
COMPARISON OF SOCIO-ECONOMIC CHARACTERISTICS OF FARMING FAMILIES IN CENTRAL AND SOUTHERN REGIONS OF PUNJAB PROVINCE OF PAKISTAN.

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ABSTRACT

The objective of this study was to compare the extent of poverty in Central and Southern Punjab, Pakistan. From the list of all districts of Central and Southern Punjab, district Toba Tek Singh (TTS) and district Dera Ghazi Khan (DGK) were selected randomly as representative of Central and Southern Punjab respectively. Data was collected in 2011-12. Descriptive statistics was used to analyze the data. The results of the demographic analysis showed that labour class was higher in DGK (43%) while dependency ratio was estimated for TTS (135.12%) as compared to DGK (132.78). Literacy rate was observed higher (73.28%) in Central Punjab while 59.11% was found in district DGK. Houses with permanent structure were higher (40%) in TTS as compared to 12% in DGK. The ownership of other assets revealed that tractors, car/scooter, refrigerator and televisions were owned more in TTS due to their better economic conditions. Data further showed that participation of women in family income was found as 67 in district D. G. Khan which is higher than 45 in TTS. Further analysis revealed that in the district of DGK majority of households (43.7%) have their own cultivated lands. The use of tractors and implements is more in district DGK as compared to TTS. About 66% farmers in district TTS use certified seeds while it is 42% in district DGK. As for as food security is concerned, district TTS was found more food secured due to more average income. . The study concludes that incidence of poverty is higher in Southern Punjab relative to Central Punjab as shown by various indicators.

Key Words: Demographic, Dependency ratio, Literacy rate, , households, , food security.

1.INTRODUCTION

In the previous decade much of work had been done in Pakistan to estimate the poverty but it was limited at country or province level (World Bank, 2002; Anwar et al. 2004; Cheema, 2005; Anwar and Qureshi 2002). Inadequate work has been done at district level. Dearth of literature at district level analysis has been due to absence of data. Analyzing the poverty at district level is important for number of reasons. The most important is in the policy formulation and designing programs for allocation of resources for infrastructure development and uplifting the social sector. At the most basic level, the design of poverty reduction programs at the provincial level will require the designing of map that shows the distribution in the incidence and severity of poverty at district and regional levels. Without this map, targeting poverty will be extremely difficult (Cheema et al. 2008).

During 1970s and 1980s incidence of poverty was observed low in the country while it was high in 1990s. The scope of rural poverty remained higher as compared to urban areas instead of declining trend in the decade of 1970s and 1980s (Chaudhry et al., 2006). Number of factors were causing rural poverty which includes social services, food and health, education, location of area, household demographics, physical assets and land ownership, rural power structure, access to other assets, labour market etc (Qureshi and Arif, 2001; Arif, 2006 and Naschold, 2009)

Punjab is the most populous province of Pakistan. Its population has increased from 92.09 million in 2009 to 95.15 million till the end of 2011 (GOPb, 2011a). Majority resides in rural areas. Literacy ratio in rural Punjab has increased from 38% (1998) to 50 % in 2008-09. Male rural literacy ratio has increased from 50.4 to 63% while rural female literacy ratio climbed up to 24.8% to 39% in 1998 and 2008-09, respectively (GOPb, 2009b). According to multiple indicator cluster survey (MICS) Punjab, 2007-08, the literacy ratio (above 10 years) of district D.G.Khan and Toba Take Singh were 44% and 63% respectively.

Dependency ratio is an indication of how much of the young population is increasing and that of old is decreasing. The dependency ratio has already decreased from 0.86 to 0.75 in the last 15 years in Pakistan. Age composition of population shows that maximum population falls under age group 19-60 years, followed by 17% under age group of 6-18. Population below 5 years stands third with 7 % share in total population (GOPb,2008c). According to Jamal (2007) overall poverty incidence in the district DG Khan was 51 % while it was 52. % in the rural areas. In case of district

T.T. Singh the estimated overall and rural poverty came to 19% and 15% respectively. Comparison with respect of different indicators of poverty such as head count ratio, poverty gap and severity of poverty gap showed high poverty in district D.G.Khan as compared to T.T. Singh (Cheema et al. 2008). Cross sectional analysis revealed that incidence of rural poverty is higher in Southern Punjab as compared to central Punjab (Arif and Farooq, 2012).

