginal), Punjab	42
3.10.5	Impact of farm debt waiver scheme on nature and extent of non-institutional loans of beneficiary households (Small), Punjab	43
3.10.6	Impact of farm debt waiver scheme on nature and extent of non-institutional loans of beneficiary households (Overall), Punjab	43
3.10.7	Impact of farm debt waiver scheme on nature and extent of indebtedness among beneficiary households (Marginal), Punjab	45
3.10.8	Impact of farm debt waiver scheme on nature and extent of indebtedness among beneficiary households (Small), Punjab	45
3.10.9	Impact of farm debt waiver scheme on nature and extent of indebtedness among beneficiary households (Overall), Punjab	46
3.11.1	Impact of farm debt waiver scheme on annual change in saving pattern of beneficiary households (Marginal), Punjab	47
3.11.2	Impact of farm debt waiver scheme on annual change in saving pattern of beneficiary households (Small), Punjab	48
3.11.3	Impact of farm debt waiver scheme on annual change in saving pattern of beneficiary households (Overall), Punjab	48
4.1.1	Economic impact of debt waiver scheme on beneficiary households, Punjab	49
4.2	Type of constraints /difficulties confronted in getting the benefits of debt waiver scheme	50
4.3.1	Suggestions/ Perceptions of beneficiary marginal farmers regarding the farm debt waiver scheme, Punjab	52
4.3.2	Suggestions/ Perceptions of beneficiary small farmers regarding the farm debt waiver scheme, Punjab	52
4.3.3	Suggestions/ Perceptions of beneficiary farmers (Overall) regarding the farm debt waiver scheme, Punjab	52

## PREFACE

Consequent upon the advent of Green Revolution, the Punjab state has achieved substantial increase in production and productivity of food grains with the adoption of new farm technology in agriculture in the form of seed-water-fertilizer combination, price support and adequate marketing infrastructure. Since late 1980s, the technology impact has stabilized resulting in yield stagnation, rising input costs to sustain farm productivity and shrinking profit margins. The increased dependence of farmers on credit to meet the increasing cost of cultivation, low returns from additional investment along with few years back there was failure of cotton crop in South-Western districts of the state, which has led to indebtedness of peasantry in the state. The scenario commonly described as 'Agrarian Crisis' has caused distress in state farmers to such an extent that 6926 farmers and agricultural labourers committed suicides during 2000-10 as per the census-based study commissioned by Government of Punjab. Among the victims, 79 per cent were marginal and small farmers. Considering the gravity of situation/distress among the farming community, Government of Punjab has announced 'Farm Debt Waiver Scheme' for marginal and small farmers in 2017. Therefore, the present study was undertaken to evaluate the impact of 'Farm Debt Waiver Schemes' announced by the Government of Punjab on the livelihood of beneficiaries.

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Authors

## Abstract

The present study was undertaken to evaluate the impact of 'Farm Debt Waiver Schemes' announced by the Governments of Punjab in 2017 on the livelihood of beneficiary farmers in Punjab. The data were collected for the pre-debt waiver year period (Before redemption) and post debt waiver period (After redemption) by selecting 180 beneficiary farmers. The results of the study revealed that no change in the primary occupation of the beneficiary farmers was observed. However, in case of dairy as secondary occupation, change in the number of marginal and small farmers adopting dairy as enterprise was reported. Thus, the debt waiver scheme had somehow helped some of the beneficiary farmers to invest in dairy enterprise. After loan redemption, higher change in income was observed in case of beneficiaries having income more than Rs.4 lakh for marginal and small farmers. Thus, the beneficiary farmers' income increased after redemption of debt. However, it cannot just be attributed to debt waiver only; the increase in income may be due to some other related factors also. There was slight increase in the operational holding on marginal and small farms after redemption of debt which can be attributed to marginal and small farmers taking more area under lease. However, there was no change in the owned land on marginal farms and slight decline in owned land was reported on small farms. After redemption of debt, there was no major change in the ownership of various farm assets owned by the sampled households on marginal and small farms, however, the value of capital invested declined due to depreciation of assets. After debt redemption, there was slight increase in the investment on adult female buffaloes on both marginal and small farms while in case of adult female crossbred cattle, it was only on marginal farms. This can be seen as positive impact on livestock investment pattern after debt redemption. There was no change in the cropping pattern on sample beneficiary farms after loan redemption and hence there was no effect of 'Farm Debt Waiver Scheme' on type of crops grown by marginal and small farmers. The operational cost of cultivation of all the crops cultivated on marginal and small farms increased owing to rise in input prices rather than benefits accrued under debt waiver scheme. There was considerable increase in the disposal pattern of the crops; especially wheat, potato and maize on marginal and small farms after redemption of debt; however, it may also be due to innovative/ changing cultivation practices adopted by the beneficiary farmers. There has been increase in household expenditure by beneficiary farmers majorly on; grocery items, education, health care and electricity/ phone bills. Major benefit of crop loan waiver scheme in Punjab was availed by beneficiary farmers from co-operative societies, being major source of institutional finance followed by commercial banks. The quantum of loan waiver was higher on small farms as compared to marginal farms. Institutional loan waiver resulted in significant decline in dependence of sampled households, especially small farmers, on non-institutional sources of finance. Due to loan waiver of institutional liability, sampled farmers were able to return higher quantum of non-institutional loan also. Thus, loan waiver scheme had reduced indebtedness to some extent on the sampled household farms. After loan waiver, some of the respondents repaid their commercial bank loan, debt of commission agent, purchased agricultural implements, invested in some insurance policy, purchased milch animals and durable items. Thus, loan waiver scheme helped the farmers to diversify their pattern of savings in more rational manner. The farmers opined that they lost man days to fulfil the requirements for availing scheme benefits, found it to be time consuming/ cumbersome and cost incurring also. These constraints/difficulties should be taken care of to make the scheme more lucrative. Major policy issues suggested are; expanding the reach of scheme to include more farmers, increasing subsidies on farm machinery and facilitating the farmers to rear crossbred cattle, buffaloes etc. for increasing their income.

## **CHAPTER-I**

### **INTRODUCTION**

#### **I.1. Background of the Study**

Punjab holds place of pride among the Indian States for its outstanding achievements in agricultural development. The state has witnessed tremendous increase in the agricultural production during the Green Revolution period, mainly due to healthy mix of institutional and technological factors. Agrarian economy, consolidation of landholdings, reclamation of new agricultural lands, development of irrigation, use of biochemical inputs comprising high yielding variety seeds, chemical fertilizers, insecticides and mechanical inputs were among the important factors which helped Punjab agriculture in making rapid strides. Dominating rural based political power with agricultural background provided favorable environment through thrust on rural and agricultural development. In this context, extension of irrigation network, rural link roads, rural electrification, establishment of focal points and agricultural market centers, efficient delivery system of credit and other agricultural inputs along with effective implementation of agricultural price policy for wheat and paddy played significant role in agriculture and rural development of state. Consequently, the Punjab state comprising only 1.5 percent of the total geographical area of country now contributes 13-14 percent towards the total food grain production of the country. State has earned a name of granary of India through contributing 25-46 percent of rice and 42 to 75 percent of wheat to the central pool in the past two decades.

Green Revolution sustained till the eighties, after which the agricultural production in the state showed the signs of stagnation. In nineties, the exalting cost of cultivation of major crops further aggravated the situation through squeezing the profitability of agriculture adversely affecting the socio-economic condition of farmers in the state. Thus, the agriculture in state has reached a plateau making it very hard to make further progress under available technologies and natural resource base. Its relative contribution in central pool of food grains both for wheat and paddy has also been declining during last few years, though, still contributing adequately to the central pool of the country.

The emerging scene of Punjab agriculture is not free from some serious concerns. The state cropping pattern dominated by wheat-rice rotation is causing a serious damage to the state's natural resource base. Paddy in particular, a water-intensive crop is blamed for water-table depletion in the large areas of the state. Increasing incidence of nutrient deficiency in the soils, including micronutrients and insect-pest attacks on the crops are also



posing major threats to productivity, food grain production and sustainability of agriculture in the long run. Besides all this, for crop cultivation, farmers rely on credit i.e. crop loan to purchase inputs for undertaking timely farm operations. Besides, farmers also take medium and long term loans from institutional sources for purchase of farm machinery etc. which has increased the debt burden of the farmers and thus demand loan waiver.

Various loan waiver schemes have been announced by the Central as well as State Governments for farmers during last four decades. The first loan waiver was announced during the year 1987 by the then Chief Minister of Haryana, Chaudhary Devi Lal. The 1980s was a period that witnessed the emergence of new social groups on the national political stage following the success of the green revolution in the 1970s. The resulting economic ascendance of the middle peasants coalesced with the political ascendance of the Other Backward Classes (OBCs) to deliver a new level of political mobilization to this hitherto under-represented group. Alongside the strengthening of the political organization of the farmer community came a number of demands ranging from subsidies for inputs such as; fertilizers, farm equipment, irrigation power, minimum support price (MSP) for farm produce and the calls for loan waiver. Here as well, the Central Government of the day declared the first agricultural loan waiver at the national level. Post these early announcements there have been 16 waivers. After the initial thrust there was virtually a moratorium on waivers for more than a decade until mid-2000. The next half-decade from 2005 to 2010 witnessed four waivers: Two in the southern states of Kerala and Tamil Nadu, one in Maharashtra and the one large central waiver in 2008. The following five years between 2010 and 2015 witnessed a significant ramp-up with five loan waivers, all from state governments such as Karnataka, Chhattisgarh, Uttar Pradesh, Andhra Pradesh and Telangana. Since 2016, there have been seven loan waiver announcements from the state governments of Tamil Nadu, UP, Punjab, Maharashtra, Rajasthan and two waivers in Karnataka alone. This broad trend suggests a steady acceleration in the number of loan waivers after 2005. The loan waivers seem to be more popular among State Governments as compared to the Central Government. Sixteen of the 18 waivers listed above came from State Governments while only two came from the Central Government. In fact post 2008, all the waivers announced were by different State Governments and none came from the centre. This suggests that waivers are largely a matter of state policy.

As far as Punjab is concerned, the scenario commonly described as 'Agrarian Crisis' has caused distress in state farmers to such an extent that 6926 farmers and agricultural

laborers committed suicides during 2000-10 as per the census-based study commissioned by Government of Punjab. Among the victims, 79 per cent were marginal and small farmers. Considering the gravity of situation/distress among the farming community, the Government of Punjab announced 'Farm Debt Waiver Scheme' for marginal and small farmers in 2017. Therefore, the present study was undertaken to evaluate the impact of 'Farm Debt Waiver Schemes' on the livelihood of beneficiary households.

### **I.2. Specific Objectives of the Study:**

This study was undertaken with the following specific objectives:

1. To examine socio-economic characteristics of the beneficiaries under Farm Debt Waiver Scheme.
2. To study the nature and extent of indebtedness among the beneficiaries.
3. To document the perceptions of beneficiaries about the likely impact of scheme on their livelihood.

### **I.3. Status of Farm Debt Waiver Scheme in Punjab:**

The 'Farm Debt Waiver Scheme' as announced by the Government of Punjab in the year 2017 covered the crop loans of marginal and small farmers. In case of marginal farmers, the entire eligible amount of those farmers who have total outstanding crop loan liability up to Rs 2 lakh was to be provided as debt relief and in case of eligible amount of more than Rs 2 lakh, only Rs 2 lakh was to be provided as debt relief. In case of small farmers, the entire eligible amount of those farmers who have total outstanding crop loan liability up to Rs 2 lakh, was to be provided as debt relief by the lending institutions namely; Co-operative Credit Institutions, Commercial Banks and Regional Rural Banks. To start with, the scheme was implemented for loans availed only from Co-operative Credit Institutions and then covering the loans forwarded by the commercial banks. The amount eligible for debt relief under the scheme comprised of outstanding liability under crop loan (principal and interest) as on March 31, 2017. Later on, the benefits of debt waiver scheme were also provided to the landless laborers. The scheme envisaged providing debt waiver to the tune of Rs. 5.1 thousand crores for 6.6 lakh farmers and 2.85 lakh landless laborers be given a relief of Rs. 520 crores. Though the scheme is still in progress in the state, the district wise status of beneficiary farmers was not available for the Punjab state.

### **I.4. Review of Literature**

Loan waivers have emerged as the prominent policy choice for addressing the issue of agricultural distress. Over the last one year waivers of farm loans were announced by a number of State Governments such as Uttar Pradesh (UP), Maharashtra, Rajasthan, Punjab

and Karnataka and the policy is under serious consideration by the State Governments of Madhya Pradesh and perhaps even by the Central Government. This expansion of the loan waiver policy has prompted many studies and commentaries by scholars that have presented a variety of perspectives on the issue which are classified into sections:

- a) Impact of farm loan waiver schemes on beneficiaries
- b) Implications of farm loan waiver schemes & agrarian distress

**a) Impact of farm loan waiver schemes on beneficiaries**

Shylendra (1995) studied the national loan waiver of 1990 in India. His empirical evidence demonstrates that loan waivers primarily benefit the better-off households and waivers adversely impact the repayment behaviour of borrowers.

Vaidyanathan (2008) and Rath (2008) analysed that the farm loan waiver policy works as a temporary palliative to the debt stress faced by farmers but will not have a long-term impact on improving their living conditions in India.

Mukherjee *et al* (2014) differentiated the impact of loan waivers on distressed and non-distressed borrowers in India. Their research shows that waivers have had a positive effect on the loan performance of distressed beneficiaries but have had no effect on non-distressed beneficiaries. Further, they find that loan waivers also lead to rationing of future credit by banks to the non-distressed borrowers.

Ravi (2015) argues that it is poor mental and physical health and not indebtedness that is the leading cause of suicides among farmers in India. Loan waivers are a reactionary policy emerging from a simplistic diagnosis of the causes for farmer suicide.

Kanz (2016) demonstrates empirical evidence that is inconsistent with the debt overhang theory. His study of the 2008 loan waiver granted by the central government of India shows that loan waiver beneficiaries tend to make lower investments and have less productive farms than similar non-beneficiaries.

**b) Implications of farm loan waiver schemes & agrarian distress**

Ramachandra (1992) studied the Agricultural and Rural Debt Relief Scheme of 1990 and found loan waivers as inflationary in effect and a fraud on the tax-payers. The study suggested instead of waiver, a deferment of the repayment period and also quick settlement

of bank cases through special courts and tribunals as the means to improve the repayment culture.

Shylendra and Katar (1994) found that rural debt relief scheme of 1990 adversely affected the functioning and performance of the primary agricultural credit societies and the primary land development banks. The scheme led to increase in the loan over dues and a consequent decline in the flow of rural credit from co-operatives. Authors also suggested a ban on general loan waivers and call for measures like implementation of effective insurance scheme and for following an incentive based loan recovery system.

