

Socio-Economic Characteristics of Marginal and Small Farmers in Punjab

H S Kingra, PK Dhindsa* and Sukhpal Singh

Department of Economics and Sociology, Punjab Agricultural University, Ludhiana

*Professor of Economics, Punjab School of Economics, Guru Nanak Dev University, Amritsar

Abstract

The vast majority of marginal and small farmers of the Punjab state was in the working age group. Of the average family size of marginal farmers in the state, as much as 2.41 were adult male members and 1.55 adult female members. This showed that there were 3.96 adult members in the families of marginal farmers in the state. Similarly, in case of small farmers, 2.24 were adult male members and 1.88 were adult female members. So far as education level and dependency ratio of marginal and small farmers are concerned, it was observed that as much as 44 per cent heads of marginal farm families and 37.43 per cent of small farm families of the state were illiterate. This shows that a large chunk of marginal and small farmers were illiterate in the so called developed state of India. The dependency ratio was 1.59 and 1.42 among marginal and small farm families. The joint family system is suffering under the impacts of modernisation. The marginal farmers of the state possessed household assets worth Rs 244822 while same was Rs 338995 in case of small farmers.

Key words: *Marginal farmers, Small farmers, Family size, Earners, Farm size*

JEL Classification: *J43, Q15*

Introduction

Agriculture is the major occupation of Punjab, which provides employment to about 36 per cent of workforce and contributes about 18 per cent to the gross state domestic product during 2013-14 (Anonymous, 2017). The agricultural model of modernisation in Punjab was based on a set of measures aimed at technological up-gradation of traditional modes of production along with a set of compatible institutional and policy changes following which the agricultural production process of the state became highly mechanized

and capital intensive. There are 4.77 lakh tractors, 14 lakh tube wells, 1.23 lakh threshers and about 13 thousand harvesting combines in the state (Anonymous, 2015). The heavy farm investment made by farmers in the state is facilitated by easy availability of institutional credit through a widespread network of cooperatives and commercial banks. Having just 1.53 per cent geographical area of the country, the state has become the backbone of the food security of the country. It has contributed about 26 per cent of wheat and about 42 per cent of rice during 2013-14 to the central pool of foodgrains (Anonymous, 2017). The state known as the 'Food Basket of

India' enables the food production to keep pace with the growing population by pioneering the process of agricultural modernization. In the economic context, Punjab is one of the progressive states of India and the agricultural sector influences the pace of growth and development of its economy. The benefits of new farm technology have been cornered much more by the large farmers as compared to the marginal and small farmers owing to viable farm sizes. Over the millennia, Punjab farming sector has undergone huge structural changes. During 1970s and 1980s the productivity of important crops grew significantly, the income of farmers' improved, agricultural employment increased and the national food economy turned from being deficient to self sufficient. This period is often referred to as the golden period of agricultural economy of the state. However, the period of 1990s was critical for the farming economy of the state, due to severe insect-pest attack (Sidhu *et al.*, 2005), particularly on cotton crop. The growth rate of agriculture sector of Punjab, which was 6.63 per cent per annum in the first decade of green revolution, decelerated to 4.74 per cent per annum between mid-1970s to mid-1980s. It further came down to 3.87 per cent between mid-eighties (Sidhu, 2002). During the period 1997-98 to 2001-02, the Punjab agriculture grew at an abysmal rate of 1.90 per cent per annum, which was less than the overall average growth (3.84%) of Punjab economy.

But over the time, the farming sector of the Punjab has witnessed large changes in its land structure, costs and productivity. During the era of high growth, the farmers acquired high living standards, which enhanced their financial liabilities towards social and cultural obligations. As a result, the burden of their debt continued to increase. There is a decline in the proportion of cultivating workers in the total workforce that have added to the unemployed

or semi-employed force which has in turn built a pressure on an already overcrowded agricultural labour market. During last two decades, the overall decline was observed in the number of marginal and small holdings. This indicates that the marginal and small farmers are either leasing out or selling their land (Singh and Bhogal, 2014).