Punjab makes a significant contribution to the national economy, accounting for 58.5% of Pakistan's national income. During the year 2007, the province accounted for 62.6% of commodity and social services, 57% of agriculture and 58.2% of industrial value-added in the national GDP. Agricultural development will not only raise farm income and generate on-farm employment but, more importantly, it will promote expansion of the rural non-agricultural sector, which will have beneficial effects on rural poverty, social stability and food security. About 38.5% population is food insecure in Punjab. District analysis revealed that food insecure population in D.G.Khan and T.T. Singh was 55% and 30% respectively. (Suleri, et al. (2009) and (Ahmed and Rehana, 1995). The results of the survey suggested that due to increase in food prices the poorest households now had to spend 70% or more of their income on food and their ability to meet most essential expenditures for health and education is severely compromised. In addition, the diminished purchasing power had severely impaired the capacity of the poor households to seek health care, and children education, particularly girls. This situation has further exasperated by the falling nutrition level, particularly for already malnourished children (GOP, 2008h).

1.1 Objectives of the study

The main objective of the study is to analyze and compare the socioeconomic characteristics of the farming communities of Central and Southern Punjab. Moreover, this study will also help the policy makers to allocate scarce resources in both the regions of Punjab.

2. RESEARCH METHODOLOGY

The study was conducted in financial year 2011-12. The study used the primary data for the analysis and comparison of socioeconomic aspects in Southern and Central Punjab. In order to draw the sample size, stratified sampling technique was employed. One district was chosen from each region and from each district one tehsils was selected by random. Then from each tehsil two union councils (UCs) were selected and from each UC three villages were taken. Total sample of 215 Households (HHs) was taken from six villages. A sample of 22-24 respondents was taken from each village. Random selection was ensured at each stage of stratified sampling. The data

were collected through a pre-designed and pre-tested questionnaire. descriptive statistics such as percentage and average were used to analyze the various socioeconomic characteristics of both the districts. SPSS software was used to analyze the data. The dependency ratio and literacy ratio have been estimated by the expressions 1 and 2, respectively. .

$$\text{Dependency Ratio} = \frac{\text{Number of peoples aged 0-18 and above 60}}{\text{Number of peoples aged 19-60}} \times 100 \quad (1)$$

Number of peoples aged 19-60

$$\text{Literacy Ratio} = \frac{\text{Number of literate aged 10 years and above}}{\text{Number of peoples aged above 10 years}} \times 100 \quad (2)$$

Number of peoples aged above 10 years

3. DATA ANALYSIS

Table 1 shows total population of the selected villages. Analysis of different age groups demonstrated that the highest proportion of population fell under the age group of below 18 years followed by age group of 19-60 years. Our results are inline with the results at national level data of Pakistan Economic survey of 2009-10 which also show the same trend of population distribution. Further probe into the matter revealed that district D.G.Khan was more populous as compared to TTS. However, the maximum population under working age group of 19-60 belongs to D.G.Khan district. The estimates of dependency ratio in table 1 elaborated that it was higher in TTS as compared to DGK. It means that population of working age in TTS face a greater burden in supporting the aging population.

Table 1: Sampling Population Under Different Age Groups

District	Total Population	Above 60			Between 19-60			Below-18			Dependency Ratio %
		M	W	%AGE	M	W	%AGE	M	W	%AGE	
D.G. Khan	1,825	38	46	4.60%	404	380	43.00%	535	422	52.43%	132.78
Toba Tek Singh	1,446	44	48	5.04%	322	293	42.53%	386	353	51.10%	135.12

Our data also showed that district D.G.Khan has low literacy rate at different levels of education from middle to university. Our results correspond to the result of (GOPb, 2008c). The Major reasons include poverty, more religious behavior and non-availability of educational institution above primary level in the villages and Sardari system in the sample area.

Table 2: Literacy Status in Study Area (Number)

District	D.G.Khan		T.T.Singh	
	Numbers	Percentage	Numbers	Percentage
Respondents No.	1460	100	1160	100
Respondents with basic education	324	22.19	218	18.79
Respondents with primary education	290	19.86	242	20.86
Respondents with Middle education	96	6.58	154	13.28
Respondents with Matric education	97	6.64	163	14.05
Respondents with College education	47	3.22	59	5.09
Respondents with University education	9	0.62	14	1.21
Literacy ratio	59.11	863	73.28	850

As per results given in above table, 22.19 % of respondents in D.G.Khan were those who had secured basic education, followed by the category of primary education with 19.86 percent of respondents. Literacy rate under the various education levels of middle, high, intermediate and graduation/master were 6.58, 6.64, 3.22 and 0.62 percent respectively in the district. The analysis revealed that there was no middle school in the sample village, while high school both for girls and boys exist in one village. Non availability of middle and high schools in the sampled villages of D.G.Khan was due to non-existence of political will on account of Sardari system. Sardars were reluctant to provide education facility in their areas. The literacy ratio was estimated as 59.11 in district DGK while it was 73.28 in TTS. The estimated literacy ratio finds support from the literacy ratio given in (GOPb, 2008c) wherein literacy ratio is higher (63%) in district TTS while it is 44% in district DGK.

