Levels of Living of Farmers in Rural Punjab

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Abstract

The objective of the present paper is to analyze the levels of living of the farmers namely landless, marginal, small, medium and large farmers of Rural Punjab. The present study is based on 631 farm households and relates to the year 2010-11. The study concludes that average household income and per capita income is directly related with the farm-size. The average household and per capita consumption expenditure on non-durables, durables, services and marriages and other socio-religious ceremonies follows trend starting with the landless farmers and ending with the large farmers. Majority of landless farmers are living below the poverty line because of lack of productive asset, i.e. land. The percentage share is higher among marginal and small farmers as compared to medium and large farmers because of small and uneconomic size of landholdings, more illiteracy, lack of gainful employment opportunities, etc. The concentration of debt within various categories has also been studied in this paper.

Key words: Farmers, Consumption expenditure, Debt. JEL Classification: D33, E21, P25

Introduction

The New Agricultural Technology relates to the package of high-yielding varieties seeds, assured irrigation, use of chemical fertilizers, insecticides, pesticides, herbicides, machinery and modern agricultural practices. It has helped in increasing the income levels as well as total food grain production. The introduction of the New Agricultural Technology would, therefore, result in a growing polarization between large-scale and small-scale cultivators (Wilson, 2002). All the categories of cultivators have been able to record substantial increase in their output and income through the adoption of new technology. But the large farmers benefitted more than the small farmers (Johl, 1975). Agriculture is now a business and has to run so. It can't be viable for marginal and small farmers, who cannot cut their costs, can't afford the latest technology. The green revolution had made impressive strides in Punjab agriculture and achieved many landmarks to enhance the income of the farmers. Nevertheless success still excludes marginal and small farmers. These resource poor farmers have been unable to get their fair share in the cake (Sekhon et al, 2009). India achieved self-sufficiency in food grains in the 1970s and has sustained it since then. It improved its capacity to cope with year-to-year fluctuations in food production. The achievement of macro food grain security at the national level did not percolate down to households and the level of chronic food insecurity in India is still high (Radhakrishna, 2005). The problem of food insecurity still persists, as a large proportion of population is still below poverty line (Singh et al., 2006). The consumption expenditure pattern has close association with income level and expenditure increased when income increased (Velanganni, 2013). The low and middle income groups have to resort borrowings to meet their consumption expenditure. The low income group spends a major proportion of their income on food grains whereas the higher income group spends proportionately less on food grains (Galgalikar et al., 1970). While India has made considerable progress in poverty reduction, the overall improvement in nutritional status has beenrather slow. Economic

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growth although resulted in decline in income poverty but has not translated into either commensurable increase in food energy intake or significant reduction in malnutrition. The risk of malnutrition is high among poor households where mothers have poor nutritional levels (Reddy *et al.*, 2004). The problem of food insecurity still persists, as a large proportion of population is still below poverty line (Singh *et al*, 2006).

Credit is one of the most impact factors having a great impact on the growth and development of an economy. With the introduction of New Agricultural Technology consisting of biological and mechanical innovation, the agriculture in Punjab became capital intensive leading to increase in the demand for more capital (Joshi, et al. 2005). Transformation of Punjab agriculture led farms of all size to use the modern machines like tractors, threshers, harvesting combines, tube-wells, diesel and electricity and chemicals, fertilisers, insecticides and weedicides (Shergill, 1998). To finance the productive and high cash expenditure on these inputs, Punjab farmers regularly borrows huge amounts from various institutional credit agencies i.e. co-operative societies, regional rural banks (RRB's), commercial banks etc. and non-institutional credit agencies i.e. moneylenders, commission agents, relatives & friends etc (Shergill, 2010). While studying the Punjab peasants, Darling (1925) wrote "Indian peasant is born in debt, lives in debt and dies in debt". Though it was written nine decades back, the problem of indebtedness not only remains true today but it has been aggravated further in the recent years.

The objective of the present paper is to analyze the levels of living of the farmers namely landless, marginal, small, medium and large farmers of Rural

 Table 1. Levels of income of farmers

Punjab.