Although the state of Punjab has achieved a higher rate of productivity and consequently changes in rural economy, the benefits of green revolution have not percolated to the marginal and small farmers (Singh, 1996). Keeping this in view, the present study examines the socio-economic characteristics of marginal and small farmers in different regions of the Punjab state.

Data Sources and Methodology

Multistage stratified random sampling technique was adopted for the study. District was selected as the first stage-sampling unit, block as the second stage unit, village as the third stage sampling unit and the farmer household as the fourth and ultimate stage sampling unit. There are 22 districts in Punjab, comprising of 4 districts in Sub-mountainous zone (zone I), 12 in Central zone (zone II) and 6 in South-western zone (zone III). One-third of the districts in each zone were selected. In this way, one district namely, Ropar from Zone I, three districts namely Ludhiana, Tarn Taran and Patiala from Zone II and two districts namely, Bathinda and Mansa from Zone III were selected for the study. Thus, total six districts were selected for the study. Two blocks from each district were randomly selected. Two villages from each selected block, away from the periphery of the main town of the block were selected randomly. On the basis of proportion at the state level, marginal farmers (up to 1 hectare) and small

farmers (1.01 to 2.00 hectares) were selected in the ratio of 1:1.4. A sample of 100 farmers (marginal and small) from zone I, 300 from zone II and 200 from zone III were selected, choosing 25 farmers from each selected village. Thus, in all 600 respondents were selected for the purpose of the present study. The primary data were collected on a specially structured questionnaire through personal interview method during the year 2012-13.

Results and Discussion

The socio-economic characteristics of marginal and small farmers include age of the respondents, family structure, family type, education level of the farmer, farm as well as non-farm earners, dependency ratio and household durable asset structure of the family. All these factors influence the income, consumption, indebtedness and poverty of the family. Therefore, it is relevant here to have an overview of the socio-economic characteristics of sampled marginal and small farmers in Punjab.

Age

The age of the sample respondents plays important role in their involvement in agricultural activities, i.e., younger generation are more motivated towards new technology as compared to the older ones, who are relatively less educated. Also, the families with elderly household head have different patterns of expenditure with respect to both domestic and farm expenditure as they are more cautious and selective for the same. Therefore, the respondents were grouped according to their age. Table 1 exhibits the distribution of selected marginal and small farmers according to their age in different zones of Punjab.

Table 1 shows that the highest proportion i.e. 48.50 per cent of the total selected heads of the marginal farm families was in the age group of 30-45 years, followed by 37.20 per cent in the age group of 45-60 years and the remaining 14.80 per cent in the age group of above 60 years. Among small farmers, the majority i.e. 68.28 per cent belonged to the age

Table 1. Distribution of selected marginal and small farmers according to age in different zones of Punjab

Zone	Farm-size categories	Age (Years)			Total
		30-45	45-60	Above 60	
I	Marginal	17(40.48)	14(33.33)	11(26.19)	42(100.00)
	Small	26(44.82)	16(27.59)	16(27.59)	58(100.00)
II	Marginal	59(47.20)	50(40.00)	16(12.80)	125(100.00)
	Small	13(7.43)	153(87.43)	9(5.14)	175(100.00)
III	Marginal	44(53.01)	29(34.94)	10(12.05)	83(100.00)
	Small	32(27.35)	70(59.83)	15(12.82)	117(100.00)
State	Marginal	120(48.50)	93(37.20)	37(14.80)	250(100.00)
	Small	71(20.29)	239(68.28)	40(11.43)	350(100.00)

Note: Figures in parentheses indicate percentage to total respondents

group of 45 to 60 years, followed by 20.29 per cent in the age group of 30-45 years and 11.43 per cent in the age group of above 60 years.

Zone wise analysis also depicted a similar pattern of age distribution. Among marginal farmers, the highest proportion i.e. 40.48, 47.20 and 53.01 per cent was in the age group of 30-45 years in zone-I, zone-II and zone-III, respectively. On the other hand, in case of small farmers the majority i.e. 87.43 per cent in zone-II and 59.83 per cent in zone-III were in the age group of 45-60 years. However, in zone-I, the highest proportion i.e. 44.82 was in the age group of 30-45 years.