In case of district TTS, the highest percentage of population (20.86 %) stood along the scale of primary education. The second highest percentage of population i.e. 18.79 % fell under the category of basic education, while 14.05, 13.28, 5.09 and 1.21 percentage of population in the district was of Middle, Matric, Graduation and Masterlevel respectively. It had been found that primary schools both for girls and boys were in 3 and 5 villages, middle schools both for males and females are available in 3 and 4 villages and high schools both for girls and boys were in operation in one village.

Type of houses is considered as an indicator of poverty. Using the same indicator, results showed maximum poverty in district D.G.Khan.. The analysis revealed that 75% houses were made up of mud in District D.G.Khan while it is 44% in district T.T.Singh. Average rooms per house had been reported as 3 in district D.G.Khan. It was pointed out that in district TTS maximum households (40%) were residing under permanent shelter due to their better economic situation.

Table 3: Livestock Assets

District	Total HH	HH with multiple entries	Lamb		Goat		Cow		Buffalo		Others	Sell Assets	
			Total respondents	Total Qty	Total respondents	Total Qty	Total respondents	Total Qty	Total respondents	Total Qty	Others	Total respondents	Purpose
Toba Tek Singh	215	14	4	4	92	332	40	64	67	188	12	81	Fertilizer, Marriage, Household Needs, Land, Construction, Medical Treatment, Livestock, loan repayment
Percent age		6.6	1.9		42.8		18.60		31.16			38.0	
Average	3.1			1.0		3.1		1.6		2.8			
D.G. Khan District	215	49	9	83	97	286	60	240	34	154	15	60	Agriculture, Household Needs, Medical Treatment, Livestock, construction, land, education
Percent age		22.8	4.2		45.1		27.91		15.81			27.9	
Average	4.1			9.2		2.95		4.0		4.53			

Results disclosed that Labor was a major source of family income in both the regions. The second highest source of income was agriculture in both the districts. However, regional comparison showed more respondents were engaged in agriculture activities in Southern Punjab on account of

more number of respondents have their own cultivated land which was estimated as 43.7% in DGK and 30% in TTS. Respondents doing government jobs were found more in TTS (8.84%) than DGK (i.e. 3.26%) literacy level is higher in TTS as compared to DGK.

Respondents doing multiple jobs were found 17.67% in DGK while it was 6.51% in TTS. Labor as a source of family income is more in district DGK and the results are consistent with the findings of Malik (2005) the incidence of poverty is maximum in cotton wheat zone. So peoples earn their extra income from non-farm sources and doing multiple jobs.

Among all types of livestock, cows and buffaloes are most important. The analysis of both the districts showed that number of cows in district D.G.Khan was found more as compared to TTS as given in table 3. Because cows were relatively cheap, therefore, households keep cows for milking purpose to fulfill not only the requirement of milk of their children but also to earn extra money by selling milk. Buffaloes were found more in district TTS because peoples prefer to take buffaloes' milk as it has more percentage of fats. The same trend is found during 2006 as per data available in (GOPb, 2009b). Data also revealed that more households in TTS sold one or more kinds of their livestock due to various reasons like education, house construction, marriage and to purchase agricultural inputs etc.

Table 4 illustrated that there were only 10 tractors in D.G.Khan while 13 in TTS among the sample respondents and the other farmers have to take the services of tractor on rent. District wise analysis revealed that car/scooter, refrigerator and televisions were more in TTS due to their better economic position. Moreover, Results also indicated the highest numbers of households with multiple facilities were found in district TTS.

Table 4: Household Assets

Distt.	Multiple Entries	Car/ Scooter		Refrige-rator		TV		Air Cooler		Tractor		Bicycle		Radio		Others
		Y	Q	Y	Q	Y	Q	Y	Q	Y	Q	Y	Q	Y	Q	
D.G. Khan	5	20	23	4	43	39	39	9	9	10	10	73	74	22	22	Mobile, Raksha, W. machin, Comput er, AC, sewing machine
% age		9		2		18		4		5		34		10		
T.T. Singh	79	27	36	4	45	49	49	8	8	13	13	61	72	12	17	Washing machine Mobile, Raksha, sewing machine , car
% age		13		2		23		4		6		28		6		

Analysis revealed that more number of women remained engage throughout the year in agricultural activities were found in T.T.Singh. However, engagement of women in seasonal agricultural activities were found more in district D.G.Khan. This indicated that either they had no land or it was very limited, therefore, they had to do work on the lands of others for income generation.