Data Sources and Methodology

For the analysis of levels of living of the different farm-size categories, on the basis of agro-climatic criterion, the whole Punjab state has been divided into three regions: the Shivalik foothills region, the central plains region and the south-west region. It was decided to select one district from each agro-climatic region. On the basis of this criterion, Hoshiarpur district from the Shivalik foothills region, Ludhiana district from the central plains region and Bathinda district from the south-west region have been selected. On the basis of random sampling method one village from each development block of the selected districts has been selected. Thus, in all, thirty villages have been selected for the survey. These include ten villages from Hoshiarpur district, twelve villages from Ludhiana district and eight villages from Bathinda district. As many as 10 per cent farm households consisting of landless, marginal, small, medium and large farmers formed the sample for the survey. Out of 30 villages, 631 households in all, 196 farm households from Hoshiarpur district, 247 from Ludhiana district and 188 from Bathinda district have been selected. Out of 631 farm households, 43 landless, 173 marginal, 183 small, 186 medium and 46 large farm households have been selected for the purpose of survey. The present study relates to the agricultural year 2010-11.

Results and Discussion

Level of income

The information about average annual household income of the different farm-size categories is given in Table 1. Sources of income have been classified into 10 different heads which include farm business income, milk and milk products, livestock, hiring out

Table	Levels of income of far	(Mean values in Rs. per annum)					
Sr. No.	Sources of Income	Landless Farmers	Marginal Farmers	Small Farmers	Medium Farmers	Large Farmers	All Sampled Farmers
1.	Farm business income	28984.21	45084.57	88942.23	231627.44	806380.93	167192.72
2.	Milk & milk products	8159.14	12101.44	15940.79	22658.50	27042.61	17147.38
3.	Livestock	1674.42	2138.73	1547.44	3496.24	5144.93	2554.91
4.	Hiring out labour in agricultural sector	2922.72	1872.72	328.69	0.00	0.00	807.94
5.	Hiring out agricultural equipment	348.84	1027.75	1284.15	2419.35	18913.04	2769.89
6.	Rent from leased out land	0.00	0.00	3978.14	13274.19	58130.43	9304.28
7.	Salaries	7801.60	4496.88	4934.43	14475.46	11021.74	8266.03
8.	Pensions	1376.74	1430.11	2344.06	4080.65	5217.40	2748.91
9.	Remittances	1162.79	2225.43	3715.85	11881.72	32139.83	7612.42
10.	Others*	644.47	587.86	514.63	713.98	1067.39	642.61
	Total	53074.93	70965.49	123530.41	304627.53	965058.30	219047.09

Source: Field Survey, 2010-11

* It includes income from poultry, sale of manure and seeds, shop keeping, beauty parlour, tailoring etc.

labour in agricultural sector, hiring out agricultural equipments, rent from leased out land, salaries, pensions, remittances and others. The table shows that an average farming household earns Rs. 219047.09 annually in rural Punjab. There was considerable variation in the income levels earned by different farm-size categories. These are Rs.53074.93, Rs. 70965.49, Rs. 123530.41, Rs.304627.53 and Rs. 965058.30 for the landless, marginal, small, medium and large farm-size categories respectively. Thus, the average household income is directly related to the farm-size. The total income of large farm-size category is 18.18 times more than that of landless farm-size category.

It is evident from the data that farm business income is the most important component of household income followed by milk and milk products and rent from leased out land. The average value of income from these three heads is found to be Rs.167192.72, Rs. 17147.38 and Rs. 9304.28, respectively. The table clearly shows that in absolute terms the sources of income shows a similar pattern across the different farm-size categories. The income from most of the sources rises as we move up from the landless to large farm-size category. Income from hiring out labour in agricultural sector, salaries and other sources appears in a somewhat different way. The income from hiring out labour in agricultural sector is the highest, i.e. Rs. 2922.72 for the landless farm-size category, followed by the marginal and small farm-size categories with their respective income values of Rs. 1872.72 and Rs. 328.69, respectively. The data relating to income from hiring out labour in agricultural sector highlights that the poor economic condition of landless, marginal and small farmers compel them to work as agricultural labourers. On an average, a farming household earns an income of Rs. 8266.03 from salaries. It is the highest for the medium farm-size category, followed by the large, landless, small and marginal farm-size categories. The large farm-size category earns Rs. 1067.39 from other sources, whereas corresponding figures for the medium, landless, marginal and small farm-size categories are Rs. 713.98, Rs. 644.47, Rs. 587.86 and Rs. 514.63, respectively. The income from hiring out agricultural equipment, pensions and remittances increases as farm-size goes up and account for a meager share of the total income for an average farming household. From the above analysis it can be concluded that the average household income is directly related to the farm-size. The average size of operational holding of the large farmers is much

higher than the other farm-size categories. They are capable of making heavy investments in the form of fertilizers, tube wells, agricultural machinery and other required inputs. It is an important factor in strengthening the income position of the large farmers.