Grover *et al* (2003) observed that indebtedness was a prime reason for suicide amongst the farming community in Punjab state. Other prominent reasons for suicides amongst the farming community in the state were; the sudden expenses to the farmers for marriage of daughter/sister, medical treatment and to perform various social ceremonies, loss of status due to selling of the land, family responsibilities, failure of crops/dairy/bore wells, frequent conflicts in the family and the decline in social support due to disintegration of joint family system as well as deteriorating standards of the village institutions particularly the co-operative culture in the state. The study emphasized the need to advance the credit for the social obligations to the farmers at the rate of interest at par with the agricultural loan by formal institutions. It was also stated that there is also need to check illegal expenses and some other avoidable formalities for taking loans from these institutions. Also, in rural areas, panchayats should start a reform movement at their own level by banning certain outdated customs, traditions and rituals to control the unnecessary expenditure.

Gaur (2008) highlighted that the loan waiver scheme of the Union Budget 2008 was perfectly fine because the outreach of any government measure is limited, and some section of the society would be benefited more than the other. But the most important consideration is the fact that agriculture is facing a serious crisis and some productive measures have to be undertaken by the government in this regard. The scheme had a very limited number of beneficiaries, and with such huge amount of money the least to be expected from a government scheme is to reach a large number of people.

Sriniwasan (2008) identified that the loan waiver scheme is an effort that cures symptoms rather than the causes. It has high visibility, but unlikely to produce lasting results in the development of farm sector. The large amount of money being spent could have been used to usher in fundamental reforms in agriculture and make it market oriented and profit centered. It was suggested that the government intervention in farming should move towards

improving profitability and target farm incomes through measures in the real sector than merely making marginal changes through the financial sector.

Anand (2009) concluded that gift of the then finance minister to the farmers in the form of Rs. 71,600 crore agricultural debt waiver has actually resulted into boon for the banks as through this agricultural debt waiver they were able to recover the Non-Performing Asset of Rs. 71,600 crore. Further, the waiver was only for the loans taken from the commercial or Regional Rural Banks and no care has been taken of the farmers who have taken loans from the informal sources. Also the limiting of landholding to 5 acres only has caused problems for the farmers as there are some areas in the country where farmers have more than 7 acres of land but they are still poor as the land is not fertile.

John *et al* (2010) have given an insight into the agricultural history of India and have also touched upon the role of liberalization in aggravating the agrarian crisis experienced by the country. According to them, Indian agriculture flourished under the phenomenal success of the Green Revolution during the 1980s. But now rural indebtedness is the single biggest challenge facing India, as the farmers of India are suffering under the burden of debt and penury. In order to arrest the increasing number of farmers' suicides, the government of India implemented the Agricultural Debt Waiver and Debt Relief Scheme, 2008. The cost of the scheme worked out to be INR 71, 600 crore. It has been widely criticized to be a populist measure proposed by the government, paying least regard to the root-cause of the problem.

Sidhu *et al* (2011) conducted census survey on suicides committed by farmers in the two most affected districts of the Punjab state. The census survey enumerated all the farmers who have committed suicide in the two most affected districts during the years 2000 to 2008. The study also tried to document the reason(s) for suicides. The census was conducted from village to village covering 876 villages. The association of suicides with indebtedness was studied examining the size of the debt, value of assets sold, debt-income ratio and the observations of the key informants of the villages. In total 1757 farmers committed suicide in the selected districts, out of which 1288 (73.3%) were committed primarily due to indebtedness while 469 (26.7%) were committed due to other reasons such as marital discord, drug addiction, property dispute within the family, prolonged illness, etc. Most of the victims (79%) belonged to small and marginal farmers category and were resource poor. Their level of education was low and about 38 per cent were drug addicts. The average amount of debt was relatively higher vis-a-vis income of the victims in the debt caused suicide cases. The average size of holding in such cases was 3 acres and the average debt was Rs 1.15 lakh while average income was only Rs 58 thousand. Significant fall in cotton productivity during

the period of 1997 to 2003, heavy investments on digging/deepening of bore wells due to steep fall in groundwater table and unproductive expenditure on social ceremonies were primarily responsible for causing economic distress among the farming families in these districts. Social and cultural backwardness in this belt coupled with economic distress resulted into the occurrence of large number of suicides in the farming sector.

Sharma (2012) has analyzed the agricultural debt waiver scheme which was the major highlight of the Union Budget 2008-09. It was concluded that this scheme was a total disaster and such waiver never worked in the past also. If the government would had spent this waiver amount on constructing warehouses, irrigation, canals, rural roads, power and other rural infrastructure farmers would had benefitted much more. Further, the study concluded that the waiver in the current context is a pretentious panacea. It will do no real good to most farmers in the short term and also in the long term. The causes of the woes that wreck farmers will remain. One of the major drawbacks of this agricultural debt waiver scheme is that it does not benefit every needy person. According to the study, the Government could have extended the benefit of waiver to all the people below the poverty line.

Kanthi (2014) in his study on economics of agriculture and farmers' suicides in Warangal District in Andhra Pradesh reported that the contributory factors for farmers suicides in Andhra Pradesh were; farmers indebtedness, crop loss and failure, risk factor related to input related problems. Besides this, other factors listed were; inadequate institutional finance, failure of agricultural extension system, lack of storage and marketing facilities, lack of remunerative prices and absence of agricultural insurance to the farmers.

Mohanty (2014) in a study conducted in Amravati and Yavatmal districts of Maharashtra revealed that crop loss and egoistic factors led to suicidal tendency among small farmers. On the contrary, the suicides of large and medium farmers, who belonged to higher castes, were attributed mainly to the anomic forces generated by failure in business, trade and politics. The socio-cultural factors such as old age, illness, family tension, etc, further added their urge to take their own lives. It was concluded that the suicides of farmers were neither properly anomic nor egoistic, rather they were ego-anomic in nature.

Singh *et al* (2014) based on the research in Punjab stated that the level of education, non-farm income, farm size and non-institutional credit were the main factors which affect the level of farmers' indebtedness. It was also found that the farmers face a large number of problems in availing institutional credit which drives them to fall into the debt trap of the crafty and exploitative non-institutional sources of credit.

Salve and Birader (2014) evaluated the Agricultural Debt Waiver and Debt Relief (ADWDR) Scheme announced by Government of India in 2008. The study concluded that the benefit of this Scheme was not equally distributed among the various regions in India. Secondly, the Scheme was not implemented by banks during the period of eleventh Plan and due to this credit availability to agricultural sector declined as compared to tenth Plan, addition to this sustainability in supply of credit also disappeared. Thirdly, after announcement of ADWDR Scheme, the growth in the number of account holders immensely decreased. The total amount of finance also declined as compared to previous Plans for CBs direct credit to farmers in India. The study suggested that for the success of Schemes like ADWDR in a country like India, more weightage need to be given to the financial and economic aspects. The objectives and the approach should be more professional rather than popular. The Scheme should have a region specific base and farmer targeted approach like growers of certain crops, dry land farmers etc.

(GoI, 2015) The National Institution for Transforming India (NITI) Aayog, India's apex policy body, set up a task force on agricultural development. To overcome the crisis, the task force suggested that the government should focus on improving agricultural productivity, remunerative prices for farmers, land policy, agrarian distress, and emphasis on Eastern states of the country that have lagged behind the rest of the country in farming.

Macharia (2015) investigated that majority of small and marginal peasants depended on non-institutional credit facilities (i.e. moneylenders, micro financiers and traders). It was also reported that farmers' suicides take place among the scheduled castes and tribe families who cultivate commercial crops. Low yields, extremely low profits and mounting debts make their life extremely difficult and compelling for the extreme step.

Chand (2017) suggested the measures to overcome the distress in Indian agriculture which included increasing livestock and crop productivity; improving resource use efficiency, crop intensity, crop diversification, and price realization; and shifting to non-farm occupation.

According a study conducted by NABARD (2018), 53.2 per cent of agricultural households in Punjab have a loan, slightly higher than the all India estimate of 51.9 per cent. However, loans disbursed show a dip in 2016-17 and 2017-18. Another feature is that the majority of the loans are crop loans i.e., working capital loans to finance one season of cultivation. In contrast, term loans were 27 per cent of the total loan disbursed in 2017-18, raising concerns about the capacity of farmers to undertake long term investment on their farms. It was also reported that indebtedness is higher among the marginal farmers.

According to the Situation Assessment Survey 2013, 46.2 per cent of the households belonging to up to 1 hectare of land possession category were indebted, in comparison to the 2.4 per cent indebted households of the households possessing greater than 10 hectares of land. The average outstanding loan amount not surprisingly increased with increasing holding size. The average amount of loan outstanding for a household possessing less than 0.01 hectares of land was the least at Rs. 13,100, followed by Rs. 24,600 for 0.01-0.40 hectares and Rs. 51,600 for 0.41-1 hectares. Whereas the largest average loan amount outstanding was 9,27,400 of households possessing greater than 10 hectares of land. It is expected that large farmers would have greater repayment capacity commensurate with size of loan outstanding.

Phadnis and Gupta (2019) observed that loan waiver policies in India are driven more by electoral exigencies rather than a deeply held ideological conviction. This is important to note because it suggests that it is difficult to connect the policy of loan waivers with any particular development philosophy, either to the left end or the right end of economic ideological spectrum. While the policy rationale given by politicians is to help farmers meet the adverse conditions emerging from drought, the study suggested that the application of the policy did not reflect a serious consideration of drought. Waivers were announced in states that faced acute drought as well as states where drought was not widespread. Further, the data suggested that politicians have been fairly conscious of the state's fiscal condition when they make decisions regarding loan waivers. Until recently the bulk of loan waiver announcements coincided with the period when states were making active efforts at restraining their public debt. Unfortunately, this trend seems to have been broken since 2016 where high debt states have also begun announcing large loan waiver packages. It was concluded that waivers have not even worked as an effective palliative, which means there should be more creativity even while designing immediate relief measures.

The above studies make it clear that the existing empirical evidence does not portend an encouraging picture of the farm loan waiver policy. Loan waivers tend to disproportionately benefit the better-off farmers, lead to lower future investments and productivity, and also result in selective credit rationing by banks. The overarching thrust reflected in many of the studies is that the long-term investments in agriculture and the rural economy may result in higher and sustained dividends to farmers rather than the instinctive payouts in the form of waivers. This inconsistency between the intellectual discourse and the observed proliferation of loan waivers impels an answer to the question on why policymakers in India have increasingly resorted to short-term reprieves when there is opportunity to make more sustained interventions in the rural economy. This is an important and complex question



that needs careful reflection and analyses. The evidence cited above suggests that the rationale for loan waivers does not lie so much in the economic benefits that it delivers to distressed farmers but it is more likely a product of the peculiarities of the policymaking process in India. Therefore, in order to understand the impact of farm debt waivers as their pre-eminent policy choice for addressing the distress of the rural sector, we need to analyze the role of these incentives in upliftment of farming community.

### **I.5. Study Design and Methodology**

The study is based on primary data collected from the beneficiary farmers of the Farm Debt Waiver Scheme, 2017 in Punjab. In order to see the impact of debt waiver on the livelihood of beneficiary farmers, Before and After approach was employed. The data were collected from the scheme beneficiaries for the pre-debt waiver year period (Before redemption) and post debt waiver period i.e. (After redemption) in which year the debt waiver scheme was implemented.

In order to select the sample in Punjab, three districts representing different agro-climatic zones of the state viz. Jalandhar from Central Plain Zone, Hoshiarpur from Sub-mountainous Zone and Bathinda from South-Western Zone were randomly chosen. Two blocks from each selected district were taken. Further, two clusters from each selected block were chosen for the field survey and the list of beneficiary farmers was collected from co-operative societies located in the respective areas. The selected clusters in each block comprised of varying number of villages according to the location of sample beneficiaries in different villages. Thus, 15 beneficiaries of the scheme were selected randomly from each cluster. Hence, the total sample comprised of 180 beneficiary farmers.

**Table 1.1: District-wise debt waiver beneficiary households selected, Punjab**

<b>Districts</b>	<b>Blocks</b>	<b>No of villages</b>	<b>Marginal</b>	<b>Small</b>	<b>Total</b>
Jalandhar	Nakodar	7	18	12	30
	Shahkot	4	17	13	30
	<b>Sub-total</b>	<b>11</b>	<b>35</b>	<b>25</b>	<b>60</b>
Hoshiarpur	Bhunga	3	21	9	30
	Hoshiarpur-I	2	26	4	30
	<b>Sub-total</b>	<b>5</b>	<b>47</b>	<b>13</b>	<b>60</b>
Bathinda	Phool	2	24	6	30
	Rampura	2	23	7	30
	<b>Sub-total</b>	<b>4</b>	<b>47</b>	<b>13</b>	<b>60</b>
<b>Grand Total</b>		<b>20</b>	<b>129</b>	<b>51</b>	<b>180</b>

### Paired T-test

Paired t-test was applied to compare the extent of indebtedness and level of loan outstanding among sample beneficiaries before and after redemption of debt waiver scheme. This test is used when the number of observation of two population is equal i.e.  $n_1 = n_2$ . The equation is as follows:

$$\text{Paired } t\text{-test} = \frac{\bar{d}\sqrt{n}}{S}$$

Where  $d = X_1 \text{ ó } X_2$

$\bar{d}$  = the mean of the differences in the extent of indebtedness among sample farmers before and after debt waiver

$n$  = number of observation

$S$  = standard deviation of differences

The value of  $S$  is calculated as under:

$$S = \sqrt{\frac{\sum (d - \bar{d})^2}{n-1}} \quad \text{or} \quad S = \sqrt{\frac{\sum d^2 - n(\bar{d})^2}{n-1}}$$

## CHAPTER-II

### SOCIOLOGICAL STATUS OF BENEFICIARY FARMERS

The sociological characteristics are the important parameters, which affect the production and marketing decisions of the farm households. This chapter deals with the important sociological indicators of the beneficiary sample households of the debt waiver scheme in Punjab. The indicators under investigation were; age of the head of the household, literacy level and family composition of beneficiary sample households. Age of the family head and literacy level plays an important role for decision making in day-to-day farm related activities. The compiled information of beneficiary households has been discussed in the following paragraphs:

#### 2.1 Age

A perusal of the Table 2.1 reveals that the majority of beneficiaries i.e. about 57 per cent were reported to be above 50 years age-group while the proportion was higher in marginal (about 60%) as compared to small (about 47%) farmers category. Also, there were few beneficiaries of young age group of up-to 35 years while the proportion of middle age group of 36-50 years was about 38 per cent in an overall scenario.