The analysis shows that the majority of the selected marginal and small farmers were in the working age group of 30-60 years. There were 14.80 per cent of marginal farmers and 11.43 per cent of small farmers who were above 60 years of age.

Family Structure

The agricultural family has a long history in the development literature which has a crucial

role in providing livelihood in rural settings. The family structure, which depicts the number of adults, children including male and female members in the family and the family size, affects the income and consumption level of the family. The family structure has been presented in Table 2.

The average family size of marginal farmers came to be 5.74 and that of small farmers was 5.96 members at the state level. In case of marginal farmers, the average family size was 5.49 in zone-I, 5.61 in zone-II and 6.05 members in zone-III. Similarly, in case of small farmers, the average family size worked at 5.80 in zone-I, 6.02 in zone-II and 5.96 in zone-III. The family size was found to be the largest in zone-III and the smallest in zone-I. of the average family size of marginal farmers in the state, as much as 2.41 were adult male members and 1.55 adult female members. This shows that there were 3.96 adult members in the families of marginal farmers in the state, while the remaining 1.78 members were children of both the gender. Similarly, in case

Table 2. Family composition of marginal and small farmers in different zones of Punjab

Zone	Farm-size categories	Family composition (number)						Family size
		Adult		Children		Total		
		M	F	M	F	M	F	
I	Marginal	2.31	1.61	0.89	0.68	3.20	2.29	5.49
	Small	2.18	1.83	0.93	0.86	3.11	2.69	5.80
II	Marginal	2.39	1.43	1.00	0.79	3.39	2.22	5.61
	Small	2.21	2.02	0.97	0.82	3.18	2.84	6.02
III	Marginal	2.48	1.69	1.22	0.66	2.70	2.35	6.05
	Small	2.32	1.71	1.14	0.79	3.46	2.50	5.96
State	Marginal	2.41	1.55	1.05	0.73	3.13	2.27	5.74
	Small	2.24	1.88	1.02	0.82	3.26	2.70	5.96

M and F stand for male and female respectively

of small farmers, 2.24 were adult male members and 1.88 was adult female members. In this way, total adult members in a family were 4.12.

In zone-I, an average family of marginal farmers was having 2.31 adult male members and 1.61 adult female members i.e. total 3.92 adult members. The remaining 1.57 members were children. In zone-II, an average family of marginal farmers comprised of 2.39 adult male members and 1.43 were adult female members which totalled to 3.82 adult members. The remaining 1.79 members were children. In zone-III, 2.48 were adult male members and 1.69 adult female members and totalled to 4.17 adult members. The remaining 1.88 members were children.

In case of family of small farmers from zone I, 2.18 were adult male members and 1.83 were adult female members i.e. a total of 4.01 adult members. The remaining 1.79 members were children. In zone-II, 2.21 were adult male members and 2.02 were adult female members and in total there were 4.23 adult members. The remaining 1.79 members were children. In

zone-III, 2.32 were adult male members and 1.71 were adult female members and a total of 4.03 adult members. The remaining 1.93 members were children.

Type of Family

Family type is a concern of occupation from which family derives its major portion of income. It is the size of the family that largely determines the economic health of the household. Type of family has its importance as it brings out the decision making pattern in the family. It shows whether the decisions are taken by a single head or jointly by heads of various units in the family. Table 3 exhibits the type of family of selected marginal and small farmers. The characteristics of a joint family are: the head of family is its absolute head, the family owns a common property and the head of family is the trustee of the property, the landed property is prevented from fragmentation, an agricultural family finds it economically profitable to cultivate larger lands using the larger manpower by joint family. In a joint family everyone is assured of meeting his basic minimum needs and in turn

Table 3. Distribution of selected marginal and small farmers according to the type of family in Punjab