Levels of consumption expenditure

The mean values of consumption expenditure of farmers have been exhibited in Table 2. The table shows that annual consumption expenditure of an average farming household is Rs. 229492.81. However, there are considerable differences in the levels of consumption expenditure of different farmsize categories. The consumption expenditure of the landless, marginal, small, medium and large farmers has been worked out as Rs. 60385.82, Rs. 89702.98, Rs. 144819.75, Rs. 329505.64 and Rs. 845742.74. respectively. These figures clearly indicated that the average household consumption expenditure is directly related to the farm-size. The table also shows that the landless farmers have spent Rs. 41963.44 on non-durable items. However, the corresponding figures for the marginal, small, medium and large farmers are Rs. 54334.29, Rs. 78397.90, Rs. 122540.98 and Rs. 217226.45, respectively. As far as expenditure on durables is concerned, Rs.4102.63 is accounted for the landless farmers, whereas it is Rs. 8697.36, Rs. 17840.98, Rs. 73309.62 and Rs. 254761.74 for the marginal, small, medium and large farmers, respectively. The landless, marginal, small, medium and large farm-size categories have spent Rs. 8466.52, Rs. 12503.70, Rs. 20392.89, Rs. 57686.90 and Rs. 110660.85 on services. The consumption expenditure on marriages and other socio-religious ceremonies has been accounted at Rs. 5853.23 for the landless farmers while the corresponding figures for the marginal, small, medium and large farmers are Rs. 14167.63, Rs. 28187.98, Rs. 75968.14 and Rs. 263093.70, respectively. The table highlights that the amount of consumption expenditure on non-durables, durables, services, and marriages and other socioreligious ceremonies is much higher in the case of large farmers as compared to landless, marginal, small and medium farmers. The large farmers spend maximum amount on marriages and other socioreligious ceremonies and durables. The remaining categories spend maximum amount on non-durable items. The highest expenditure on all the items in the case of large farmers reveals their higher level of income due to ownership of productive means of production which have a significant role in determining the levels of living.