**Table 2.1: Sociological profile of beneficiary households, Punjab**

(%)

Particulars	Marginal	Small	Overall
<b>Age (years)</b>			
Up-to 35	5.43	5.88	5.56
36-50	34.11	47.06	37.77
>50	60.46	47.06	56.67
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
<b>Educational qualification</b>			
Illiterate	26.36	17.65	23.89
Primary	15.50	13.73	15.00
Middle	21.71	19.61	21.11
Matriculate	28.67	41.19	32.22
Secondary	5.43	5.86	5.56
Graduate	2.33	1.96	2.22
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

#### 2.2 Education

Education level of the beneficiaries is most important indicator which influences the adoption of new innovative ideas paving the way for development. A perusal of Table 2.1 reveals that among the beneficiaries, the proportion of illiterates was about 24 per cent in overall scenario

while category-wise proportion was higher in case of marginal (about 26%) than small (about 18%) farmers. In overall, the highest proportion i.e. nearly 32 per cent beneficiaries were matriculates followed by about 21 per cent having education up-to middle, 15 per cent up-to primary and about 6 per cent up-to secondary level of education. The farmers having graduate degrees were only about 2 per cent. Thus in Punjab, nearly one third of the beneficiaries were educated up-to matric level in overall while proportion was about 41 per cent for small and about 29 per cent in case of marginal farmers. Hence, the status of education among the beneficiary farmers was deplorably poor.

### 2.3 Household Composition of Respondent Farmers:

Table 2.2 shows the household composition of sample beneficiary farmers. The family size of the sample households was found to be lower i.e. 4.64 for the marginal farms as compared to 4.94 for the small farm size category. The numbers of male adults were dominating in both the categories of sample farmers and number of minors was less than one in both the categories.

**Table 2.2: Household composition of beneficiary households, Punjab**

Family composition	(Number/farm)		
	Marginal	Small	Overall
Adult male	2.07 (44.61)	2.27 (45.95)	2.13 (45.03)
Adult female	1.66 (35.78)	1.73 (35.02)	1.68 (35.52)
Minor	0.91 (19.61)	0.94 (19.03)	0.92 (19.45)
<b>Total</b>	<b>4.64</b> <b>(100.00)</b>	<b>4.94</b> <b>(100.00)</b>	<b>4.73</b> <b>(100.00)</b>

Figures in parentheses are percentages of the total

## **CHAPTER-III**

### **IMPACT OF FARM DEBT WAIVER SCHEME ON BENEFICIARY HOUSEHOLDS**

The present chapter deals with the impact of Farm Debt Waiver Scheme in Punjab and encompasses the perceptions of beneficiaries about the likely impact of scheme on their livelihood. The aspects under study with respect to beneficiary households were; occupational structure of the beneficiary households, operational holding, capital investment, livestock inventory, cropping pattern and operational cost of cultivation of crops grown. Besides this, production and disposal/utilization pattern of produce, annual household expenditure, credit structure and saving pattern of the beneficiary farmers, before and after redemption of the debts under farm debt waiver scheme, also form part of this chapter. The above cited aspects have been discussed in the following paragraphs:

#### **3.1. Occupational Structure**

A perusal of Table 3.1 reveals that agriculture and allied (except dairy) was the primary occupation of most of the beneficiary farmers i.e. about 92 per cent and which did not change even after the redemption of debt. The next major primary occupation was non-agricultural labour and about 5 per cent marginal farmers had opted it as primary occupation before and after redemption of debt. Besides this, some of the farmers were also having salaried work, pension, household work, small shopkeeper and mechanics whose number remained same after redemption of debt.

As regards the secondary occupations opted by the beneficiary farmers was concerned, on an overall basis, about 8 per cent marginal farmers had opted agriculture and allied as secondary occupation before redemption of debt which remained same after redemption. The highest change in secondary occupation of beneficiaries was observed in case of dairy, which changed in relative terms from about 44 per cent to 50 per cent after redemption of debt. All other occupations viz. agricultural labour, non-agricultural labour, salaried work and household work showed relative decline after the redemption of debt, except in case of self employed in services which showed no change.

Thus, no change in the primary occupation of the beneficiary farmers was observed. However, in case of dairy as secondary occupation, change in the number of both marginal and small farmers adopting dairy as enterprise was reported. It shows that debt waiver scheme had somehow helped some of the beneficiary farmers to invest in dairy enterprise.

**Table 3.1: Impact of farm debt waiver scheme on occupational status of beneficiary households, Punjab**

(%)

Type	Marginal			Small			Overall		
	BR	AR	Change	BR	AR	Change	BR	AR	Change
<b>Primary</b>									
Agriculture and allied (except dairy)	89.92	89.92	0.00	96.08	96.08	0.00	91.67	91.67	0.00
Dairy	0.78	0.78	0.00	0.00	0.00	0.00	0.56	0.56	0.00
Non-agricultural labour	4.65	4.65	0.00	0.00	0.00	0.00	3.33	3.33	0.00
Salaried work	1.55	1.55	0.00	0.00	0.00	0.00	1.11	1.11	0.00
Household work	0.78	0.78	0.00	3.92	3.92	0.00	1.67	1.67	0.00
Pension	0.78	0.78	0.00	0.00	0.00	0.00	0.56	0.56	0.00
Other (Small shopkeeper, mechanics )	1.54	1.54	0.00	0.00	0.00	0.00	1.10	1.10	0.00
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>
<b>Secondary</b>									
Agriculture and allied (except dairy)	7.75	7.75	0.00	0.00	0.00	0.00	5.56	5.56	0.00
Dairy	37.98	42.64	4.66	58.82	68.63	9.80	43.89	50.00	6.11
Agricultural labour	1.55	1.55	0.00	29.41	27.45	-1.96	9.44	8.89	-0.56
Self employment in household industry	-	-	-	3.92	0.00	-3.92	1.11	0.00	-1.11
Self employed in services	2.33	2.33	0.00	0.00	0.00	0.00	1.67	1.67	0.00
Non-agricultural labour	10.85	7.75	-3.10	0.00	0.00	0.00	7.78	5.56	-2.22
Salaried work	4.65	3.88	-0.77	0.00	0.00	0.00	3.33	2.78	-0.55
Household work	2.33	1.55	-0.78	1.96	1.96	0.00	2.22	1.67	-0.55
Pension	0.00	0.00	0.00	0.00	1.96	1.96	0.00	0.56	0.56
Other	2.33	3.88	1.55	5.89	0.00	-5.89	3.33	2.78	-0.55
No secondary occupation	30.23	28.67	-1.54	0.00	0.00	0.00	21.67	20.53	-1.14
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>

BR- Before redemption, AR- After redemption

### **3.2 Annual Household Income**

Table 3.2 shows the distribution of beneficiary farmer's annual household income before and after redemption of debt. In an aggregate scenario, the farmer's income was Rs.3.39 lakh before redemption of debt and increased to Rs.3.95 lakh after redemption showing a per cent change of about 16 per cent. Farm category-wise analysis reveals that the change in income was higher in case of small (18.15%) as compared to marginal (15.18%) farmers. In overall, about 35 per cent beneficiaries were in the income group of up-to Rs. one lakh before redemption of debt while their percentage decreased to about 31 per cent after redemption. While in the income group of Rs. 1-2 lakh, the percentage of households decreased from about 21 per cent before redemption to about 18 per cent after redemption. Like-wise in the income group of Rs. 2-4 lakh also, slight decline in the percentage of beneficiaries was observed after debt redemption. On the other hand, in the income group of more than Rs. 4 lakh, there was increase in the percentage of beneficiaries from about 23 per cent to 30 per cent after redemption of debt. The category-wise analysis revealed that before and after redemption of debt, higher proportion of marginal farmers were in the income group of up-to Rs. 1 lakh while on the contrary, proportion of small beneficiary farmers was higher in the income group of more than Rs.4 lakh. Further, it was observed that in both the categories, after loan redemption, higher change in income was observed in case of beneficiaries having income more than Rs.4 lakh.

Thus, it was observed that beneficiary farmer's income increased after redemption of debt. However, it can't just be attributed to debt waiver only which may be due to some other related factors also.

**Table 3.2: Impact of farm debt waiver scheme on the distribution of beneficiary annual household income, Punjab**

(%)

Income (Rs)	Marginal			Small			Overall		
	Before redemption	After redemption	Change	Before redemption	After redemption	Change	Before redemption	After redemption	Change
Up-to one lakh	41.86	37.98	-3.88	15.69	13.73	-1.96	34.44	31.11	-3.33
1.6-2 lakh	19.38	19.38	0.00	25.49	13.73	-11.76	21.11	17.78	-3.33
2-4 lakh	21.71	18.60	-3.11	21.57	27.44	5.87	21.67	21.11	-0.56
More than 4 lakh	17.05	24.04	6.99	37.25	45.10	7.85	22.78	30.00	7.22
<b>Average annual income</b>	<b>279225</b>	<b>321617</b>	<b>15.18*</b>	<b>492616</b>	<b>582043</b>	<b>18.15*</b>	<b>339686</b>	<b>395404</b>	<b>16.40*</b>

\* Percent change



### 3.3 Operational Holding

The change in operational holdings after the redemption of debt has been depicted in Table 3.3.1 for marginal, small and overall farm size categories. For marginal farms, the total operational area increased by about 4 per cent after the redemption of debt which was due to the increase in leased-in land. The total operational land per farm for small farms was estimated to be 9.49 acres before redemption of debt which after the redemption of debt decreased marginally to 9.48 acres per farm. Thus, there was a percentage change of 0.05 per cent in the operational land of a small farmer after the redemption of debt. For overall farms, before the redemption of debt the operational holding size was 6.1 acres per farm which increased to 6.24 acres per farm after the redemption of debt. Thus, there was only 2.3 per cent increase in the operational holding after the redemption of debt on an average but no increase in owned land on marginal farms but there was slight decline on small farms. The change in operational holding can be attributed to marginal and small farmers taking more area under lease after redemption of debt although it was meager i.e. 4.44 per cent only

**Table 3.3.1: Impact of farm debt waiver scheme on operational holding of beneficiary households, Punjab**

S No	Type of Land	Marginal			Small			Overall		
		BR	AR	PC	BR	AR	PC	BR	AR	PC
1	Total owned land	1.62	1.62	0.00	3.93	3.83	-2.37	2.28	2.25	-1.32
2	Leased-in	3.15	3.35	6.27	5.57	5.66	1.58	3.83	4.00	4.44
3	Leased -out	0.02	0.02	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4	Uncultivated land	-	-	-	-	-	-	-	-	-
5	Total operational land (1+2-3-4)	4.76	4.96	4.15	9.49	9.48	-0.05	6.10	6.24	2.30

**BR- Before redemption, AR- After redemption and PC: Percent Change**

### 3.4 Capital Investment

The change in capital investment after the redemption of debt has been depicted in Tables 3.4.1, 3.4.2 and 3.4.3 for marginal, small and overall farm size categories. For marginal farms, Rs. 107568 per farm was estimated as capital investment for maintaining total 10.49 numbers of farm machinery, implements, farm buildings and irrigation structures before the redemption of debt. But after redemption of debt for maintaining same assets, the present value of these investments per farm had declined to Rs. 106599 mainly due to the

depreciation in the value. Therefore, the capital investment on machines, implement sheds and irrigation structure, per farm had decreased by 0.9 per cent after the redemption of debt with only slight increase in number.

**Table 3.4.1: Impact of farm debt waiver scheme on capital investment of beneficiary households (Marginal), Punjab**

Type of machine	Before redemption		After redemption		Percent change	
	N	PV	N	PV	N	PV
<b>1. Farm machinery and Implements</b>						
Tractor	0.33	79690	0.33	77457	0.00	-2.80
Trolley	0.16	5496	0.16	5124	0.00	-6.77
Disc Harrow	0.05	632	0.05	632	0.00	0.00
Cultivator	0.29	2105	0.29	1935	0.00	-8.08
Rotavator	0.02	1783	0.02	2000	0.00	12.17
Seed-drill	0.05	488	0.05	332	0.00	-31.97
Spray pump	0.4	670	0.4	645	0.00	-3.73
Potato planter	0.02	271	0.03	1822	50.00	572.32
Thresher	0.02	698	0.03	1078	50.00	54.44
Laser land leveler	0.01	2326	0.01	2326	0.00	0.00
Happy Seeder	0.01	775	0.01	775	0.00	0.00
Mulcher machine	0.01	388	0.01	798	0.00	105.67
Others (Small tools etc.)	8.08	837	8.08	811	0.00	-3.11
<b>2. Farm Buildings</b>						
Implements/storage shed	0.04	919	0.04	903	0.00	-1.74
Cattle shed	0.29	2609	0.29	2546	0.00	-2.41
<b>3. Irrigation Structure</b>						
Electric motor	0.27	2988	0.27	2755	0.00	-7.80
Diesel engine	0.22	1219	0.22	1103	0.00	-9.52
Submersible pump	0.22	3674	0.22	3557	0.00	-3.18
<b>Total</b>	<b>10.49</b>	<b>107568</b>	<b>10.51</b>	<b>106599</b>	<b>0.19</b>	<b>-0.90</b>

N-Number/farm, PV-Present Value (Rs./farm)

**Table 3.4.2: Impact of farm debt waiver scheme on capital investment of beneficiary households (Small), Punjab**

Type of machine	Before redemption		After redemption		Percent change	
	N	PV	N	PV	N	PV
<b>1. Farm machinery and Implements</b>						
Tractor	0.63	116373	0.63	100176	0.00	-13.92
Trolley	0.37	11686	0.37	10510	0.00	-10.06
Disc harrow	0.14	1333	0.14	1324	0.00	-0.68
Cultivator	0.55	2814	0.55	2673	0.00	-5.01
Rotavator	0.1	9961	0.1	9471	0.00	-4.92
Seed-drill	0.1	588	0.1	565	0.00	-3.91
Generator	0.06	3431	0.06	3431	0.00	0.00
Spray pump	0.55	878	0.55	821	0.00	-6.49
Potato planter	0.02	490	0.02	490	0.00	0.00
Potato digger	0.02	1176	0.02	1176	0.00	0.00
Ridger	0.02	98	0.02	98	0.00	0.00
Others (Small tools etc.)	2.04	1329	2.06	1239	0.98	-6.77
<b>2. Farm Buildings</b>						
Implements/storage shed	0.12	1961	0.14	4176	16.67	112.95
Cattle shed	0.61	6314	0.59	5892	-3.28	-6.68
<b>3. Irrigation Structure</b>						
Electric motor	0.24	3157	0.24	2824	0.00	-10.55
Diesel engine	0.18	784	0.18	745	0.00	-4.97
Submersible pump	0.57	9137	0.57	8902	0.00	-2.57
<b>Total</b>	<b>6.32</b>	<b>171510</b>	<b>6.34</b>	<b>154513</b>	<b>0.32</b>	<b>-9.91</b>

N-Number/farm, PV-Present Value (Rs./farm)

**Table 3.4.3: Impact of farm debt waiver scheme on capital investment of beneficiary households (Overall), Punjab**

Type of machine	Before redemption		After redemption		Percent change	
	N	PV	N	PV	N	PV
<b>1. Farm machinery and Implement</b>						
Tractor	0.42	90084	0.42	83894	0.00	-6.87
Trolley	0.22	7250	0.22	6650	0.00	-8.28
Disc harrow	0.08	831	0.08	828	0.00	-0.36
Cultivator	0.36	2306	0.36	2144	0.00	-7.03
Rotavator	0.04	4100	0.04	4117	0.00	0.41
Seed-drill	0.06	516	0.06	398	0.00	-22.87
Generator	0.02	972	0.02	972	0.00	0.00
Spray pump	0.44	729	0.44	695	0.00	-4.66
Potato planter	0.02	333	0.03	1445	50.00	333.93
Potato digger	0.01	333	0.01	333	0.00	0.00
Ridger	0.01	28	0.01	28	0.00	0.00
Thresher	0.01	500	0.02	773	100.00	54.60
Laser land leveler	0.01	1667	0.01	1667	0.00	0.00
Happy seeder	0.01	555	0.01	555	0.00	0.00
Mulcher	0.01	278	0.01	572	0.00	105.76
Others (Small tools etc.)	6.37	976	6.37	932	0.00	-4.51
<b>2. Farm Buildings</b>						
Implements/storage shed	0.06	1214	0.07	1830	16.67	50.74
Cattle shed	0.38	3659	0.38	3494	0.00	-4.51
<b>3. Irrigation Structure</b>						
Electric motor	0.26	3036	0.26	2775	0.00	-8.60
Diesel engine	0.21	1096	0.21	1002	0.00	-8.58
Submersible pump	0.32	5222	0.32	5071	0.00	-2.89
<b>Total</b>	<b>9.32</b>	<b>125685</b>	<b>9.35</b>	<b>120175</b>	<b>0.32</b>	<b>-4.38</b>

N-Number/farm, PV-Present Value (Rs./farm)

On an average the number of farm machinery, implements, farm buildings and irrigation structures per farm was estimated to be 6.32 on the small farms before the redemption of debt which slightly increased to 6.34 per farm after the redemption of debt. But the present value of these assets had declined from Rs. 171510 per farm before redemption of debt to Rs. 154513 per farm after redemption of debt showing a decrease of about 10 per cent mainly because of depreciation due to wear, tear and usage of assets. Therefore, on small farms also, the capital investment on various farm assets per farm had registered decline after the redemption of debt while there was slight increase in their number.