Zone	Farm-size categories	Type of family		Total
		Nuclear	Joint	
I	Marginal	25 (59.52)	17 (40.48)	42
	Small	31 (53.44)	27 (46.56)	58
II	Marginal	79 (63.20)	46 (36.80)	125
	Small	111 (63.43)	64 (36.57)	175
III	Marginal	41 (49.40)	42 (50.60)	83
	Small	56 (47.86)	61 (52.14)	117
State	Marginal	145(58.00)	105 (42.00)	250
	Small	198(56.57)	152 (43.43)	350

everyone performs the work allotted to him by the head of the family; and commonality of place of living saves lot of expenses which would have otherwise to be made on house rent, cost of constructing house and cost of the articles of daily use. In other words, in order to pursue agriculture joint family proves to be beneficial and has been preferred for long. However, the joint family system is suffering under the impacts of modernization. The table shows that on an average 58 per cent of the marginal rural households were having much family set up while 42 per cent had joint family system. Of the total small rural households 56.57 per cent had nuclear family set up while 43.43 per cent were having a joint family set up.

Zone-wise analysis revealed that majority of both categories of farm households were in the nuclear family type set up in zone I and II whereas in zone III maximum of marginal and small farmers were having joint family system, being 50.60 and 52.14 per cent, respectively.

Education Level

Education plays an important role in building any nation. When people of a country are literate, the country becomes more efficient and capable of adopting any changes. Likewise, the literate farmers are enthusiastic to adopt new farm technology, so as to increase their agricultural output in special and economic condition of the country in general. Therefore, the literate people in the research area are considered to be more knowledgeable than the illiterate and have greater capacity to adopt new technologies. Also, education of the family especially of the head of the family is an important determinant which affects the socio-economic status of the family. The educational level of head of the family is given in Table 4. As much as 44 per cent heads of marginal farm families were illiterate, maximum in case of zone III (55.42%). In case of small farm size categories 37.43 per cent heads of the families were illiterate in the state and ranged between 32.48 to 40.00 per cent among different zones.

Table 4. Distribution of selected marginal and small farmers according to their education level in different zones of Punjab

Zone	Farm-size categories	Education level						Total
		Illiterate	Primary	Middle	Matric	10+2	Graduate	
I	Marginal	20(47.62)	8(19.05)	6(14.29)	8(19.05)	0(0.00)	0(0.00)	42(100.00)
	Small	23(39.66)	15(25.86)	4(6.90)	14(24.14)	1(1.72)	1(1.72)	58(100.00)
II	Marginal	44(35.20)	22(17.60)	6(4.80)	51(40.80)	1(0.80)	1(0.80)	125(100.00)
	Small	70(40.00)	26(14.86)	31(17.71)	44(25.14)	2(1.14)	2(1.14)	175(100.00)
III	Marginal	46(55.42)	10(12.05)	17(20.48)	10(12.05)	0(0.00)	0(0.00)	83(100.00)
	Small	38(32.48)	29(24.79)	15(12.82)	34(29.06)	1(0.85)	0(0.00)	117(100.00)
State	Marginal	110(44.00)	40(16.00)	29(11.60)	69(27.60)	1(0.40)	1(0.40)	250(100.00)
	Small	131(37.43)	70(20.00)	50(14.29)	92(26.29)	4(1.14)	3(0.86)	350(100.00)

Figures in parentheses indicate per cent to total respondents

On the other hand, 27.60 per cent of head of family of marginal farmers and 26.29 per cent of the small farm families were having educational qualification of matric. So far as the level of higher education of these farmers is concerned, just 0.4 per cent of marginal farmers and 0.86 per cent of small farmers were having educational qualification of graduation. This shows that a large chunk of marginal and small farmers were illiterate in the so called developed state of India.