Sr.	Items of Consumption	Landless	Marginal	Small	Medium	fean values in Large	All
No.		farmers	farmers	farmers	farmers	farmers	sampled farmers
A.	Non-durables						
1.	Foodgrains						
(i)	Cereals	8204.15	9348.73	12594.39	17922.69	29145.95	14206.55
(ii)	Pulses	783.93	731.87	662.19	1583.88	2378.91	1088.33
2.	Milk & milk products	8015.31	13322.94	18717.89	33018.87	58168.56	23643.18
3.	Sugar/gur	2933.70	3053.84	3681.33	4662.83	6972.52	3996.71
4.	Edible oils	964.44	1014.78	1207.61	1394.70	1941.70	1246.83
5.	Vegetables	2434.21	2732.21	3353.90	3616.77	5868.54	3388.14
6.	Fruits	205.58	320.84	703.12	2118.45	5083.22	1300.91
7.	Condiments and spices	1915.86	1878.43	2145.25	2351.13	3106.07	2187.19
8.	Pickles/ jams / juices	210.46	276.57	413.93	567.36	1313.26	473.19
9.	Tea leaves	1449.58	1465.25	1576.94	1747.94	2994.06	1691.35
10.	Meat/ mutton/fish	37.21	55.00	474.22	1327.23	3752.28	819.92
11.	Eggs	79.07	95.84	222.46	603.92	1127.17	356.37
12.	Biscuits/ bread/ sweets	243.72	332.01	681.19	1553.07	5106.30	1135.24
13.	Intoxicants and drugs	2019.76	4008.15	9071.50	15054.35	27298.90	10347.55
14.	Fuel &electricity	4471.58	6141.52	8370.12	12451.35	22317.00	9764.36
15.	Clothing & bedding	3689.35	4799.73	8457.40	14288.90	27168.48	10248.55
16.	Footwear	1688.80	1908.05	2806.18	4568.76	8720.76	3434.53
17.	Washing & toilet articles	2616.74	2848.53	3258.28	3708.78	4762.77	3349.20
	Sub-total A (1-17)	41963.44	54334.29	78397.90	122540.98	217226.45	92678.10
B.	Durables						
1.	House construction, addition of rooms and major repairs	2348.84	5173.41	10956.28	52715.05	190434.78	34225.04
2.	Radio/TV/ VCD/ LCD	504.65	288.12	289.62	1277.15	4608.70	909.82
3.	Fans /coolers / ACs	453.49	270.81	377.87	888.71	2816.30	682.01
4.	Sewing/ washing machine	133.60	255.25	224.04	589.25	1136.74	400.62
5.	Furniture	232.56	207.51	177.05	1061.02	3369.57	682.49
6.	Utensils	217.44	153.29	215.30	788.66	1447.83	457.31
7.	Bicycle	132.56	109.83	131.97	86.02	480.43	137.80
8.	Car/motorcycle	0.00	2178.45	5284.15	15733.87	49663.04	10388.07
9.	Others*	79.49	60.69	184.70	169.89	804.35	184.34
	Sub-total B (1-9)	4102.63	8697.36	17840.98	73309.62	254761.74	48019.95
C.	Services						
1.	Education	1939.53	3499.16	6996.17	33463.71	65130.43	17732.65
2.	Healthcare	2604.20	3614.62	5349.18	9567.31	18686.96	6902.26
3.	Entertainment	778.30	917.06	1292.73	3834.50	7915.11	2386.70
4.	Conveyance	1818.16	2720.85	4263.64	6818.85	11395.96	4947.15
5.	Communication	1326.33	1752.01	2491.17	4002.53	7532.39	3022.15
	Sub-total C (1-5)	8466.52	12503.70	20392.89	57686.90	110660.85	34990.91
D.	Socio-religious Ceremonies						
1.	Marriages	4883.72	11716.76	24321.86	66392.87	238535.48	47558.81
2.	Other social ceremonies	481.39	1491.33	1778.69	5698.92	20449.52	4128.17
3.	Religious ceremonies	488.12	959.54	2087.43	3876.35	4108.70	2343.88
	Sub-total D (1-3)	5853.23	14167.63	28187.98	75968.14	263093.70	54030.86
	Total	60385.82	89702.98	144819.75	329505.64	845742.74	229492.81

 Table 2. Levels of Consumption Expenditure of Farmers

Source: Field Survey, 2010-11

*It includes expenditure on almirah, gas, geyser, inverter, etc.

Incidence of income based poverty

Table 3 carries the data showing the percentage of farmers living below the poverty line,

which has been worked out on the basis of different income criterion. While analyzing the data it was found that almost one-third of the sampled farmers, i.e., 35.18 per cent live below the poverty line. However, under the two criterions, i.e., 50 per cent of the state PCI and 40 per cent of the state PCI, the respective percentages for such famers are 65.13 and 58.32.

On the basis of income as per the Expert Group criterion, the poverty line comes to Rs. 18781.30 per capita per annum. According to this criterion, category-wise percentages for the landless, marginal, small and medium farmers living below the poverty line appear as 83.72, 66.47, 31.69 and 6.99 respectively.

By using the second criterion, i.e., 50 per cent of the state PCI, the poverty line comes to Rs. 34918.50 per capita income per annum. The table shows that all the landless farmers live below the poverty line. However, the percentages for the marginal, small and medium farmers living below the poverty line are 97.11, 80.33 and about 28.49, respectively.

The below poverty line households in the rural Punjab can also be identified by taking into consideration only 40 per cent of per capita income of the state instead of 50 per cent. This way the poverty line comes to Rs.27934.80 per capita income per annum. The table shows that considerable variations exist in the percentage of households living below the poverty line for the different farm-size categories. All the landless farmers live below poverty line. The category-wise percentages with respect to the marginal, small and medium farmers are 92.49, 68.85 and 20.97, respectively.