For overall farms scenario, the numbers of farm machinery and implements, farm buildings and irrigation structures were estimated at 9.32 per farm before the redemption of debt, but the same had changed to 9.35 per farm after redemption of debt. While the present value of these assets had declined from Rs. 125685 before redemption period of debt to Rs. 120175 after redemption period of debt showing a percentage change by 4.38 per cent mainly due to depreciation and thereby decline in their value.

Hence, after redemption of debt there was no major change in the ownership of different farm assets owned by the sampled households, however, the value of capital invested declined because of depreciation due to usage, wear and tear of the assets.

### **3.5 Livestock Inventory**

The change in livestock inventory after the redemption of debt has been depicted in Tables 3.5.1, 3.5.2 and 3.5.3 for marginal, small and overall farm size categories. For marginal farms, number of livestock per farm increased from 1.99 before redemption of debt to 2.78 per farm after redemption showing a percentage change by about 40 per cent. The present value of the livestock also increased by about 49 per cent after the redemption of debt, which was mainly due to higher investment on adult female buffaloes.

On small farms, the number of livestock was 3.46 per farm before redemption of debt which changed to 3.84 per farm after redemption of debt showing a change by about 11 per cent and the present value also increased by about 8 per cent which was also due to increase in the number of adult female buffaloes owned by the farmers.

**Table 3.5.1: Impact of farm debt waiver scheme on livestock inventory of beneficiary households (Marginal), Punjab**

Livestock	Before redemption		After redemption		Percent change	
	N	PV	N	PV	N	PV
<b>1. Indigenous Cattle</b>						
Adult female	0.21	3636	0.19	3140	-9.52	-13.64
Adult male	0.03	605	0.03	504	0.00	-16.69
Young stock	0.06	132	0.05	39	-16.67	-70.45
<b>2. Crossbred Cattle</b>						
Adult female	0.40	9860	0.48	13209	20.00	33.97
Adult male	0.02	54	0.02	93	0.00	72.22
Young stock	0.13	422	0.24	571	84.62	35.31
<b>3. Buffalo</b>						
Adult female	0.87	32256	1.28	52163	47.13	61.72
Adult male	0.02	271	0.02	333	0.00	22.88
Young stock	0.25	930	0.47	1750	88.00	88.17
<b>Total</b>	<b>1.99</b>	<b>48166</b>	<b>2.78</b>	<b>71802</b>	<b>39.70</b>	<b>49.07</b>

N-Number/farm, PV-Present Value in Rs./farm

**Table 3.5.2: Impact of farm debt waiver scheme on livestock inventory of beneficiary households (Small), Punjab**

Livestock	Before redemption		After redemption		Percent change	
	N	PV	N	PV	N	PV
<b>1. Indigenous Cattle</b>						
Adult female	0.49	7765	0.49	8451	0.00	8.83
Adult male	0.04	451	0.02	118	-50.00	-73.84
Young stock	0.02	29	0	0	-100.00	-100.00
<b>2. Crossbred Cattle</b>						
Adult female	0.67	16588	0.65	17216	-2.99	3.79
Adult male	0.02	49	0.04	88	100.00	79.59
Young stock	0.16	255	0.18	216	12.50	-15.29
<b>3. Buffalo</b>						
Adult female	1.51	60765	1.61	65255	6.62	7.39
Adult male	0.06	176	0.12	1608	100.00	813.64
Young stock	0.49	1902	0.73	2247	48.98	18.14
<b>Total</b>	<b>3.46</b>	<b>87980</b>	<b>3.84</b>	<b>95199</b>	<b>10.98</b>	<b>8.21</b>

N-Number/farm, PV-Present Value in Rs./farm

In an overall scenario, the livestock population was reported as 2.41 per farm before redemption which increased to 3.07 per farm after redemption of debt showing an increase of about 27 per cent. The present value of livestock increased by about 32 per cent after redemption which mainly increased due to higher investment on adult female buffaloes on both marginal and small farms and to some extent on crossbred adult female cattle in case of marginal farms.

**Table 3.5.3: Impact of farm debt waiver scheme on livestock inventory of beneficiary households (Overall), Punjab**

Livestock	Before redemption		After redemption		Percent change	
	N	PV	N	PV	N	PV
<b>1. Indigenous Cattle</b>						
Adult female	0.29	4806	0.28	4644	-3.45	-3.37
Adult male	0.03	561	0.03	394	0.00	-29.77
Young stock	0.05	103	0.03	28	-40.00	-72.82
<b>2. Crossbred Cattle</b>						
Adult female	0.48	11767	0.53	14344	10.42	21.90
Adult male	0.02	53	0.03	92	50.00	73.58
Young stock	0.14	375	0.22	470	57.14	25.33
<b>3. Buffalo</b>						
Adult female	1.05	40333	1.37	55872	30.48	38.53
Adult male	0.03	244	0.04	694	33.33	184.43
Young stock	0.32	1206	0.54	1891	68.75	56.80
<b>Total</b>	<b>2.41</b>	<b>59448</b>	<b>3.07</b>	<b>78429</b>	<b>27.39</b>	<b>31.93</b>

N-Number/farm, PV-Present Value in Rs./farm

Hence, after redemption of debt there was slight increase in the investment on adult female buffaloes on both marginal and small farms, which can be seen as positive impact on livestock investment pattern after debt redemption.

### **3.6 Cropping Pattern:**

The change in cropping pattern after the redemption of debt has been depicted in Table 3.6.1 for marginal, small and overall farm size categories. Paddy and wheat were the major *kharif* and *rabi* crops cultivated in the study area. For marginal farms, the gross cropped area per farm was 9.57 acres per farm before the redemption of debt which increased to 10.10 acres after the redemption of debt. The cropping intensity on marginal farms increased from about 201 per cent to about 204 per cent after the redemption of debt. In *kharif* season, paddy and maize were the main crops on sample marginal farms and during *rabi* season wheat and potato were the important crops.

The gross cropped area per farm among small farms was 19.13 acres per farm before redemption of debt which decreased to 18.96 acres after the redemption of debt. During *kharif* season the major area was under paddy and maize crops while during *rabi* season the major area was covered by wheat and potato crops. There was slight decline in the cropping intensity on small farms.

The gross cropped area per farm on all farms taken together was 12.28 acres per farm before the redemption of debt while after redemption of debt the gross cropped area per farm slightly increased to 12.50 acres per farm showing an increase by 1.79 per cent. Also, there was no major change in the cropping intensity after redemption of debt.

Thus, there was no major change in the cropping pattern on the sample farms after redemption of debt.



**Table 3.6.1: Impact of farm debt waiver scheme on cropping pattern of beneficiary households, Punjab**

(Per cent)

Season/crop	Marginal			Small			Overall		
	BR	AR	Change	BR	AR	Change	BR	AR	Change
<b>A. Kharif season</b>									
Paddy	36.56	36.22	-0.34	40.56	40.56	0.00	38.27	38.32	0.05
Maize	9.92	9.60	-0.32	6.38	6.28	-0.10	8.39	8.24	-0.15
Cotton	0.21	0.20	-0.01	0.00	0.00	0.00	0.16	0.16	0.00
<i>Kharif</i> fodder (Bajra/ sorghum)	3.03	2.87	-0.16	2.67	2.53	-0.14	2.85	2.80	-0.05
Others (Eucalyptus etc.)	0.00	0.20	0.2	0.00	0.63	0.63	0.00	0.40	0.40
<b><i>Kharif</i> total</b>	<b>49.72</b>	<b>49.09</b>	<b>-0.63</b>	<b>49.61</b>	<b>50.00</b>	<b>0.39</b>	<b>49.67</b>	<b>49.92</b>	<b>0.25</b>
<b>B. Rabi season</b>									
Wheat	43.35	40.68	-2.67	41.30	43.78	2.48	42.43	42.32	-0.11
<i>Rabi</i> fodder (Barseem)	2.92	2.77	-0.15	2.51	2.43	-0.08	2.77	2.64	-0.13
Potato	3.45	5.64	2.19	5.80	3.11	-2.69	4.48	4.64	0.16
Others (Eucalyptus etc.)	0.00	0.04	0.04	0.00	0.69	0.69	0.00	0.32	0.32
<b><i>Rabi</i> total</b>	<b>49.72</b>	<b>49.13</b>	<b>-0.59</b>	<b>49.61</b>	<b>50.00</b>	<b>0.39</b>	<b>49.67</b>	<b>49.92</b>	<b>0.25</b>
<b>C. Zaid season</b>									
Potato (late sown)	0.52	1.78	1.26	0.16	0.00	-0.16	0.33	0.16	-0.17
Others	0.04	0.00	-0.04	0.62	0.00	-0.62	0.33	0.00	-0.33
<b>Gross cropped area (acres)</b>	<b>100.00</b> <b>(9.57)</b>	<b>100.00</b> <b>(10.10)</b>	<b>-</b> <b>(5.54)*</b>	<b>100.00</b> <b>(19.13)</b>	<b>100.00</b> <b>(18.96)</b>	<b>-</b> <b>(-0.89)*</b>	<b>100.00</b> <b>(12.28)</b>	<b>100.00</b> <b>(12.50)</b>	<b>-</b> <b>(1.79)*</b>
<b>Cropping intensity (%)</b>	<b>201.13</b>	<b>203.55</b>	<b>2.42</b>	<b>201.58</b>	<b>200.00</b>	<b>-1.58</b>	<b>201.31</b>	<b>200.32</b>	<b>-0.99</b>

BR- Before redemption, AR- After redemption and \* Per cent Change

### 3.7 Operational Cost of Cultivation

The change in operational cost of cultivation for different crops after the redemption of debt has been depicted in Tables 3.7.1, 3.7.2 and 3.7.3 for marginal, small and overall farm size categories, respectively. For marginal farms, during the *kharif* season the highest increase in operational cost of the cultivation was found in case of paddy (20.05%). For paddy crop, it was estimated at Rs. 14153 per acre before redemption of debt which increased to Rs.16990 per acre after redemption of debt. In *rabi* season, the cost of cultivation of wheat was Rs. 9095 per acre before redemption of debt which increased to Rs. 10546 per acre after redemption of debt showing a change by about 16 per cent. For cotton, potato and maize the cost of cultivation per acre increased by about 10, 10.82 and 4.43 per cent, respectively after the redemption of debt.

**Table 3.7.1: Impact of farm debt waiver scheme on operational cost of cultivation of beneficiary households (Marginal), Punjab**

(Rs./Acre)			
Season/crop	Before redemption	After redemption	Percent change
<b>A. Kharif season</b>			
Paddy	14153	16990	20.05
Maize	7744	8087	4.43
Cotton	12000	13200	10.00
<i>Kharif</i> fodder (Bajra/ sorghum)	4531	4857	7.19
Others (Eucalyptus etc.)	0	1100	NC
<b>B. Rabi season</b>			
Wheat	9095	10546	15.95
<i>Rabi</i> fodder (Barseem)	6115	6430	5.15
Potato	14633	16217	10.82
Others (Eucalyptus etc.)	1100	1200	9.09

**BR- Before redemption, AR- After redemption and PC: Percent Change**

In case of small farms, the cost of cultivation of Paddy was Rs. 14967 per acre before redemption of debt which increased to Rs. 17138 per acre after the redemption of debt showing a change by about 15 per cent. For maize, the cost of cultivation per acre increased by about 4 per cent. During *rabi* season, the cost of cultivation per acre for wheat increased by about 16 per cent, berseem by about 6 per cent and potato by about 5 per cent after redemption of debt.

On overall farms, for paddy the cost of cultivation per acre was Rs. 14384 before the redemption of debt which increased to Rs. 17032 per acre after redemption of debt showing a change by about 18 per cent. For maize and cotton it increased by about 4 and 10 per cent, respectively. During *rabi* season, for wheat the cost of cultivation per acre increased by about 16 per cent while that of berseem by 5 per cent and potato by about 9 per cent after

redemption of debt. Though increase in cost of cultivation can be attributed to increase in input prices.

It can be inferred that the operational cost of cultivation of all the crops cultivated on selected farms increased majorly due to rise in input prices such as; seed, fertilizer, human labour etc.