Farm and Non-Farm Earners

It is a fact that the agricultural sector is, by itself, incapable of creating additional opportunities of gainful employment that keeps pace with the increasing population. As a result, the sustenance of rural households is pivoted around not only creating effective employment in farming sector but also expanding the base of non-farm activities. Farm earners and non-farm earners lead to the determination of income, consumption and poverty level of the family. It also depicts the dependency ratio in the family. The number of

earners and dependency ratio is given in Table 5. The average family size of marginal farmers of the state was 5.74, out of which 1.50 (26.13 per cent) were working in the farm sector and 0.72 (12.54 per cent) were working in the non-farm sector. Higher the number of earners in a family lower will be dependency ratio and vice-versa. The dependency ratio for both the categories of farmers was the highest in zone III at 1.85 members for marginal farmers and 1.68 members for small farmers. The dependency ratio among marginal farm families was 1.59. Similarly, the average family size of small farmers in the state was 5.96 out of which 27.52 per cent were working in the farm sector and 13.76 per cent were working in the non-farm sector. The dependency ratio among small farm families was 1.42. Zone-wise analysis depicts that in case of marginal farmers the number of earner members were highest in zone II (41.53%) in both farm (28.34%) and non-farm (13.19%) sector which led to lowest dependency ratio of 1.41 members. In case of small farmers the earners percentage was again the highest in

Table 5. Number of earners in farm and non-farm sector among selected marginal and small farmers in different zones of Punjab

Zone	Farm-size categories	Family size	(Number)			
			Farm earners	Non-farm earners	Total earners	Dependency ratio
I	Marginal	5.49	1.40(25.50)	0.69(12.57)	2.09(38.07)	1.63
	Small	5.80	1.45(25.00)	0.84(14.48)	2.29(39.48)	1.53
II	Marginal	5.61	1.59(28.34)	0.74(13.19)	2.33(41.53)	1.41
	Small	6.02	1.81(30.07)	0.86(14.29)	2.67(44.36)	1.25
III	Marginal	6.05	1.41(23.31)	0.71(11.74)	2.1(35.05)	1.85
	Small	5.96	1.48(24.83)	0.74(12.42)	2.22(37.25)	1.68
State	Marginal	5.74	1.50(26.13)	0.72(12.54)	2.22(38.67)	1.59
	Small	5.96	1.64(27.52)	0.82(13.76)	2.46(41.28)	1.42

Figures in parentheses indicate per cent to total family size

zone II at 44.36 per cent and dependency ratio the lowest at 1.25 members.

Household Durable Assets

The level of living of farmers can be analysed from the status of ownership of various durable assets such as house, scooter, motor cycle, television, etc. The present value of household durables possessed by the marginal and small farm families has been given in Table 6. At the state level, the marginal farmers possessed household assets worth Rs 244822 while same was Rs 338995 in case of small farmers. The house itself secured a large share in total household durable assets. It was Rs 225571 for marginal farmers and Rs 313213 for small farmers. The average value of each item of durable asserts was higher for small farm size categories than the marginal farm size category. Among different zones the value of house, scooter, refrigerator, television, telephone, etc. was the highest in zone II for both the categories of farmers. Overall the average value of assets possessed

by marginal farmers were the highest at Rs 305727 in zone II followed by Rs 198387n zone I and Rs 176593 in zone III. Similar pattern of assets was observed in case of small farm size category being the highest in zone II at Rs 399638 followed by Rs 317159 and Rs 259114 for zone I and zone III, respectively.

From the above discussion, it is observed that the age of the majority of selected farmers ranged between 30-60 years; the average family size was about 6 members in a family, majority of farmers had nuclear family type, but in case of zone III the maximum farmers were having joint family system. The education level of the farmers showed a dismal picture having 44 and 37 per cent of marginal and small farmers respectively illiterate among the selected households. The dependency ratio was the lowest in zone II for both the categories of farmers and the highest in zone III, average being 1.59 and 1.42 for marginal and small farmers at state level. The possession of assets in value term was also the highest in zone II followed by zone I and III.