It is clear from the above analysis that an inverse relationship exists between the farmers living below the poverty line and farm-size in the rural areas of Punjab. Majority of landless farmers are living below the poverty line because of lack of productive asset, i.e., land. The percentage share is higher among marginal and small farmers as compared to medium and large farmers because of small and uneconomic size of landholdings, more illiteracy, lack of gainful employment opportunities, etc.

Incidence of consumption-based poverty

In the previous section, poverty among the different farm-size categories was studied on the basis of their income. However, in this section, an attempt has been made to work out poverty levels on the basis of consumption expenditure levels of the different farm-size categories. The basic criteria for the poverty line remain the same as applied in the previous section. All the farm households having per capita consumption expenditure below Rs. 18781.30 have been treated as poor according to the Expert Group criterion. Table 4 shows the percentage of farmers living below the poverty line on the basis of consumption expenditure. The table shows that as many as 27.57 per cent of the sampled farm households in rural Punjab live below the poverty line on the basis of consumption expenditure. This percentage is the highest (79.07) for the landless farmsize category, followed by the marginal, small and medium farm-size categories with their respective percentages of 55.49, 21.86, and 2.37, respectively. According to this criterion, the landless and marginal farm-size categories show the worst picture as compared to the small and medium farm-size categories. It is important to mention that percentage of the households below poverty line among the medium farm-size category is very low. Not even a single household is living below the poverty line among the large Farmers.

By using the second criterion, i.e., 50 per cent of the

Criterion	Farm-Size Categories							
	Landless farmers	Marginal farmers	Small farmers	Medium farmers	Large farmers	All Sampled farmers		
Expert Group (Poverty Line Rs. 18781.30 per capita income, per annum)	83.72	66.47	31.69	6.99	0.00	35.18		
50 Per Cent of the State PCI (Poverty Line Rs. 34918.50 per capita income, per annum)	100.00	97.11	80.33	28.49	0.00	65.13		
40 Per Cent of the State PCI (Poverty Line Rs. 27934.80 per capita income, per annum)	100.00	92.49	68.85	20.97	0.00	58.32		

Table 3: Percentage of farmers living below the poverty line: category-wise

Source: Field Survey, 2010-11

state PCI, the poverty line comes to Rs. 34918.50 per capita consumption expenditure, per annum. The table shows that as many as 61.80 per cent of all the sampled farmers taken together in the rural Punjab are living below the poverty line, while these figures work out to be 95.35, 90.75, 77.60 and 26.88 percent for the landless, marginal, small and medium farm-size categories, respectively which reveal a decreasing tendency with an increase in farm-size.

If we consider moderately by taking into consideration only 40 per cent of per capita income of the state instead of 50 per cent, the poverty line comes to Rs. 27934.80 per capita consumption expenditure per annum. The table shows that as many as 52.46 per cent of all the sampled farm households in rural Punjab are living below the poverty line on the basis of their consumption expenditure. There are considerable variations in the percentages of households living below the poverty line for the different farm-size categories. These are 93.02, 85.55, 65.02 and 12.90 per cent for the landless, marginal, small and medium farm-size categories, respectively.

It is clear from the above analysis that according to above criterion of poverty, percentage of poverty is the highest among landless, marginal, and small farmers because of their illiteracy, small and uneconomic size of landholdings, limited access to productive assets and higher incidence of indebtedness. There is not even a single farmer who is living below poverty in large farm-size category. This phenomenon is the result of higher size of owned and operational holdings.

Extent of debt

The data showing the extent of debt among the different farm-size categories in the study area is presented in Table 5. The table shows that 80.19 per cent of the farming households in the state of Punjab are under debt. There are certain variations across the different farm-size categories. The percentage of indebted households is the highest i.e., 90.70 among the landless farmers, whereas it is 82.66, 79.23, 77.42 and 76.09 per cent in the case of marginal, small, medium and large farm-size categories, respectively.

The average amount of debt per indebted household is Rs. 175746.91 in the rural areas of Punjab, while for an average per sampled household it is Rs. 140931.75. It is interesting to note that average amount of loan per indebted household and per sampled household increases with the increase in farm-size. This reveals the fact that the needs of farmers increase as farm-size increases because without investing in operational as well as fixed costs, the major share of income cannot be generated.

