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Socio-economic characteristics of pastrolists: A case of migratory *Gaddi* of Himachal Pradesh

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Abstract

In the present study it was observed that the literacy level of males and females was 70 and 58 per cent, respectively. Proportion of females was higher on sample households. The highest proportion of population was in the age group of 16-40 years. Caste was the dominant factor for marriage settlement. Contribution of females (34.15 %) in agriculture was higher as compared to males (11.38 %), while in case of migratory stock of flocks, the proportion of males was higher than females. The opinion of the parents regarding inclination of children towards their traditional profession indicated that new generation did not take interest in the profession. Participation of the *gaddis* in social organizations was very low. Maximum participation was observed in case of religious committees followed by village co-operatives.

Keywords: Pastrolists, migratory *Gaddi*, socio-economic characteristics.

Introduction

Himachal Pradesh lies in the north-western Himalayan region. More than 92 per cent of the population, which is mainly rural, depends directly on agriculture, horticulture and animal husbandry in Himachal Pradesh. The livestock rearing is an integral part of the State's economy, providing source of livelihood to most of the people, especially those inhabiting the border districts of Lahaul and Spiti, Kinnaur, Pangi & Bharmour sub-division of Chamba districts. Livestock rearing as practiced generally within the frame-work of mixed farming in the remaining areas. Livestock rearing so far has been treated as rural occupation and ancillary to crop farming. Himachal Pradesh has extensive pastures in the cold and dry zone which provide nutritive and luxuriant grazing facilities to the animals. The tribes (*Gaddi* and *Gujjar*) remain on the move round the year in search of quality fodder. During the transitional phases, they earn their livelihoods from their flocks/herds and maintain their families. Their economic status is only adjudged from the livestock strength being kept by them.

Pastoralism as an economic and social system is very old and traditional pastoralists, nomads and transhuman groups are predominantly found in the arid and semi-arid and Himalayan region of India. They derive their basic food needs and income from pastoralism which incorporates resource management, production, trade and welfare mechanism. The living standards of these people tend to be at subsistence levels and a major goal of the community is food security and survival. Pastoral nomads are often responsible for conservation of indigenous institutions that sustain animal. Pastoralists rear different species of livestock mainly cattle, buffaloes, sheep, goats, camel, etc. Although these animals are normally maintained for subsistence purposes (meat, milk and milk products, etc for food, and manure, wool, and hides), products are often exchanged for other products such as grains and other necessities of life. Most of the pastoralists suffer from the lack of basic services such as education and health, veterinary services and infrastructure. The precarious environment and the deep socio-economic and political marginalization have trapped the pastoralists in a vicious circle of poverty.

Though these pastoral tribes are less in numbers, yet their importance in development and preservation of unique breeds of animals cannot be undermined. Keeping, this in view, it is, therefore, considered appropriate to study the socio-economic and cultural aspect in this unexplored field. The present paper help to understand the problems of pastoralism, the environment in which nomads live and suggest

various strategies for improving their socio-economic conditions.

Methodology

Multi stage stratified random sampling design was employed to select the sample for this study. In the first stage of sampling three district viz. Chamba, Kangra and Sirmour have been selected purposively. In the second stage of sampling one tehsil where higher concentration of these migratory communities exist were selected from each districts. In the third stage of sampling villages were randomly selected and from each village the respondents were selected using proportional allocation procedure. The farmers were categorized into two categories on the basis of their flock size. The farmers having ≤ 200 flock size are called marginal, while those with more than 200 are called small. The complete list of households in the selected village was prepared along with the flock size of sheep and goat. A sample consists of 87 *Gaddi's* households (49 marginal and 38 small households). In order to meet the objectives of the study both primary and secondary data were collected.

Analytical framework

To meet the objectives of the present study, both tabular and mathematical techniques were employed for analysis and interpretation of data.

$$\text{Sex ratio (per 1000 males)} = \frac{\text{Total population of females}}{\text{Total population of males}} \times 1000$$

$$\text{Literacy rate (\%)} = \frac{\text{Total number of literate persons}}{\text{Total population}} \times 100$$

$$\text{Population growth (human/animal)} = P_t = P_0 (1 + \frac{r}{100})^t$$

Where, P_t = Population in the years t
P_0 = Population in initial years
r = Growth rate
t = Time

Results and Discussion

District-wise population of Gaddi

Table 1 shows the population of *Gaddi* of Himachal Pradesh. It can be seen from the table that the total population of *Gaddi* in the state in 1981 and 1991 was found 76,859 and 86,511, respectively. The population of *Gaddi* in Chamba district was found to be maximum followed by Sirmour (17.81%). Table also revealed that about 98 per cent population of *Gaddi* is found in Chamba district. In the state the population of *Gaddi* increased 12.56 per cent in 1991 over 1981.