Table 6. Household durable assets with marginal and small farmers in different zones of Punjab (Rs/family)

Items	Zone - I		Zone - II		Zone - III		State	
	Marginal	Small	Marginal	Small	Marginal	Small	Marginal	Small
House	184137	293568	281421	371249	162426	236162	225571	313213
Scooter /Motor cycle /cycle	3162	4981	8214	7997	2956	6138	5620	6876
Refrigerator	1854	2771	3254	2992	1967	2687	2592	2853
Television	1959	3401	2756	4187	1467	3129	2194	3703
Telephone	289	311	398	464	318	382	353	411
Others	6986	12127	9684	12749	7459	10616	8492	11933
Total	198387	317159	305727	399638	176593	259114	244822	338995

Table 7. Operational area of marginal and small farmers in different zones of Punjab (hectares)

Type of Land	Zone-I		Zone-II		Zone-III		State	
	Area	%age	Area	%age	Area	%age	Area	%age
Marginal								
Owned	0.79	-	0.78	-	0.89	-	0.82	-
Leased-out	0.00	0.02*	0.00	0.00*	0.05	5.62*	0.02	2.03*
Owned Operational	0.79	100.00	0.78	95.12	0.84	100.00	0.80	97.76
Leased-in	0.00	0.00	0.04	4.88	0.00	0.00	0.02	2.44
Operational Area	0.79	100.00	0.82	100.00	0.84	100.00	0.82	100.00
Small								
Owned	1.56	-	1.53	-	1.78	-	1.62	-
Leased-out	0.00	0.00	0.00	0.00	0.09	5.06*	0.03	1.86*
Owned Operational	1.56	96.89	1.53	92.17	1.69	98.26	1.59	95.12
Leased-in	0.05	3.11	0.13	7.83	0.03	1.74	0.08	4.98
Operational Area	1.61	100.00	1.66	100.00	1.72	100.00	1.67	100.00

*: Percentages of leased-out land are out of owned land

Farm Size

Farm size is the major determinant of economic base of the peasantry. Table 7 reveals that on an average the marginal farmers of the state having 0.82 ha of operational land. Out of the total operational land, nearly 98 per cent of land was owned operated land whereas the proportion of leased-in land came to be 2.44 per cent only. Zone-wise, the operational area worked out to be the highest in Zone-III (0.84 ha), followed by Zone-II (0.82 ha) and was the lowest in Zone-I (0.79 ha).

Similarly, in the case of small farmers of the state having on an average 1.67 ha of operational land. Out of the total operational land, nearly 95 per cent of land was owned operated land whereas the proportion of leased-in land came to be 4.98 per cent only. Zone-wise, the operational area worked out to

be the highest in Zone-III (1.72 ha), followed by Zone-II (1.66 ha) and was the lowest in Zone-I (1.61 ha). The overall scenario with respect to farm size revealed that majority of the marginal and small farmers having owned cultivated land holdings in the state.

Conclusion and Policy Implications

Age structure of family is the main factor which determines the number of working persons and income of the family. In this study, the highest proportion i.e. 48.50 per cent of the total selected heads of the marginal farm families was in the age group of 30-45 years. Among small farmers, the majority (68.28 per cent) belonged to the age group of 45 to 60 years. Of the average, family size of marginal farmers in the state, as much as 2.41 were adult male members and 1.55 adult female members. Similarly, in case of small farmers,

2.24 were adult male members and 1.88 were adult female members.

So far as education level and dependency ratio of marginal and small farmers are concerned, it was observed that as much as 44 per cent heads of marginal farm families and 37.43 per cent of small farm families of the state were illiterate. The average family size of marginal farmers of the state was 5.74, out of which 1.50 (26.13 per cent) were working in the farm sector and 0.72(12.54 per cent) were working in the non-farm sector. The dependency ratio among marginal farm families was 1.59. Similarly, the average family size of small farmers in the state was 5.96 out of which 27.52 were working in the farm sector and 13.76 per cent were working in the non-farm sector. The dependency ratio among small farm families was 1.42. The joint family system is suffering under the impacts of modernisation. On an average 58 per cent of the marginal farm families were having a joint family set up while 42 per cent were living in nuclear family system. Of the total small rural households 56.57 per cent had joint family set up while 43.43 were a nuclear family set up. The marginal farmers possessed household assets worth Rs 244822 while same was Rs 338995 in case of small farmers. The house

itself secured a large share in total household durable assets. It was Rs 225571 for marginal farmers and Rs 313213 for small farmers of the state.

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