**Table 3.7.2: Impact of farm debt waiver scheme on operational cost of cultivation of beneficiary households (Small), Punjab**

(Rs./Acre)

Season/crop	Before redemption	After redemption	Percent change
<b>A. Kharif season</b>			
Paddy	14967	17138	14.51
Maize	9433	9833	4.24
Cotton	0	0	0.00
<i>Kharif</i> fodder (Bajra/ sorghum)	4484	4968	10.79
Others (Eucalyptus etc.)	0	1350	NC
<b>B. Rabi season</b>			
Wheat	9483	10975	15.73
<i>Rabi</i> fodder (Barseem)	6110	6469	5.88
Potato	15800	16625	5.22
Others (Eucalyptus etc.)	1200	1300	8.33

BR- Before redemption, AR- After redemption and PC: Percent Change

**Table 3.7.3: Impact of farm debt waiver scheme on operational cost of cultivation of beneficiary households (Overall), Punjab**

(Rs./Acre)

Season/crop	Before redemption	After redemption	Percent change
<b>A. Kharif season</b>			
Paddy	14384	17032	18.41
Maize	8222	8582	4.38
Cotton	8600	9460	10.00
<i>Kharif</i> fodder (Bajra/ sorghum)	4517	4888	8.21
Others (Eucalyptus etc.)	0	1171	NC
<b>B. Rabi season</b>			
Wheat	9204	10668	15.91
<i>Rabi</i> fodder (Barseem)	6113	6441	5.37
Potato	14964	16332	9.14
Others (Eucalyptus etc.)	1128	1228	8.87

BR- Before redemption, AR- After redemption and PC: Percent Change

### **3.8 Production and Disposal Pattern**

The change in production/retention after the redemption of debt has been depicted in Tables 3.8.1, 3.8.2 and 3.8.3 for marginal, small and overall farm size categories, respectively. The change in disposal pattern after the redemption of debt has been depicted in Tables 3.8.4, 3.8.5 and 3.8.6 for marginal, small and overall farm size categories.

For marginal farmers, the highest increase in production/marketed surplus was observed for potato crop, as it is highly input intensive crop and the surplus money due to redemption may have been diverted towards its production. Amongst other crops grown by the beneficiary farmers, the proportionate change in production/marketed surplus was found to be positive after redemption for wheat and maize crops, while it was negative for paddy and cotton crop, which was mainly due to change in production of these crops.

For small farmers, the highest decrease in production/marketed surplus was observed for potato crop after redemption which is mainly due to decrease in area under the crop. Amongst other crops grown by the beneficiary farmers, the proportionate change in production/marketed surplus was found to be positive for wheat after redemption, while it was negative for paddy and maize crop, which was mainly due to change in production of these crops.

For overall farmers, the highest increase in production/marketed surplus was observed for potato crop, as it is highly input intensive crop and the surplus money due to redemption may have been diverted towards its production. Amongst other crops grown by the beneficiary farmers, the proportionate change in production/marketed surplus was found to be positive for wheat and maize crops after redemption, while it was negative for paddy and cotton crops, which was mainly due to change in production of these crops. As there is assured marketing of paddy and wheat in the state, the government agencies are purchasing these crops at minimum support price (MSP) from the farmers in the state. Therefore, the entire quantity of paddy and wheat was sold to the government agencies. The increase in price was due to the increase in MSP for these crops. The highest increase in marketed surplus as well as price was observed for potato crop. Cotton, maize and potato were sold to the private traders. The increase in price for maize was only about 2 per cent after redemption of debt.

**Table 3.8.1: Impact of farm debt waiver scheme on crop retention pattern of beneficiary households (Marginal), Punjab**

(Qtls/farm)

Crop	Production	Self consumption	Seed	Feed	Payments in kind	Total retention	Total qty sold
<b>Before redemption</b>							
Paddy	101.18 (100.00)	0.20 (0.20)	0.14 (0.14)	0.22 (0.22)	0.00 (0.00)	0.56 (0.55)	100.62 (99.45)
Wheat	74.05 (100.00)	7.60 (10.26)	2.20 (2.97)	4.09 (5.52)	0.42 (0.57)	14.31 (19.32)	59.74 (80.68)
Cotton	0.21 (100.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.21 (100.00)
Maize	12.89 (100.00)	0.06 (0.47)	0.00 (0.00)	0.05 (0.39)	0.63 (4.89)	0.74 (5.74)	12.15 (94.26)
Potato	21.50 (100.00)	0.12 (0.56)	0.64 (2.98)	0.00 (0.00)	0.00 (0.00)	0.76 (3.53)	20.74 (96.47)
<b>After redemption</b>							
Paddy	98.93 (100.00)	0.18 (0.18)	0.10 (0.10)	0.16 (0.16)	0.00 (0.00)	0.44 (0.44)	98.49 (99.56)
Wheat	76.94 (100.00)	7.96 (10.35)	1.85 (2.40)	4.58 (5.95)	0.44 (0.57)	14.83 (19.27)	62.11 (80.73)
Cotton	0.19 (100.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.19 (100.00)
Maize	13.19 (100.00)	0.05 (0.38)	0.00 (0.00)	0.05 (0.38)	0.58 (4.40)	0.68 (5.16)	12.51 (94.84)
Potato	36.47 (100.00)	0.08 (0.22)	0.45 (1.23)	0.00 (0.00)	0.00 (0.00)	0.53 (1.45)	35.94 (98.55)
<b>Percent change</b>							
Paddy	-2.22	-10.00	-28.57	-27.27	0.00	-21.43	-2.12
Wheat	3.90	4.74	-15.91	11.98	4.76	3.63	3.97
Cotton	-9.52	0.00	0.00	0.00	0.00	0.00	-9.52
Maize	2.33	-16.67	0.00	0.00	-7.94	-8.11	2.96
Potato	69.63	-33.33	-29.69	0.00	0.00	-30.26	73.29

Figures in parentheses are percentages of the total production

**Table 3.8.2: Impact of farm debt waiver scheme on crop retention pattern of beneficiary households (Small), Punjab**

(Qtls/farm)

<b>Crop</b>	<b>Production</b>	<b>Self consumption</b>	<b>Seed</b>	<b>Feed</b>	<b>Payments in kind</b>	<b>Total retention</b>	<b>Total qty sold</b>
<b>Before redemption</b>							
Paddy	226.40 (100.00)	0.30 (0.13)	0.24 (0.11)	0.30 (0.13)	0.00 (0.00)	0.84 (0.37)	225.56 (99.63)
Wheat	143.12 (100.00)	7.85 (5.49)	2.60 (1.82)	5.95 (4.16)	0.58 (0.40)	16.98 (11.86)	126.14 (88.14)
Cotton	-	-	-	-	-	-	-
Maize	12.71 (100.00)	0.11 (0.87)	0.00 (0.00)	0.18 (1.42)	0.82 (6.45)	1.11 (8.73)	11.60 (91.27)
Potato	71.27 (100.00)	0.12 (0.17)	0.69 (0.97)	0.00 (0.00)	0.00 (0.00)	0.81 (1.14)	70.46 (98.86)
<b>After redemption</b>							
Paddy	219.23 (100.00)	0.26 (0.12)	0.07 (0.03)	0.27 (0.12)	0.00 (0.00)	0.60 (0.27)	218.63 (99.73)
Wheat	150.68 (100.00)	8.09 (5.37)	2.46 (1.63)	6.14 (4.07)	0.60 (0.40)	17.29 (11.47)	133.39 (88.53)
Cotton	-	-	-	-	-	-	-
Maize	12.44 (100.00)	0.10 (0.80)	0.00 (0.00)	0.18 (1.45)	0.83 (6.67)	1.11 (8.92)	11.33 (91.08)
Potato	41.27 (100.00)	0.12 (0.29)	0.69 (1.67)	0.00 (0.00)	0.00 (0.00)	0.81 (1.96)	40.46 (98.04)
<b>Percent change</b>							
Paddy	-3.17	-13.33	-70.83	-10.00	0.00	-28.57	-3.07
Wheat	5.28	3.02	-5.31	3.18	3.73	1.82	5.75
Cotton	-	-	-	-	-	-	-
Maize	-2.12	-9.09	0.00	0.00	1.22	0.00	-2.33
Potato	-42.09	0.00	0.00	0.00	0.00	0.00	-42.58

**Figures in parentheses are percentages of the total production**

**Table 3.8.3: Impact of farm debt waiver scheme on crop retention pattern of beneficiary households (Overall), Punjab**

(Qtls/farm)							
Crop	Production	Self consumption	Seed	Feed	Payments in kind	Total retention	Total qty sold
<b>Before redemption</b>							
Paddy	136.66 (100.00)	0.23 (0.17)	0.17 (0.12)	0.24 (0.18)	0.00 (0.00)	0.64 (0.47)	136.02 (99.53)
Wheat	93.62 (100.00)	7.67 (8.19)	2.31 (2.47)	4.62 (4.93)	0.47 (0.50)	15.07 (16.10)	78.55 (83.90)
Cotton	0.15 (100.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.15 (100.00)
Maize	12.84 (100.00)	0.08 (0.62)	0.00 (0.00)	0.09 (0.70)	0.69 (5.37)	0.86 (6.70)	11.98 (93.30)
Potato	35.60 (100.00)	0.15 (0.42)	0.84 (2.36)	0.00 (0.00)	0.00 (0.00)	0.99 (2.78)	34.61 (97.22)
<b>After redemption</b>							
Paddy	133.02 (100.00)	0.20 (0.15)	0.09 (0.07)	0.19 (0.14)	0.00 (0.00)	0.48 (0.36)	132.54 (99.64)
Wheat	97.83 (100.00)	7.99 (8.17)	2.02 (2.06)	5.02 (5.13)	0.49 (0.50)	15.52 (15.86)	82.31 (84.14)
Cotton	0.13 (100.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.13 (100.00)
Maize	12.97 (100.00)	0.06 (0.46)	0.00 (0.00)	0.09 (0.69)	0.65 (5.01)	0.80 (6.17)	12.17 (93.83)
Potato	37.83 (100.00)	0.09 (0.24)	0.52 (1.37)	0.00 (0.00)	0.00 (0.00)	0.61 (1.61)	37.22 (98.39)
<b>Percent change</b>							
Paddy	-2.66	-13.04	- 47.06	-20.83	0.00 (0.00)	-25.00	-2.56
Wheat	4.50	4.17	- 12.55	8.66	4.26	2.99	4.79
Cotton	-13.33	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-13.33
Maize	1.01	-25.00	0.00 (0.00)	0.00 (0.00)	-5.80	-6.98	1.59
Potato	6.26	-40.00	- 38.10	0.00 (0.00)	0.00 (0.00)	-38.38	7.54

Figures in parentheses are percentages of the total production

**Table 3.8.4: Impact of farm debt waiver scheme on disposal pattern of beneficiary households (Marginal), Punjab**

(Quantity in Qtls/farm)

(Price in Rs/Qtl)

Crop	Total qty. sold	To whom and quantity sold in quintals			
		Govt. Agencies		Pvt. Trader/ Commission agent	
		Qty.	Price	Qty.	Price
<b>Before redemption</b>					
Paddy	100.62	100.62	1510	-	-
Wheat	59.74	59.74	1625	-	-
Cotton	0.21	-	-	0.21	4800
Maize	12.15	-	-	12.15	1206
Potato	20.74	-	-	20.74	415
<b>After redemption</b>					
Paddy	98.49	98.49	1770	-	-
Wheat	62.11	62.11	1840	-	-
Cotton	0.19	-	-	0.19	5000
Maize	12.51	-	-	12.51	1221
Potato	35.94	-	-	35.94	709
<b>Percent change</b>					
Paddy	-2.12	-2.12	17.22	-	-
Wheat	3.97	3.97	13.23	-	-
Cotton	-9.52	-	-	-9.52	4.17
Maize	2.96	-	-	2.96	1.24
Potato	73.29	-	-	73.29	70.84



**Table 3.8.5: Impact of farm debt waiver scheme on disposal pattern of beneficiary households (Small), Punjab**

(Quantity in Qtls/farm)

(Price in Rs/Qtl)

Crop	Total qty. sold	To whom and quantity sold in quintals			
		Govt. Agencies		Pvt. Trader/ Commission agent	
		Qty.	Price	Qty.	Price
<b>Before redemption</b>					
Paddy	225.56	225.56	1510	-	-
Wheat	126.14	126.14	1625	-	-
Cotton	-	-	-	-	-
Maize	11.60	-	-	11.60	1205
Potato	70.46	-	-	70.46	415
<b>After redemption</b>					
Paddy	218.63	218.63	1770	-	-
Wheat	133.39	133.39	1840	-	-
Cotton	-	-	-	-	-
Maize	11.33	-	-	11.33	1227
Potato	40.46	-	-	40.46	703
<b>Percent change</b>					
Paddy	-3.07	-3.07	17.22	-	-
Wheat	5.75	5.75	13.23	-	-
Cotton	-	-	-	-	-
Maize	-2.33	-	-	-2.33	1.83
Potato	-42.58	-	-	-42.58	69.40

**Table 3.8.6: Impact of farm debt waiver scheme on disposal pattern of beneficiary households (Overall), Punjab**

(Quantity in Qtls/farm)

(Price in Rs/Qtl)

Crop	Total qty. sold	To whom and quantity sold in quintals			
		Govt. Agencies		Pvt. Trader/ Commission agent	
		Qty.	Price	Qty.	Price
<b>Before redemption</b>					
Paddy	136.02	136.02	1510	-	-
Wheat	78.55	78.55	1625	-	-
Cotton	0.15	-	-	0.15	4800
Maize	11.98	-	-	11.98	1206
Potato	34.61	-	-	34.61	415
<b>After redemption</b>					
Paddy	132.54	132.54	1770	-	-
Wheat	82.31	82.31	1840	-	-
Cotton	0.13	-	-	0.13	5000
Maize	12.17	-	-	12.17	1223
Potato	37.22	-	-	37.22	705
<b>Percent change</b>					
Paddy	-2.56	-2.56	17.22	-	-
Wheat	4.79	4.79	13.23	-	-
Cotton	-13.33	-	-	-13.33	4.17
Maize	1.59	-	-	1.59	1.41
Potato	7.54	-	-	7.54	69.88

### **3.9 Household Expenditure Pattern**

The changes in household expenditure pattern after the redemption of debt has been depicted in Tables 3.9.1, 3.9.2 and 3.9.3 for marginal, small and overall farm size categories. The household expenditure pattern on marginal farms shows that the total domestic expenditure per household per annum before the redemption of debt was estimated at Rs. 97796 which increased to Rs. 102463 per household per annum showing an increase by about 5 per cent after redemption of debt. The maximum domestic expenditure i.e. Rs. 39367 was incurred on grocery items per household per annum before redemption of debt which increased by about 11 per cent after redemption. The other major items of expenditure were health care, education and electricity bill before the redemption of debt. But after the redemption of debt, the expenditure on health care decreased by about 23 per cent but it increase was higher on social ceremonies by about 18 per cent.

The household expenditure pattern on small farms indicates that on an average the total domestic expenditure per household per annum was Rs. 109766 before the redemption of debt which increased to Rs. 119981, showing a significant increase of about 9 per cent. It confirms that there was considerable impact of debt waiver scheme on small farmers in the area under study.

The item-wise analysis on domestic expenditure shows that on small farms too the main item was grocery on which the maximum i.e. Rs. 47671 per household per annum was spent before redemption of debt which increased to Rs. 53176 per household per annum after the redemption of debt showing a change by about 12 per cent. The other major items of domestic expenditures were; healthcare, education, conveyance fuel and electricity bill which changed by about (-) 11 per cent, 5 per cent, 4 per cent and 4 per cent, respectively after the redemption of debt.