Table 1.Population and demographic features of *Gaddi* communities in different districts

Districts	Total Population			Sex Ratio			Decadal growth		
	1971	1991	2001	1971	1991	2001	1971-81	1998-91	1991-2001
Chamba	50107	85301	95694	999	978	978	51.74	12.19	12.18
Mandi	388	984	1619	884	976	974	54.12	64.55	64.53
L &S	3	38	206	-	900	962	133.33	442.86	442.11
Bilaspur	56	20	5	37	818	667	39.29	-74.36	-75.00
Shimla	56	-	16	556	-	778	-17.86	-100	100
Sirmour	70	58	76	556	758	949	-37.14	31.82	31.03
Kinnaur	5	17	-	-	700	-	20.00	183.33	-100
Hamirpur	-	-	-	-	-	-	-	-	-
Kangra	-	-	-	-	-	-	100	-100	-
Kullu	-	-	-	-	-	-	100	-100	-
Solan	-	92	769	-	840	962	100	736.36	735.87
Una	-	-	-	-	-	-	100	-100	-
H.P.	50685	86510	98385	994	978	978	51.61	12.58	13.73

More than 50 per cent of *Gaddi* and *Gujjar* migrate to Kangra during winter season. Lahaul spiti (L&S) district has maximum decadal growth of 133.33 during 1971-81, which was followed by Kangra (100%) and Kullu (100%). The sex ratio was disproportionate noticed highest in Chamba district followed by Mandi. The sex ration was not in order in Bilaspur and Shimla, which is a matter of concern for all involved in policy planning.

Literacy level

The literacy rate of *Gaddi* community for different district over time have been presented in table 2. It can be seen from the table that literacy rate of male was higher than female in all the districts. The literacy rate of male for different districts in 1971 varied between 13 to 38 percent and for females the rate varied between 2 to 14 per cent. The literacy rate of male and female population for different census increased. The literacy level of male and female during 2001 was noticed at 60 to 71 and 36 to 45 percent for different districts of the state for which the government of HP be appreciated. The increased rate of literacy clearly indicates that the Gaddi community has become conscious about education.

Table 2. District-wise literacy of *Gaddi* in Himachal Pradesh

(Per cent)

Year/ District	1971		1991		2001	
	Male	Female	Male	Female	Male	Female
Bilaspur	12.96	0.00	44.55	19..22	59.67	36.00
Chamba	17.15	2.16	55.57	21.75	69.26	43.17
Hamirpur						
Kangra						
Kinnaur			53.00	26.57	64.00	
Kullu						
Lahaul & Spiti	33.33		60.00	20.22	70.14	70.14
Mandi	40.29	9.34	57.03	26.87	72.07	45.07
Shimla/	38.89	14.00	51.40	20.70	67.78	42.14
Sirmour	17.78	4.00	54.55	36.00	66.92	46.35
Solan			58.00	20.81	71.04	42.58
Una						
H.P (%)	17.38	2.25	57.90	23.75	67.45	43.61

Socio-economic profile of sample farmers

Age-wise Distribution

The size of family is an important socio-economic parameter as well as an indicator of over all development. The age-wise distribution of sampled farmers is summarized in table 3. This table revealed that the proportion of population of males less than 15 years of age group was 26.35 per cent as compared to females whose proportion was 27.78 per cent. The proportion of female children was found slightly higher on average farms. The highest proportion of population was in the age group of 16-40 year as 46.67 per cent of the male population and 46.96 per cent of female population.