Table 5: Land Holding

District	Total Land	Cultivable Land		Non-Cultivable Land		No Land
		No. of respondents	Qty (Acre)	No. of respondents	Qty (Acre)	No. of respondents
Dist. D.G Khan	591	94	567	5	24	116
Percentage		43.7	96	2.3	4.1	54
Average			6.03		4.8	

Dist. T.T Singh	326	65	286	-	-	150
Percentage		30.02	87.7	-	-	70.4
Average			4.4			

Table 5 exhibited that district D.G.Khan has the majority of households with cultivated land. Main reason was that the district has the maximum percentage of cultivated area. According to the Punjab Development Statistics cultivated area in district D.G.Khan and TTS is 430 and 261 thousand hectares respectively. Due to highest cultivated land in the district, agriculture is a major source of family income wherein 33 percent respondents were engaged in agricultural activities as a major source of their family income.

Table: 6 Use of Agricultural Tools

DISTRICT ID	%age of respondents using latest agriculture tools							
	Tractor	Cultivator	Rota-vator	Leveler	Wheat Driller	Plough	Thrasher	Ridger
DG Khan Dist.	42.3	21.4	29.8	20.9	24.2	20.9	37.2	23.3
TT Singh Dist.	27.7	9.9	21.1	11.3	12.2	14.6	24.4	8.5

Further investigation pointed out that maximum use of tractors and all types of agricultural tools were found in D.G.Khan as shown in table 6. This may be due to the reason that the district has more area under cultivation as well as average land holding of cultivated area. This also shows the level of mechanization in the district. Tractor is the main source of mechanization in Punjab. The highest use of tractor in district D.G.Khan also correlates with the more number of tractors in the district as compared to TTS as per Punjab Development Statistics, 2009. Data also disclosed that maximum respondents (44%) using implements such as cultivator, rootavator, plough, ridger on rent were found in district D.G.Khan due to small holdings.

Table 7: Use of Inputs

District	No. of respondents	Farmers using Certified Seed	Farmers using own preserved seeds.	Farmers using indigenous seed from other farmers	Method of procurement for seeds	Seed preservation practices	Distance from market	% of farmers using fertilizer and pesticide
D.G Khan	103	44	45	14	Cash, credit, cash and credit	Packs in plastic bags, bardana.	1-25 KM	
% age		42.72	43.69	13.59				91.26
TT Singh	83	39	36	8	Cash, credit, cash and credit	Packs in bardana, bags, store in steel container and room	3-17 KM	
% age.		47	43.37	9.6				81

Table 07 revealed that own preserved seeds are being used by more numbers of respondents in district D.G.Khan, while the usage of certified seeds had been found more in TTS. Data disclosed that the percentage of respondents using fertilizers and pesticides in district D.G.Khan were high. This use is very rightly corresponding to the cultivated land in the surveyed districts of the province. Among those having their own cultivated land, 15% and 12% of respondents were found practicing grain storage in district D.G.Khan and TTS respectively. It means that 85 % households sell their produce in order to meet with other emergent needs because most of the farmers are small holders and they have to purchase seed, fertilizers and other inputs for the sowing of next crop and to meet some other requirements.

Detailed analysis illustrated that the highest percentages of respondents (66%) who were taken their meals three times in a day found in district TTS because higher average income. Our results

also get support from the results of the report of SDPI wherein District of D.G. Khan has been included in the food insecure group while, Toba Tek Singh has been put into food secure districts.

4. CONCLUSION

The objective of the study was to analyze and compare the poverty through analyzing the socioeconomic characteristics of both the study areas. Results revealed high population in district D.G. Khan. The literacy rate was found more in T.T.Singh. Poverty found high in Southern Punjab as indicated by average income, ownership of assets, women participation in agricultural activities and food security situation.

5. RECOMMENDATIONS

On the basis of above conclusions, it is recommended that investment on education should be enhanced in Southern Punjab as low percentage of people are literate as compared to Central Punjab. New schemes are required to be introduced in agriculture sector in both the regions especially in Southern Punjab to uplift the farming community. As sources of formal loan are limited in the study areas, therefore, there is a need to increase the facility at farmers door step. Moreover, loaning procedure is required to be simplified. Furthermore, cost of loan is required to be minimized so that farmers could be able to get maximum benefit from this facility at the time of requirement. Livestock is recognized one of the important sources of reducing poverty. Government should introduce a scheme of providing livestock to the targeted farmers to mitigate poverty among the poor farmers as limited percentage of farmers has livestock in both the study areas. Food security is one of the main concerns of the developing countries. Hence, the use of modern inputs in a judicious way is needed to be popularized among the farming community through different incentives.

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