The household expenditure pattern on overall farms shows that on an average the total domestic expenditure per household per annum was Rs. 101188 before redemption of debt which increased to Rs. 107426 per household per annum after the redemption of debt, increasing by about 6 per cent. Grocery was the major item of domestic expenditure on which Rs. 41720 per household per annum was spent before the redemption of debt which increased to Rs. 46333 per household per annum, an increase of about 11 per cent after the redemption of debt. The other major items of domestic expenditure were; health care, electricity bill, conveyance fuel, education and the expenses on these changed by about (-) 20 per cent, 4 per cent, 6 per cent and 7 per cent after the redemption of debt.

**Table 3.9.1: Impact of farm debt waiver scheme on household expenditure pattern of beneficiary farmers (Marginal), Punjab**

(Rs/farm/annum)

<b>Particular</b>	<b>Before redemption</b>	<b>After redemption</b>	<b>Per cent change</b>
Grocery items	39367	43628	10.82
Durable items	1251	1572	25.66
Health care	12558	9633	-23.29
Education ( <i>fees/books/uniform, IELTS coaching others</i> )	9349	10130	8.35
Entertainment ( <i>cable/Dish/internet charges etc.</i> )	2451	2695	9.96
Electricity bill	11335	11744	3.61
Phone bill	3047	3112	2.13
Conveyance fuel	9181	9833	7.10
Social ceremonies	1591	1874	17.79
Any insurance payment (life/car/home etc)	149	0	-100.00
House construction/Maintenance	1772	1893	6.83
Legal issues	47	51	8.51
Others	5698	6298	10.53
<b>Total Domestic Expenditure</b>	<b>97796</b>	<b>102463</b>	<b>4.77</b>

**Table 3.9.2: Impact of farm debt waiver scheme on household expenditure pattern of beneficiary farmers (Small), Punjab**

(Rs/farm/annum)

<b>Particular</b>	<b>Before redemption</b>	<b>After redemption</b>	<b>Per cent change</b>
Grocery items	47671	53176	11.55
Durable items	1271	1682	32.34
Health care	10051	8906	-11.39
Education ( <i>fees/books/uniform, IELTS coaching others</i> )	10259	10729	4.58
Entertainment ( <i>cable/Dish/internet charges etc.</i> )	3176	3418	7.62
Electricity bill	12024	12494	3.91
Phone bill	3871	3941	1.81
Conveyance fuel	12118	12588	3.88
Social ceremonies	1576	1741	10.47
Any insurance payment (life/car/home etc)	0	0	0.00
House construction/Maintenance	1431	4153	190.22
Legal issues	0	129	NC
Others	6318	7024	11.17
<b>Total Domestic Expenditure</b>	<b>109766</b>	<b>119981</b>	<b>9.31</b>

**Table 3.9.3: Impact of farm debt waiver scheme on household expenditure pattern of beneficiary farmers (Overall), Punjab**

(Rs/farm/annum)

<b>Particular</b>	<b>Before redemption</b>	<b>After redemption</b>	<b>Per cent change</b>
Grocery items	41720	46333	11.06
Durable items	1257	1603	27.53
Health care	11848	9427	-20.43
Education ( <i>fees/books/uniform, IELTS coaching others</i> )	9607	10300	7.21
Entertainment ( <i>cable/Dish/internet charges etc.</i> )	2657	2900	9.15
Electricity bill	11530	11957	3.70
Phone bill	3280	3347	2.04
Conveyance fuel	10013	10613	5.99
Social ceremonies	1587	1837	15.75
Any insurance payment (life/car/home etc)	107	0	-100.00
House construction/Maintenance	1676	2533	51.13
Legal issues	33	73	121.21
Others	5873	6503	10.73
<b>Total Domestic Expenditure</b>	<b>101188</b>	<b>107426</b>	<b>6.16</b>

### **3.10 Impact of farm debt waiver scheme on credit structure of beneficiary households**

#### **3.10.1 Institutional sources:**

Institutional loan play a major role in undertaking various crop growing operations by timely purchase of farm inputs by the farmers. Co-operative societies and commercial banks are major institutional sources which provide crop loan to the farmers. The nature and extent of institutional loans for marginal holders has been shown in Table 3.10.1. A perusal of the table reveals that the quantum of share of institutional loan for marginal holders was higher from commercial banks as compared to co-operative societies before and after redemption of loan. There was about 49 per cent significant decline in the crop loan burden of marginal farmers taken from co-operative societies while in case of commercial banks; it was nearly 9 per cent. In aggregate scenario, after redemption of crop loan, debt burden decreased significantly by about 24 per cent on amount borrowed as well as outstanding amount of crop loan component. Thus, crop loan redemption significantly helped in decreasing monetary liability on marginal farms.

**Table 3.10.1: Impact of farm debt waiver scheme on nature and extent of institutional loans of beneficiary household (Marginal), Punjab**

	(Rs/farm)	
Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Co-op. Society: Crop loan	60556 (36.43)	59898 (36.18)
Commercial bank:	105674 (63.57)	105674 (63.82)
<b>Total</b>	<b>166230</b> <b>(100.00)</b>	<b>165572</b> <b>(100.00)</b>
<b>After redemption</b>		
Co-op. Society: Crop loan	30731 (24.30)	30731 (24.30)
Commercial bank:	95729 (75.70)	95729 (75.70)
<b>Total</b>	<b>126460</b> <b>(100.00)</b>	<b>126460</b> <b>(100.00)</b>
<b>Percent change</b>		
Co-op. Society: Crop loan	-49.25**	-48.69**
Commercial bank:	-9.41 <sup>NS</sup>	-9.41 <sup>NS</sup>
<b>Total</b>	<b>-23.92**</b>	<b>-23.62**</b>

\*\* Significant at one per cent level of significance, NS=Non-significant

Note: Figures in parentheses are percentages to total

The nature and extent of institutional loans on small farms (Table 3.10.2 ) revealed that share of commercial banks in amount borrowed was nearly three fourth of the total quantum of loan availed while rest of the loan liability was from co-operative societies. This shows the higher dependence of small holders on commercial banks to fulfil their crop loan requirement. Loan redemption helped small holders by significant decline of loan burden from co-operative societies on amount borrowed by about 26 per cent and on outstanding loan amount it was nearly 23 per cent. On the contrary, loan liability of small holders from commercial banks increased by 5.71 per cent which shows loan waive off confined only to co-operative societies loan liability. In totality, about 2 per cent decline in loan liability on amount borrowed and a meagre 1.22 per cent reduction in outstanding loan amount was observed by small holders which was the benefit of loan waiver scheme started by the state Govt.

**Table 3.10.2: Impact of farm debt waiver scheme on nature and extent of institutional loans of beneficiary households (Small), Punjab**

(Rs/farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Co-op. Society: Crop loan	77235 (25.14)	74083 (24.36)
Commercial bank:	230000 (74.84)	230000 (75.64)
<b>Total</b>	<b>307235</b> <b>(100.00)</b>	<b>304083</b> <b>(100.00)</b>
<b>After redemption</b>		
Co-op. Society: Crop loan	57226 (19.05)	57226 (19.05)
Commercial bank:	243137 (80.95)	243137 (80.95)
<b>Total</b>	<b>300363</b> <b>(100.00)</b>	<b>300363</b> <b>(100.00)</b>
<b>Percent change</b>		
Co-op. Society: Crop loan	-25.91**	-22.75**
Commercial bank:	5.71 <sup>NS</sup>	5.71 <sup>NS</sup>
<b>Total</b>	-2.24 <sup>NS</sup>	-1.22 <sup>NS</sup>

\*\* Significant at one per cent level of significance, NS=Non-significant

Note: Figures in parentheses are percentages to total

In overall scenario, after loan redemption, about 41 per cent significant decline in quantum of crop loan was observed which was taken by farmers from co-operative societies. On the other hand, decrease in crop loan was only 2.42 per cent in case of commercial banks. In aggregate, a significant decline in loan liability of marginal and small holders was about 15 per cent of the amount borrowed and nearly 14 per cent of outstanding loan amount from both co-operative societies and commercial banks. Thus, major benefit of crop loan waiver was availed by marginal farmers followed by small farmers with co-operative societies being leading source followed by commercial banks.

**Table 3.10.3: Impact of farm debt waiver scheme on nature and extent of institutional loans of beneficiary households (Overall), Punjab**

(Rs/farm)		
Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Co-op. Society: Crop loan	65282 (31.66)	63917 (31.21)
Commercial bank:	140900 (68.34)	140900 (68.79)
<b>Total</b>	<b>206182</b> <b>(100.00)</b>	<b>204817</b> <b>(100.00)</b>
<b>After redemption</b>		
Co-op. Society: Crop loan	38238 (21.76)	38238 (21.76)
Commercial bank:	137494 (78.24)	137494 (78.24)
<b>Total</b>	<b>175732</b> <b>(100.00)</b>	<b>175732</b> <b>(100.00)</b>
<b>Percent change</b>		
Co-op. Society: Crop loan	-41.43**	-40.18**
Commercial bank:	-2.42 <sup>NS</sup>	-2.42 <sup>NS</sup>
<b>Total</b>	<b>-14.77**</b>	<b>-14.20**</b>

\*\* Significant at one per cent level of significance, NS=Non-significant

Note: Figures in parentheses are percentages to total

### 3.10.2 Non-institutional sources:

Non-institutional sources of finance play an important role in providing loan to farmers especially for consumption purposes. Commission agents/ arhtias are the most common and reliable non-institutional source and farmers rely on them for getting loan even at odd hours. A perusal of Table 3.10.4 reveals that share of amount borrowed by marginal holders from commission agents/ atrhtias was about 98 per cent while some of them also took money on credit from relatives and friends. It was observed that after redemption of institutional loan, there was about 13 per cent significant decline in the loan taken from commission agents by marginal holders while reduction was by about 61 per cent for the credit taken from relatives and friends. Thus, waiver of institutional loan helped marginal holders to decrease their dependence on non-institutional sources.

In case of small holders, quantum of amount borrowed per farm (Table 3.10.5 ) was lower as compared to marginal holders. Commission agent/ arhtias also remained most preferred non-institutional source of finance among small holders. After redemption of institutional loan, dependence of small holders on commission agents declined and, therefore, quantum of loan liability declined significantly by about 58 per cent and loan taken from relatives and friends



came to a nought. In totality there was 60 per cent decline in amount borrowed and outstanding loan amount after redemption of loan. Thus, small holder's dependence on non-institutional sources of finance decreased due to waiving off of institutional loan.

In an overall scenario also, loan liability from commission agents/ arhtias significantly declined by about 24 per cent after institutional loan redemption while from relatives and friends decline was by 75 per cent. Thus, institutional loan waive off resulted in significant decline in dependence of marginal and small holders on non-institutional sources viz. commission agents/ arhtias , relatives and friends.

**Table 3.10.4: Impact of farm debt waiver scheme on nature and extent of non-institutional loans of beneficiary households (Marginal), Punjab**

(Rs/Farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Commission agent	54341 (97.50)	54341 (97.50)
Relatives and friends	1395 (2.50)	1395 (2.50)
<b>Total</b>	<b>55736</b> <b>(100.00)</b>	<b>55736</b> <b>(100.00)</b>
<b>After redemption</b>		
Commission agent	47481 (98.87)	47481 (98.87)
Relatives and friends	543 (1.13)	543 (1.13)
<b>Total</b>	<b>48024</b> <b>(100.00)</b>	<b>48024</b> <b>(100.00)</b>
<b>Percent change</b>		
Commission agent	-12.62**	-12.62**
Relatives and friends	-61.10 <sup>NS</sup>	-61.10 <sup>NS</sup>
<b>Total</b>	<b>-13.84**</b>	<b>-13.84**</b>

\*\* Significant at one per cent level of significance, NS: Non-significant

Note: Figures in parentheses are percentages to total

**Table 3.10.5: Impact of farm debt waiver scheme on nature and extent of non-institutional loans of beneficiary households (Small), Punjab**

(Rs/Farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Commission agent	45098 (75.83)	45098 (75.83)
Relatives and friends	1961 (4.17)	1961 (4.17)
<b>Total</b>	<b>47059</b> <b>(100.00)</b>	<b>47059</b> <b>(100.00)</b>
<b>After redemption</b>		
Commission agent	18824 (100.00)	18824 (100.00)
Relatives and friends	0 (0.00)	0 (0.00)
<b>Total</b>	<b>18824</b> <b>(100.00)</b>	<b>18824</b> <b>(100.00)</b>
<b>Percent change</b>		
Commission agent	-58.26**	-58.26**
Relatives and friends	-100.00 <sup>NS</sup>	-100.00 <sup>NS</sup>
<b>Total</b>	<b>-60.00**</b>	<b>-60.00**</b>

\*\* Significant at one per cent level of significance

Note: Figures in parentheses are percentages to total

**Table 3.10.6: Impact of farm debt waiver scheme on nature and extent of non-institutional loans of beneficiary households (Overall), Punjab**

(Rs/Farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Commission agent	51722 (97.08)	51722 (97.08)
Relatives and friends	1556 (2.92)	1556 (2.92)
<b>Total</b>	<b>53278</b> <b>(100.00)</b>	<b>53278</b> <b>(100.00)</b>
<b>After redemption</b>		
Commission agent	39361 (99.02)	39361 (99.02)
Relatives and friends	389 (0.98)	389 (0.98)
<b>Total</b>	<b>39750</b> <b>(100.00)</b>	<b>39750</b> <b>(100.00)</b>
<b>Percent change</b>		
Commission agent	-23.90**	-23.90**
Relatives and friends	-75.00 <sup>NS</sup>	-75.00 <sup>NS</sup>
<b>Total</b>	<b>-25.39**</b>	<b>-25.39**</b>

\*\* Significant at one per cent level of significance, NS=Non-significant

Note: Figures in parentheses are percentages to total

### **3.10.3 Nature and extent of indebtedness:**

The nature and extent of indebtedness has been shown in Table 3.10.7. A perusal of the table reveals that after loan redemption the amount borrowed on marginal farms declined from Rs.2.21 lakh to 1.74 lakh per farm with overall decline of 21.39 per cent. After loan waive off, a significant decline in institutional loan was about 24 per cent while in case of non-institutional loan, it was about 14 per cent which was also significant. Thus, with loan waiver there was decline in the indebtedness on marginal farms.

Similarly, on small farms (Table 3.10.8) the quantum of amount borrowed declined from Rs. 3.54 lakh to 3.19 lakh which was 9.91 per cent in relative terms. The decline in institutional loan was a meagre 2.24 per cent while in case of non-institutional loan it was huge i.e. 60 per cent which was also significant. It can be inferred that on small farms, crop loan waiver for institutional loan has resulted in higher decline in non-institutional loan liability.