Table 3. Age- wise distribution of the sample *Gaddi* households

(per cent)

Farm Size	Age group (Years)									
	0- 5		6 - 15		16-40		41-60		Above 60	
	M	F	M	F	M	F	M	F	M	F
Marginal	3.23	3.59	21.29	26.29	46.45	44.52	20.65	18.49	8.39	4.11
Small	6.25	3.52	21.88	20.67	46.88	47.62	18.75	18.63	6.25	4.56
Overall	4.76	3.56	21.59	24.22	46.67	46.96	19.68	18.56	7.30	3.78

Size structure and literacy level of family

The average family size of family was found to be 5.72. Table 4 presents comparative picture of demographic features of sample households. The results reveal that male population was slightly higher compared to females. The study also revealed that joint family system among sampled households is loosing its ground on account of environmental and developmental objectives of a family. Thus, the proportion of nuclear families was the highest (64.16 %) as compared to joint families (35.84%). The average family size on both the farm groups was, by and large, the same. It is generally held that higher education leads to better living standards and play a crucial role in early adoptions of new practices thereby improving quality of life. The literacy level of male was higher than female. It was 70.39 per cent for male and 58.54 per cent for female. Similar pattern was noticed on the state census for these communities. Due to this reason new generation of *gaddis* was against the migratory nature of their profession, as they have to migrate with their sheep and goats from one to another place which makes it difficult for them to attend the schools regularly. About 50% of the educated couples in *gaddi* community liked to stay with the elders while other liked their independence. It was concluded that due to improvement in economic conditions and higher literacy rate the business of keeping sheep and goat has been decreasing over periods

Table 4. Average family size and structure on sample *Gaddi* households

(per cent)

Particulars	Marginal	Small	Overall
Family size (No)	5.56	6.05	5.72
Family structure			
a) Nuclear	66.30	61.23	64.16
b) Joint	33.70	38.77	35.84
Total	100	100	100
Literacy Level			
Male	67.11	73.55	70.39
Female	58.46	58.62	58.54
Favour presence of elders in family	55.29	57.78	56.35

Marriage

The marriage is another important institution of interest. Different criteria considered for marriage, have been presented in table 5. It can be seen that caste was the dominant factor (34.13 %) followed by education (26.19 %) and economic status (22.22 %). Ownership of land and health were the next leading factors. Economic status and ownership were reported by a large number of marginal farmers (25.17 %) whereas caste and education influenced marriage of more than 30 per cent among small *Gaddi* households. The *gaddi* communities perform marriage with in their caste, but they do not have marriage with in the same Gotra.

Table 5. Factors determining marriage among *Gaddi* households

(per cent)

Particulars	Marginal	Small	Overall
1. Economic Status	25.17	18.10	22.22
2. Caste*	32.65	36.19	34.13
3. Education	23.81	29.52	26.19
4. Health	2.72	8.57	5.16
5. Ownership of lan	14.29	7.62	11.51
6. Any other	1.36	0.00	0.79

* Marriage within their caste

System of marriage

The system of marriage among the *Gaddi* households is different and is presented in table 6. All the *Gaddi* farmers consider marriage as ceremonial (Table 6) and 99 per cent of the farmers did not favour dowry. The sample households considered marriage as a costly affair. Maximum households (87.82 per cent) reported that they do not marry within their *gotra*. Similar pattern was noticed for different categories of households.

Table 6. Marriage system of sample *Gaddi* households

(per cent)

Particulars/Farm size	Marginal	Small	Overall
1. Ceremonial marriage	100	100	100
Are you in favour of system? Favour	100	97.37	98.85
2. Is it a costly affair?	70.00	66.00	68.00
3. Not like to marry with in *Gotra*?	87.14	88.46	87.82

Role, knowledge and feelings about profession

Inclination of children towards traditional profession

Traditional occupation of *Gaddi*'s is rearing of sheep and goat flocks which is quite harsh and hard. They migrate with the animals from one place to another. Table 7 depicts the opinion of the parents regarding inclination of children towards traditional profession. About 96 per cent

of new generation did not take interest in the profession and preferred white collar jobs and education facilities, for improving standard of living. However, the profession of rearing flocks restricts them from education because most of the time they have to live away from their home with their livestock herd. Table also revealed that cent per cent next generation of marginal households had negative attitude about this profession. Hardly 7.89 per cent children of small farmers showed positive outlook for this profession. This shows that the profession has bleak future which needs rethinking to keep the profession alive.