Conclusion and Policy Implications

The analysis of income pattern of farmers in rural Punjab reveals that farm business income is the most significant component of the income of all the farming households. There is a positive relationship between the farm size and income levels. The total income of large farmers is 18.18 times more than that of landless farmers. The analysis of consumption pattern of farmers in rural Punjab reveals that the large farmers give priority to marriages and other socio-religious ceremonies and durables while the other farming categories give the priority to non-durable items. The expenditure made by the large farmers on these items is reflective of their better economic condition due to ownership land. All the measures of poverty show an inverse relationship between the farmers living below the poverty line and farm-size. The analysis of magnitude and determinants of indebtedness among farmers in rural Punjab concluded that slightly more than 80 per cent of the farming households in the state of Punjab are under debt. The average amount of loans per indebted household and per sampled household increases as the farm-size goes up which reveals that the needs of farmers are increasing as the farm-size increases because without investing in operational as well as fixed costs, the major share of income cannot be generated.

The field survey has revealed the fact that income generated from farm activities and subsidiary occupations is too small to satisfy the needs of landless, marginal, small and medium farmers. Since, there is a positive relationship between farm size and farm business income, this makes a strong case for land reforms in favour of these poor peasants apart from other measures helpful in increasing their income. The income levels of poor farmers can be raised by developing subsidiary occupations like dairying, poultry, fisheries, repairing, small trade etc. The landless, marginal, small and medium farm-size categories try to maintain a minimum consumption level whether they can afford it or not. They spend most of their income on food grains. Their consumption expenditure on fruits, vegetables, meat, mutton and juice etc., is very low as compared to the large farm-size category. So, the social security measures have to be implemented particularly for the

benefit of these low income farmers. Moreover, distribution of essential goods particularly cereals and pulses at subsidized rates may be undertaken for the benefit of poor peasants. There exists an inverse relationship between population below the poverty line and farm-size in the rural areas of Punjab. The poverty is higher among the landless, marginal and small farmers as compared to large and medium farmers and there is not even a single large farmer living below the poverty line. Small and uneconomic size of landholdings, lack of gainful employment opportunities, etc are some of the main factors contributing towards the poverty of such farmers. Therefore, proper implementation of government employment generation programmes is necessary to improve the condition of these poor farmers. The average amount of loan per indebted household and per sampled household increases as the farm-size goes up which reflects that higher the farm-size more would be the needs of the farmers. There is urgent need to take effective measures to overcome the problem of indebtedness. Appropriate policy measures should be taken to promote smooth financing with minimum formalities. A system is required to be developed

wherein there should be no cost of borrowing except interest.

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Criterion	Farm-Size Categories							
	Landless farmers	Marginal farmers	Small farmers	Medium farmers	Large farmers	All sampled farmers		
Expert Group Criterion (Poverty Line Rs. 18781.30 per capita consumption expenditure, per annum)	79.07	55.49	21.86	2.37	0.00	27.57		
50 Per Cent of the State PCI (Poverty Line Rs. 34918.50 per capita consumption expenditure, per annum)	95.35	90.75	77.60	26.88	0.00	61.80		
40 Per Cent of the State PCI (Poverty Line Rs. 27934.80 per capita consumption expenditure, per annum)	93.02	85.55	65.02	12.90	0.00	52.46		

Table 4. Percentage of farmers living below the poverty line: category-wise

Source: Field Survey, 2010-11

Table 5. Extent of debt among farmers

Farm-Size Categories	No. of Households		Indebted Households as	Average Amount of Debt (Rs.)		
	Sampled	Indebted	Percentage of Sampled Households	Per Sampled Household	Per Indebted Household	
Landless Farmers	43	39	90.70	46,450.84	51,215.03	
Marginal Farmers	173	143	82.66	64,985.16	78,618.40	
Small Farmers	183	145	79.23	108,153.55	136,497.24	
Medium Farmers	186	144	77.42	220,365.59	284,638.89	
Large Farmers	46	35	76.09	324,087.28	425,943.29	
All Sampled Farmers	631	506	80.19	140,931.75	175,746.91	

Source: Field Survey, 2010-11

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