Also, in an overall scenario (Table 3.10.9) the amount of loan borrowed declined from Rs. 2.59 lakh per farm to 2.15 lakh with relative decline of about 17 per cent. The quantum of institutional loan decline was about 15 per cent while non-institutional loan decline was nearly 25 per cent and both were significant. Thus, loan waiver scheme has resulted in decline of indebtedness on the marginal and small farms. However, relative institutional loan decline after redemption was higher on marginal farms and non-institutional loan decline being more in case of small farms.

**Table 3.10.7: Impact of farm debt waiver scheme on nature and extent of indebtedness among beneficiary households (Marginal), Punjab**

(Rs/farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Institutional	166230 (74.89)	165572 (74.82)
Non- Institutional	55736 (25.11)	55736 (25.18)
<b>Total</b>	<b>221966</b> <b>(100.00)</b>	<b>221308</b> <b>(100.00)</b>
<b>After redemption</b>		
Institutional	126460 (72.48)	126460 (72.48)
Non- Institutional	48024 (27.52)	48024 (27.52)
<b>Total</b>	<b>174484</b> <b>(100.00)</b>	<b>174484</b> <b>(100.00)</b>
<b>Percent change</b>		
Institutional	-23.92**	-23.62**
Non- Institutional	-13.84**	-13.84**
<b>Total</b>	<b>-21.39**</b>	<b>-21.16**</b>

\*\* Significant at one per cent level of significance

Note: Figures in parentheses are percentages to total

**Table 3.10.8: Impact of farm debt waiver scheme on nature and extent of Indebtedness among beneficiary households (Small), Punjab**

(Rs/farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Institutional	307235 (86.72)	304083 (86.60)
Non- Institutional	47059 (13.28)	47059 (13.40)
<b>Total</b>	<b>354294</b> <b>(100.00)</b>	<b>351142</b> <b>(100.00)</b>
<b>After redemption</b>		
Institutional	300363 (94.10)	300363 (94.10)
Non- Institutional	18824 (5.90)	18824 (5.90)
<b>Total</b>	<b>319187</b> <b>(100.00)</b>	<b>319187</b> <b>(100.00)</b>
<b>Percent change</b>		
Institutional	-2.24 <sup>NS</sup>	-1.22 <sup>NS</sup>
Non- Institutional	-60.00**	-60.00**
<b>Total</b>	<b>-9.91<sup>NS</sup></b>	<b>-9.10<sup>NS</sup></b>

\*\* Significant at one per cent level of significance, NS=Non-significant

Note: Figures in parentheses are percentages to total

**Table 3.10.9: Impact of farm debt waiver scheme on nature and extent of Indebtedness among beneficiary households (Overall), Punjab**

(Rs/farm)

Name of the agency	Amount borrowed	Outstanding loan amount
<b>Before redemption</b>		
Institutional	206182 (79.47)	204817 (79.36)
Non- Institutional	53278 (20.53)	53278 (20.64)
<b>Total</b>	<b>259460</b> <b>(100.00)</b>	<b>258095</b> <b>(100.00)</b>
<b>After redemption</b>		
Institutional	175732 (81.55)	175732 (81.55)
Non- Institutional	39750 (18.45)	39750 (18.45)
<b>Total</b>	<b>215482</b> <b>(100.00)</b>	<b>215482</b> <b>(100.00)</b>
<b>Percent change</b>		
Institutional	-14.77**	-14.20**
Non- Institutional	-25.39**	-25.39**
<b>Total</b>	<b>-16.95**</b>	<b>-16.51**</b>

\*\* Significant at one per cent level of significance

Note: Figures in parentheses are percentages to total

### 3.11: Impact of farm debt waiver scheme on saving pattern of beneficiary households

The changes in saving pattern of marginal holders have been shown in Table 3.11.1. A perusal of the table reveals that after loan redemption, there were changes in the saving pattern of the marginal category respondents. Earlier, most of the savings were consumed in meeting household expenditure only; however, after redemption of loan, about 17 per cent higher number of respondents repaid their commercial bank loan, about 5 per cent repaid debt of commission agents, purchased agricultural implements and some (1.55%) of them started recurring deposit, purchased durable items, milch animals etc. A few numbers of them also purchased life insurance policy and spent on medical treatment. Thus, due to loan waiver farmerø somehow shifted the pattern of their savings for more productive activities.

The changes in saving pattern of small holders have been shown in Table 3.11.2. It was observed that after loan waiver, significant changes were seen in the saving pattern of the small category farmers. Before redemption, in case of marginal holders also, most of the savings were consumed in meeting household expenditure only; however, after redemption of loan, about 31 per cent respondents repaid debt of commission agents, about 10 per cent their

commercial bank loan and about 6 per cent purchased agricultural implements. Also, about 5 per cent of them also started new recurring deposit, purchased durable items and milch animals etc. Some of the small respondents also purchased life insurance policy and spent on social ceremonies in the family.

Annual changes in the saving pattern of both marginal and small category farmers have been shown in Table 3.11.3. After crop loan being waived off, selected respondents also started spending towards other day-to-day activities and asset formation. Before redemption of loan, most of the savings were utilized towards meeting household expenditure but after loan waiver, higher number of respondents repaid their commercial bank loan, debt of commission agent, purchased agricultural implements and invested in any insurance policy. Also, starting of recurring deposit, durable items and milch animals purchase were some of the additional expenses incurred by the respondents after redemption of loan. Thus, loan waiver scheme helped the farmers to diversify their pattern of savings in more rational manner.

**Table 3.11.1: Impact of farm debt waiver scheme on annual change in saving pattern of beneficiary households (Marginal), Punjab**

(Percent)			
Means of saving	Before redemption	After redemption	Change
Insurance policy	2.33	3.10	0.77
Recurring deposit	0.00	1.55	1.55
<b>Others:</b>			
Consumed in household expenditure	79.83	48.06	-31.77
Purchased agricultural implements, irrigation structure etc.	0.00	4.65	4.65
Purchased land	0.00	0.78	0.78
Repaid commercial banks loan	3.88	20.93	17.05
Repaid debt of commission agent	6.20	10.85	4.65
Purchased durable items	0.00	1.55	1.55
Purchased milch animals	0.00	1.55	1.55
Medical treatment	3.88	4.65	0.77
Social ceremonies	2.33	0.78	-1.55
Child education	1.55	1.55	0.00

**Table 3.11.2: Impact of farm debt waiver scheme on annual Change in saving pattern of beneficiary households (Small), Punjab**

(Percent)

<b>Means of saving</b>	<b>Before redemption</b>	<b>After redemption</b>	<b>Change</b>
Insurance policy	5.88	7.84	1.96
Recurring deposit	0.00	3.92	3.92
<b>Others:</b>			
Consumed in household expenditure	84.32	29.43	-54.89
Purchased agricultural implements, irrigation structure etc.	0.00	5.88	5.88
Purchased land	0.00	0.00	0.00
Repaid commercial banks loan	0.00	9.80	9.80
Repaid debt of commission agent	0.00	31.37	31.37
Purchased durable items	0.00	3.92	3.92
Purchased milch animals	0.00	3.92	3.92
Medical treatment	9.80	0.00	-9.80
Social ceremonies	0.00	3.92	3.92
Child education	0.00	0.00	0.00

**Table 3.11.3: Impact of farm debt waiver scheme on annual Change in saving pattern of beneficiary households (Overall), Punjab**

(Percent)

<b>Means of saving</b>	<b>Before redemption</b>	<b>After redemption</b>	<b>Change</b>
Insurance policy	3.33	4.44	1.11
Recurring deposit	0.00	2.22	2.22
<b>Others:</b>			
Consumed in household expenditure	81.11	42.78	-38.33
Purchased agricultural implements, irrigation structure etc.	0.00	5.00	5.00
Purchased land	0.00	0.56	0.56
Repaid commercial banks loan	2.78	17.78	15.00
Repaid debt of commission agent	4.44	16.67	12.22
Purchased durable items	0.00	2.22	2.22
Purchased milch animals	0.00	2.22	2.22
Medical treatment	5.56	3.33	-2.22
Social ceremonies	1.67	1.67	0.00
Child education	1.11	1.11	0.00

## CHAPTER-IV

### CONSTRAINTS, PERCEPTIONS AND SUGGESTIONS REGARDING FARM DEBT WAIVER SCHEME

The present Chapter deals with the extent of debt waived off on marginal, small and overall sample farms, types of constraints/difficulties confronted in getting the benefits of scheme and the suggestions/perceptions regarding the farm debt waiver scheme implemented in Punjab. These are discussed in the following paragraphs:

#### 4.1 Economic impact of debt waiver scheme:

The economic impact of debt waiver scheme has been given in Table 4.1.1. A perusal of the table reveals that under debt waiver scheme, marginal and small farmers were entitled for waiving off crop loan up to Rs.2.00 lakh. The amount of loan waived off for marginal farms was Rs. 67131 per farm which was nearly 34 per cent of the entitled amount while it was Rs. 76044 for small farms being nearly 38 per cent of the entitled amount. In an overall scenario, the amount of loan waived off was Rs. 69656 per farm which was about 35 per cent of the entitled amount under the debt waiver scheme. As far as institution-wise debt waive off is concerned, the relative share of co-operative societies loan waiver was 29.78 per cent of the entitled amount on marginal farms, 37.04 per cent on small farms and 31.83 per cent in overall scenario. Similarly, in case of commercial banks, the loan waiver of the entitled amount was just 3.79 per cent on marginal farms, 0.98 per cent on small farms and 3 per cent in overall situation. Thus, the quantum of loan waiver was nearly one third of the entitled amount with major constituent of the crop loan being advanced by the co-operative societies followed by commercial banks.

**Table 4.1.1: Economic impact of debt waiver scheme on beneficiary households, Punjab  
(Rs/farm)**

Particulars	Marginal	Small	Overall
Entitlement	200000 (100.00)	200000 (100.00)	200000 (100.00)
<b>Amount waived off</b>			
Cooperatives	59550 (29.78)	74083 (37.04)	63667 (31.83)
Commercial banks	7581 (3.79)	1961 (0.98)	5989 (3.00)
Total	67131 (33.57)	76044 (38.02)	69656 (34.83)

**Note: Figures in parentheses are percentages to total entitlement**



#### 4.2 Difficulties/ constraints in getting benefit of loan waiver scheme:

The farmers were also asked about the difficulties/ constraints faced in availing the benefits of loan waiver scheme. A perusal of the Table 4.2 reveals that about 92 per cent each of the marginal, small and in overall category farmers lost man days to fulfil the requirements for availing the benefits under loan waiver scheme. Also, 25 per cent respondents in overall situation reported the scheme to be very time consuming while the response on marginal and small farms was 27.91 and 17.65 per cent, respectively. The respondent farmers also reported that they have to incur different type of costs in terms of delayed dairy/ farm related activities while availing benefits of the scheme and it was reported by 5.43 per cent marginal and 3.92 per cent small category farmers. So, the farmers lost man days to fulfil the requirements for availing scheme benefits, found it to be time consuming/ cumbersome and cost incurring also.

**Table 4.2: Type of constraints /difficulties confronted in getting the benefits of debt waiver scheme**

(Percent multiple response)

<b>Particular</b>	<b>Marginal</b>	<b>Small</b>	<b>Overall</b>
Time consuming/ cumbersome	27.91	17.65	25.00
Cost incurring	5.43	3.92	5.00
Man days lost	92.25	92.16	92.22

#### 4.3 Perceptions and suggestions

The selected marginal and small respondents were also asked about the perceptions/ suggestions about the debt waiver scheme. A perusal of the Table 4.3.1 reveals that on marginal farms, 33.33 per cent of the farmerø revealed 'extremeø reduction in agrarian distress due to the implementation of debt waiver scheme while 30.23 per cent reported it as 'moderateø and 17.84 per cent reported it as 'not at allø. Also, 82.95 per cent of the marginal farmers revealed increased farm productivity as 'not at allø while remaining 12.40 per cent stated it as 'lowø. Farmers were asked whether loans taken from commission agents/ arhtias should be waived off, consequently 13.95 per cent farmers reported this suggestion as 'extremeø, 20.93 per cent as 'lowø and 43.42 per cent as 'not at allø. Another perception/ query about decreased indebtedness due to debt waiver was asked from the farmers and 25.58

per cent farmers reported it as 'extreme', 27.91 per cent as 'moderate' and 18.60 per cent as 'not at all'.

As far as small farmers are concerned, only 21.57 per cent of the farmers reported 'extreme' reduction in agrarian distress due to the implementation of debt waiver scheme while 52.94 per cent reported it as 'moderate' and 11.77 per cent as 'not at all' (Table 4.3.2). Farmers were asked whether there was increase in farm productivity due to implementation of debt waiver scheme, there upon 88.24 per cent of the marginal farmers expressed their opinion as 'not at all' while 7.84 per cent stated it as 'low'. Selected small respondents were asked whether loans taken from commission agents/ arhtias should be waived off, consequently 17.65 per cent farmers reported this suggestion as 'extreme', 31.37 per cent as 'moderate' and 37.26 per cent as 'not at all'. Another perception about decreased indebtedness due to debt waiver scheme was asked from the small category farmers and 17.65 per cent farmers reported it as 'extreme', 49.02 per cent as 'moderate' and 15.68 per cent as 'not at all'.

In an overall scenario 30 per cent farmers reported as 'extreme' reduction in agrarian distress due to implementation of debt waiver scheme while 23.33 per cent reported it resulting in decreased indebtedness (Table 4.3.3). Similarly, 84.45 per cent farmers expressed their opinion that there is 'not at all' increase in farm profitability with the implementation of debt waiver scheme and 15 per cent farmers expressed their perception as 'extreme' about the waiving off loans taken from commission agents/ arhtias.