Table 7. Contribution/ involvement of children in their parents profession

(per cent)

Particular	Positive outlook	Negative outlook	Total
Marginal	-	100	100
Small	7.89	92.11	100
Overall	3.45	96.55	100

Social participation

Social participation of the gaddi households has been depicted in table 8. It can be seen that the participation of the gaddis in social organizations was very low. Maximum participation was observed in political organizations (8.16 %) among the marginal farmers where as small farmers participated in the local non-political organizations. It is interesting to note that there was no youth club in the study area. The poor participation by the sample households in different social organizations might be due to their migratory profession.

Table 8. Participation of *Gaddi* households in social organizations

(per cent)

Particulars/ Farm size	Marginal	Small	Overall
1. Panchayat	-	-	-
2. Village co operative	4.08	2.63	3.44
3. Rural youth club	-	-	-
4. Religious committee	2.04	5.26	3.45
5. Political organizations	8.16	0.00	1.15
6. Any other/Office bearer	2.04	7.90	4.60

Land utilization

The size of holding was considered to be an important factor influencing the adoption of technology. The average holding was observed to be 1.09 bigha/farm out of which hardly 0.91 ha/farm was found to be irrigated. The land holding size of marginal and small farms was found to be 0.78 and 1.44 ha/farm, respectively. On an average, 6.67 per cent of the area was found irrigated and about 50 per cent area was under current fellow, pasture and uncultivated land. On an average, area under leased in and leased out was found 0.004 ha and 0.02 ha respectively. Area under orchard was higher on small farms as compared to marginal farms. Area under orchard was 0.03 ha. Per farm land under orchards on marginal and small farms on an average was 0.03 and 0.04 ha, respectively (Table 9).

Table 9. Land utilization on *Gaddi* households

(bigha/farm)

Farm Size	Cultivated Land		Leased -in	Lease-Out	Uncultivated	Current Fallow	Pasture/ Ghasni	Orchard	Total land holding	
	Irr	UR	Irr	UR	UR	UR	UR	UR	Irr	UR
Marginal	0.26	5.91	-	0.37	0.01	2.53	1.11	0.37	0.26	9.56
Small	1.63	8.74	0.11	0.00	1.76	1.96	3.30	0.54	1.74	16.30
Overall	0.86	7.15	0.05	0.21	0.77	2.28	2.06	0.44	0.91	12.73

Note: 1 Bigha = 0.08 ha, Irr = Irrigated, UR = Unirrigated

Cropping pattern

The hilly tribal areas are characterized by small size of farms due to uneven topography and rocky lands which may render them unfit for cultivation. One -third of the areas remain fallow in every season, in which the sowing of next season is done when previous crops are standing on the remaining part of the land. The percentage of area devoted to different crops has been shown in table 10. It was observed that maize UR in *kharif* and wheat UR in *rabi* season dominated the cropping pattern. However, the area under these two crops did not differ significantly. Next to maize UR and wheat UR, barley UR and *rajmash* occupied 7.78 per cent and 8.17 per cent of total cropped area,

respectively. *Cheney* and *pholan (amaranths)* were also grown in the study area. Though these are inferior food crops but *chene* is close substitute for rice while *amaranths* was used in biscuit preparation. About 23 per cent area of total cropped area was irrigated. Out of which about 10 per cent was occupied by paddy. Other crops grown on irrigated land were maize, wheat, and linseed. The gross cropped area was more on small farms (5.94 ha per farm) as against the marginal farms (10.01 ha/farm). Marginal farmers did not grow fodder either in *kharif* or in *rabi* season. Percentage of area under *rajmash*, *mash*, *chene*, barley and potato was more on marginal farms while area under maize, *pholan* and wheat was more on small farms. Percentage of irrigated area was quite high on small farms (33.87 %) as compared to marginal farms (8.75 %).

Livestock population

The tribal economy of the study area basically is an agro- pastoral. Rearing of sheep and goats is the main occupation of the people who migrate from one place to another. The livestock inventory of households has been presented in table 11. It can be seen that sampled households did not keep buffaloes. The number of local cows, on an average 0.63 and that of improved cows was very low thereby showing that many of the households did not have either improved cows or local cows. Further, it can be seen that the rearing of sheep and goats was the most common profession accounting for about 120 and 49 numbers, respectively. Similar pattern was noted for marginal and small households. Some of the households also kept horses/mules for lifting their luggage during migration.

Table 10. Cropping pattern on sample *Gaddi* households (per cent)

Particulars	Marginal	Small	Overall
Kharif			
Maize (IR)	1.35	2.40	1.94
Maize (UR)	31.99	24.07	27.50
Paddy (IR)	3.03	14.69	9.60
Rajmash	9.93	6.79	8.17
Amaranths	2.53	3.00	2.72
Mash	3.03	0.90	1.82
Chene	0.84	0.50	0.65
Chari bajra	0.00	1.10	0.65
Chari bajra	0.00	1.10	0.65
Rabi			
Wheat (IR)	2.69	7.09	5.19
Wheat (UR)	31.99	23.38	27.11
Linseed (IR)	0.67	9.63	5.84
Barley (IR)	1.01	0.00	0.39
Barley (UR)	10.27	5.99	7.78
Barseem /Oats	0.00	0.10	0.13
Summer			
Potato	0.67	0.30	0.52
Total cropped are	5.94	10.01	7.71

IR= Irrigated UR= Unirrigated

Table 11. Livestock inventory of sample *Gaddi* households

(Number/farm)

Particulars	Marginal		Small		Overall	
Cows	Crossbred	Local	Crossbred	Local	Crossbred	Local
i. Milking	0.14	0.41	0.26	0.50	0.20	0.45
ii. Non milking	0.06	0.16	-	0.21	0.03	0.18
Bullocks	-	0.49	-	0.95	-	0.69
Young stock	-	0.10	-	0.39	-	0.23
Sheep (Adult)	-	63.37	-	192.89	-	119.94
Lamb	-	5.37	-	8.11	-	6.56
Goats (Adult)	-	51.33	-	124.34	-	48.74
Kids	-	3.33	-	6.00	-	4.49
Horses/ Mules	-	0.06	-	0.87	-	0.41
Others	-	0.37	-	0.74	-	0.53

Income

The main occupation of *gaddi* is rearing of sheep and goat. This enterprise contributes maximum to their total income. It can be seen from the Table 12 that, on an average, the total income was Rs.82, 273/farm/year out of which more than 72 per cent was contributed by sheep and goats followed by govt. services (16.54 %). Sheep and goats contributed maximum share (78.02 %) in total income on marginal farms compared to small farms, where as services contributed maximum (19.82%) on small farm. The share of livestock and agriculture was only

4.44 and 5.34 per cent in total income. Only a few small farms were engaged in business and its share in total income was found to be very low (1.92%).

Table 12. Income from different enterprises on *Gaddi* households

(Rs/farm)

Particulars/ Farm size	Marginal	Small	Overall
Agriculture	5.18	5.04	5.14
Livestock	4.77	4.24	4.44
Sheep and Goats	78.02	68.98	72.51
Business	-	1.92	1.17
Services'	11.40	9.82	16.54
Total (Rs Per Farm)	56945 (100)	114931 (100)	82273 (100)

Figures in brackets indicates the percentage

Conclusion

It was observed that the average family size of *Gaddi* was 5.72. Males were more educated compared to females from primary to higher education level. The literacy level of males and females was 70 and 58 per cent, respectively. The proportion of nuclear families was the highest as compared to joint family system. Proportion of females was higher on sample households. The highest proportion of population was in the age group of 16-40 years. Caste was the dominant factor for marriage settlement on sample households (34 %) followed by education (26 %) and economic status (22.22 %). About 40 percent of the male population and 1.47 per cent of the female population migrated with their herds. Contribution of females (34.15 %) in agriculture was higher as compared to males (11.38 %), while in case of migratory stock of flocks, the proportion of males was higher than females. The opinion of the parents regarding inclination of children towards their traditional profession indicates that new generation did not take interest in the profession. Average land holding was 13.64 *bigha*/farm.The area under irrigation was very less. Participation of the *gaddis* in social organizations was very low. Maximum participation was observed in case of religious committees followed by village co-operatives.

It was observed that literacy rate has improved over the years. This is mainly due to increased awareness of the parents towards education of their wards. The state Government has launched various welfare programmes to promote education among the communities. The free education and book upto middle standards, mid day meal up to primary standards and fellowships to meritorious students are the major incentives given by the government to these tribal communities. But; there are no migratory schools for pastoralists communities. Therefore, the school going wards were generally allowed to stay at stationary place in owned / rented- in houses and did not accompany to the migration camp. It was also suggested that high yielder goat and sheep should be provided to the *Gaddi* so that they can increased their income.

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