**Table 4.3.1: Suggestions/ perceptions of beneficiary marginal farmers regarding the farm debt waiver scheme, Punjab**

Particular	(Percent)				
	Extreme (5)	High (4)	Moderate (3)	Low (2)	Not at all (1)
Reduction in agrarian distress	33.33	3.10	30.23	15.50	17.84
Increased farm profitability	0.00	3.10	1.55	12.40	82.95
Loans taken from money lenders should also be waived off	13.95	3.10	18.60	20.93	43.42
Decreased indebtedness	25.58	1.55	27.91	26.36	18.60

**Table 4.3.2: Suggestions/ perceptions of beneficiary small farmers regarding the farm debt waiver scheme, Punjab**

Particular	(Percent)				
	Extreme (5)	High (4)	Moderate (3)	Low (2)	Not at all (1)
Reduction in agrarian distress	21.57	3.92	52.94	9.80	11.77
Increased farm profitability	0.00	0.00	3.92	7.84	88.24
Loans taken from money lenders should also be waived off	17.65	3.92	31.37	9.80	37.26
Decreased Indebtedness	17.65	3.92	49.02	13.73	15.68

**Table 4.3.3: Suggestions/ perceptions of beneficiary farmers (overall) regarding the farm debt waiver scheme, Punjab**

Particular	(Percent)				
	Extreme (5)	High (4)	Moderate (3)	Low (2)	Not at all (1)
Reduction in agrarian distress	30.00	3.33	36.67	13.89	16.11
Increased farm profitability	0.00	2.22	2.22	11.11	84.45
Loans taken from money lenders should also be waived off	15.00	3.33	22.22	17.78	41.67
Decreased Indebtedness	23.33	2.22	33.89	22.78	17.78

## CHAPTER-V

### MAJOR FINDINGS AND POLICY IMPLICATIONS

The present chapter brings out the major findings of 'Farm Debt Waiver Scheme' in Punjab. The major issues discussed emphasize on the change in the livelihood of the beneficiary farmers due to implementation of the scheme, constraints/ problems faced to avail the scheme benefits and suggestions required to improve the scheme. The major findings of the study undertaken have been given under the following heads:

#### 5.1 Impact of loan waiver on beneficiaries' livelihood

- As far as occupational status of the beneficiaries is concerned, no change in the primary occupation of the beneficiary farmers was observed. However, in case of dairy as secondary occupation, change in the number of marginal and small farmers adopting dairy as enterprise was reported. Thus, the debt waiver scheme had somehow helped some of the beneficiary farmers to invest in dairy enterprise.
- After loan redemption, higher change in income was observed in case of beneficiaries having income more than Rs.4 lakh for marginal and small farmers. Thus, the beneficiary farmer's income increased after redemption of debt. However, it can't just be attributed to debt waiver only; the increase in income may be due to some other related factors also.
- There was slight increase in the operational holding on marginal and small farms after redemption of debt which can be attributed to marginal and small farmers taking more area under lease. However, there was no change in the owned land on marginal farms while slight decline in owned land was reported on small farms.
- After redemption of debt, there was no major change in the ownership of various farm assets owned by the sampled households on marginal and small farms, however, the value of capital invested declined due to depreciation of assets because of usage, wear and tear.
- After debt redemption, there was slight increase in the investment on adult female buffaloes on both marginal and small farms while in case of adult female crossbred cattle, it was only on marginal farms. This can be seen as positive impact on livestock investment pattern after debt redemption.

- There was no change in the cropping pattern on sample beneficiary farms after loan redemption and hence there was no effect of Farm Debt Waiver Scheme on type of crops grown by marginal and small farmers.
- The operational cost of cultivation of all the crops cultivated on marginal and small farms increased owing to rise in input prices such as; seed, fertilizer, human labour etc. rather than benefits accrued under debt waiver scheme.
- There was considerable increase in the disposal pattern of the crops; especially wheat, potato and maize on marginal and small farms after redemption of debt; however, it may also be due to innovative/ changing cultivation practices adopted by the beneficiary farmers.
- There has been increase in household expenditure by beneficiary marginal and small farmers majorly on; grocery items, education, health care and electricity/ phone bills. Although, this change may be due to increase in prices of grocery items, education fee and healthcare facilities also.
- Major benefit of crop loan waiver scheme in Punjab was availed by beneficiary farmers from co-operative societies being major source of institutional finance followed by commercial banks. The quantum of loan waive off was higher on small farms as compared to marginal farms. Institutional loan waive off resulted in significant decline in dependence of sampled households, especially small farmers, on non-institutional sources viz. commission agents/ arhtias, relatives and friends.
- Due to loan waiver of institutional liability, sampled farmers were able to return higher quantum of non-institutional loan also. Thus, loan waiver scheme had reduced indebtedness to some extent on the sampled household farms.
- After loan waiver, some of the respondents repaid their commercial bank loan, debt of commission agent, purchased agricultural implements, invested in some insurance policy, purchased milch animals and durable items. Thus, loan waiver scheme helped the farmers to diversify their pattern of savings in more rational manner.

## **5.2 Constraints/ problems in availing scheme benefits**

- Majority of the farmers on marginal and small farms reported having lost man days in availing benefits of the scheme as they have to spend time in procuring the requisite documents to fulfill the scheme requirements.
- Some of the farmers also reported the entire procedure to avail debt waiver being time consuming and cumbersome which needs improvement and thereby making the scheme lucrative.

### 5.3 Perceptions/ suggestions regarding the scheme

- Some of the beneficiaries reported about reduction in agrarian distress and decline in indebtedness due to the implementation of farm debt waiver scheme.
- Some of the beneficiaries in both marginal and small farms also suggested waiving off loans taken from commission agent/ arhtias also. Although it doesn't come in the preview of farm debt waiver scheme.

### 5.4: Policy Implications

Based on the findings, following Policy Implications emerge for consideration:

- It has been observed that major benefit of crop loan waiver was availed by small farmers followed by marginal farmers and leading public sector institution of debt waiver scheme was co-operative societies followed by some meagre amount waived by commercial banks. There is a need to enhance the quantum of loan waiver under Farm Debt Waiver Scheme to give higher benefit to agrarian distressed marginal and small holder's category.
- Debt waive off had resulted in lowering the dependence of small and marginal farmers on non-institutional sources of finance. It has been observed as positive impact of the debt waiver scheme in the sense that interest liability of farmers to non-institutional sources declined and they took more loan from institutional sources with lower interest rate. Thus, there is a need to further strengthen the debt waiver scheme for farmer's benefit.
- Farmers also reported decline in indebtedness due to debt waiver, since after loan redemption, the amount of loan borrowed declined by about 17 per cent. The quantum of institutional loan decline was about 15 per cent while non-institutional loan decline was nearly 25 per cent. Therefore, the scheme should also be extended to benefit other category farmers as well.
- Taking all farms together, the amount of loan waived off was about 35 per cent of the entitled amount (Rs.2 lakh) under the debt waiver scheme. Consequently, the quantum of debt waiver should match-up with the entitled amount for providing higher benefit to marginal and small farmers. As it's known fact that agriculture is in distress and some relief measures provided under the scheme can somehow rejuvenate this sector.
- After loan waiver some of the farmers reported investing in dairy enterprise by purchasing buffaloes and adult female crossbred cattle. Along with debt waiver, there is a need to provide subsidy to the farmers to invest in good quality breed livestock to increase their income.

- The farmers opined that they lost man days to fulfil the requirements for availing scheme benefits, found it to be time consuming/ cumbersome and cost incurring also. These constraints should be taken care of to make the scheme more attractive for the farming community.

## REFERENCES

- Anand, R. (2009) Waiver of agricultural loans: social justice or a travesty thereof?, Drake Journal of Agricultural Law, 15 Drake J. Agric. L. 287, retrieved on December 10, 2013, from 48, [http://www.researchgate.net/publication/228174812\\_Waiver\\_of\\_Agricultural\\_Loans\\_Social\\_Justice\\_or\\_a\\_Travesty\\_Thereof](http://www.researchgate.net/publication/228174812_Waiver_of_Agricultural_Loans_Social_Justice_or_a_Travesty_Thereof).
- Chand, R. (2017) Doubling Farmers Income: Rationale, Strategy, Prospects and Action Plan (NITI Policy Paper No 1/2017), NITI Aayog, New Delhi, Government of India, [http://nitigovin/writereaddata/files/document\\_publication/DOUBLING%20FARMERS%20INCOMEpdf](http://nitigovin/writereaddata/files/document_publication/DOUBLING%20FARMERS%20INCOMEpdf).
- Gaur, U. (2008) Loan Waiver Scheme and Indian Agriculture, CCS Working Paper No. 195 Summer Research Internship Programme 2008, Centre for Civil Society, retrieved on December 10, 2013, from <http://ccs.in/...papers/2008/Loan-Waiver-and-Indian-Agriculture-195.pdf>.
- GoI. (2015) Raising Agricultural Productivity and Making Farming Remunerative for Farmers, NITI Aayog, Government of India, 16 December, [http://wwwnitigovin/writereaddata/files/document\\_publication/Raising%20Agricultural%20Productivity%20and%20Making%20Farming%20Remunerative%20for%20Farmerspdf](http://wwwnitigovin/writereaddata/files/document_publication/Raising%20Agricultural%20Productivity%20and%20Making%20Farming%20Remunerative%20for%20Farmerspdf)
- Grover, D. K., Kumar, S. and Vatta, K. (2003) *Market Imperfection and Farmers' Distress in Punjab*, Agro Economic Research Centre, P.A.U., Ludhiana.
- John, D., Lakshmi, A. and Chatterjee, C. (2010) Farm Loan Waiver ó Remedy or Malady? IBS Research Center 8-13.
- Kanthi, J. (2014) Economics of Agriculture and Farmers' Suicides-A Case Study of arangal District In Andhra Pradesh. Unpublished PhD Thesis, Osmania University.
- Kanz, M. (2016) What Does Debt Relief Do for Development? Evidence from India's Bailout for Rural Households, American Economic Journal: Applied Economics, Vol 8, No 4, pp 666-99.
- Macharia, I. (2015) Determinants of Farmers' suicides in Andhra Pradesh: An analysis. International Journal of Academic Research. 2(1): 81-87
- Mohanty, B.B. (2014) Social Root of farmers suicides in Maharashtra. Gokhale Institute of Politics and Economics, Pune. Retrieved from <http://www.unipune.ac.in/snc/cssh/egp/6%20Unpublished%20materials%20on%20EIGS/14.pdf>.



- Mukherjee, S., Krishnamurthy, S. and Prasanna, T. (2014) Costs and Benefits of Debt Moratoria: Evidence from a Natural Experiment in India, Indian School of Business Working Paper.
- NABARD. (2018) *All India Rural Financial Inclusion Survey (NAFIS) 2016-17*. Available at [https://www.nabard.org/auth/writereaddata/tender/1608180417NABARD-Repo16\\_Web\\_P.pdf](https://www.nabard.org/auth/writereaddata/tender/1608180417NABARD-Repo16_Web_P.pdf)
- Phadnis, A. and Gupta, A. (2019) The Politics of Farm Loan Waivers, *Economic and Political Weekly*, 54 (23): 50-56.
- Ramachandra Rao, B. (1992) Some critical observations on the agricultural and rural debt relief scheme, *The Banker*-Jan 1992
- Rath, N. (2008) Implications of the Loan Waiver for Rural Credit Institutions, *Economic & Political Weekly*, Vol 43, No 24, pp 13616.
- Ravi, S. (2015) *Farmer Suicide Contagion in India*, Brookings India IMPACT Series, Brookings Institution India Center.
- Salve, T. N. and Biradar, J. P. (2014) An Impact of Government's Agricultural Debt Waiver and Debt Relief (ADWDR) Scheme. *Journal of Commerce & Management Thought*, Vol. 5-4: 635-643
- Sharma, T. (2012) Waiver of Agricultural Loans: Social Justice or a Travesty There of. *SSRN*, 1-30.
- Shylendra, H.S. And Katar, S. (1994). The Impact of the loan-waiver scheme on the recent performance of credit co-operatives in Karnataka. *Institute of Rural Management*, October 1994, 1-9.
- Shylendra, H S. (1995) 'Farm Loan Waivers: A Distributional and Impact Analysis of the Agricultural and Rural Debt Relief Scheme, 1990', *Artha Vijnana*, Vol 37, No 3, pp 261-275.
- Sidhu, R.S., Singh, S. and Bhullar, A. S. (2011) Farmers' suicides in Punjab: A census survey of the two most affected districts, *Economic and Political Weekly*, 46:131-137.
- Singh, S., Bhogal, S. and Singh, R. (2014) Magnitude and Determinants of Indebtedness Among farmers in Punjab. *Indian Journal of Agricultural Economics*. 68(2); 243-256
- Srinivasan, N. (2008) Farm Loan Waiver: Right Choice for Supporting Agriculture? *Cab Calling*, April to June 2008, 30-35.
- Vaidyanathan, A. (2008) Farm Loan Waiver: A Closer Look and Critique, *Hindu*, pp 11.

## Appendix I: Comments on the draft report

### Title of the draft report examined: Impact evaluation of farm debt waiver scheme on farmers livelihood in Punjab

1. **Date of receipt of the Draft report:** 31<sup>st</sup> March, 2020
2. **Date of dispatch of the comments:** 30<sup>th</sup> May, 2020
3. **Chapter-wise comments:**

#### Chapter-I:

- Background of the study is very poorly written. Please make a case, why this study is implemented. Initially, you may mention for Indian agriculture experiencing agrarian distress. Mention how many loan waiving schemes were announced. It will be good to provide a brief history of loan waiving.
- Review of literature section is very weak. You need to divide review based on the broad objectives of the study. The review should have been done from professional journals. There are only two papers reviewed from EPW; and only one by Sidhu *et al* is evidence based article. Another one is the Perspective and not based on any evidence. A brief write-up at the end of the review of literature on what were the key observations and how your study will add value to the literature.
- I am not sure if sampling is right. There is no non-beneficiaries in the sample. This means there is no control. And, how can you conclude that the changes were due to loan waiving. You should have taken difference-in-difference for sampling as well as for analysis.

#### Chapter-III:

- Your results are good but need lot of improvement in presenting them. There is no statistical test, nor any analysis to arrive at conclusions. In many instances, the change is so negligible (1% or 2%), which may be due to other factors than loan waiving.

#### Chapter-V:

- The last chapter repeats some of the previous chapters. In conclusions, you may mention: (1) how loan-waiving affected beneficiaries; (2) what were the major constraints in implementing the schemes; (3) what problems farmers faced to avail the scheme; and (4) how the scheme could have been improved.

#### 5. General comments.

- The report needs lot of editing. I shall appreciate if the report is edited technically as well as professionally.

#### 6. Overall view on acceptability of report

- I am sorry for so many suggestions. I hope you will incorporate the suggestions before submitting the report. Despite lots of limitations, I enjoyed the report and for that I congratulate you and your team.

P.K.Joshi  
Hon. Director  
(AERC, Delhi)

## **Appendix II: Action taken report on the comments of draft report entitled 'Impact evaluation of farm debt waiver scheme on farmers livelihood in Punjab'**

All the comments were taken into consideration while finalizing the report. The most appropriate answer to the comments has been incorporated in the relevant chapters. The point-wise detail of the answers to various queries is as follows:

### **Chapter-I:**

As per reviewer's comments, background of the study undertaken has been revised by adding brief history of loan waiving in India. Review of literature has been updated by adding more study related articles and bifurcated according to the broad objectives of the study.

As far as sampling is concerned, the study has been undertaken by adopting 'Before' and 'After' approach rather than 'With' and 'Without' approach i.e. why there were no non-beneficiaries in the sample selected.

### **Chapter-III:**

The entire chapter has been edited and statistical analysis undertaken as per suggestion of the learned reviewer.

### **Chapter-V:**

The chapter has been revised as per suggestions of the learned reviewer.

As desired, report has been edited and discussion strengthened wherever required. Sincere efforts have been put forth by the team members to bring out a good output through this study.

J.M.Singh  
Director  
(AERC, Ludhiana)