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To analyse influencing factors of the socio-economic status of tribal and non-tribal farmers of Chhattisgarh plain

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Abstract
Despite agriculture's decreasing contribution to India's GDP, it remains a critical livelihood for a vast majority of the rural population, with 75% residing in rural areas and significantly employed in this sector. Historical growth in agriculture has helped reduce poverty, but recent declines pose threats to economic stability for many. Even though the agricultural sector in India is witnessing a drop in its GDP contributions, it remains the primary source of livelihood for a large proportion of the rural community, of which three-fourths is engaged in this sector. Growth of this sector over time has aided in poverty reduction but the recent reductions present economic risks for many. This research is an attempt to study the socio-economic conditions of small tribal and non-tribal farmers in Chhattisgarh and focus on the effect of a number of independent variables on their economic conditions. The most significant conclusion is that education, family income, irrigational facilities, and types of business activities are improving the status. There was, however, a significant bad relationship for training needs indicating that there is room for improvement in training to achieve better economic results. The study focuses on the need for enhancement of agricultural diversification to produce more high-value goods, while identifying the determinants of the farmer's economic and social status. In the end, encouraging the economic activities of small farmers is vital in growing the agricultural and rural economies, this can be achieved by well-directed measures.

Keywords: Small farmers, agriculture, tribal and non-tribals, socio-economic status, influencing factors, *etc.*

1. Introduction
Fast agricultural expansion is a national policy objective, despite the fact that agriculture's share of the Indian economy is declining. 40% of India's GDP came from agriculture in 1980-81; by 2004-05, that share had fallen to 21%. At the same time, 75% of Indians live in rural areas and 72% of them work in agriculture and associated businesses. Furthermore, in 1999-2000, the agricultural sector employed 57% of India's workforce, making it the country's largest employer. The growth rate of India's agriculture sector was 3.3% annually from 1980-1981 to 1995-1996. Poverty was greatly lessened by this growth. This is consistent with the findings of Warr (2003) [12] and Ravallion and Dutt (1996) [10], who showed that agricultural sector expansion reduces poverty more effectively than development in other economic sectors. However, despite this industry's historical growth, India's agriculture is today beset by problems. Most notably, agricultural growth decreased by 2.1% between 1996-1997 and 2002-2003, mostly due to a 0.6% increase in the food grains sector. Since agriculture is the main source of income for the poor, stagnation in this sector now threatens India's attempts to combat poverty. In such a scenario, the primary question is: how can agricultural growth be accelerated? There is minimal likelihood of employing basic dietary grains to boost growth, as evidenced by the fact that demand for them has stagnated. Nowadays, there are many different methods to eat high-value agricultural commodities (HVA), including fruits, vegetables, dairy products, poultry, fish, and processed meals (Ravi and Roy, 2006) [11]. Ravi and Roy (2006) [11] forecasted demand in India through 2020 and showed how changes in other factors, such income growth and urbanization, could intensify the diversification of consumption patterns toward high-value agricultural goods. This change in demand is a result of both urbanization and steady income growth. Additionally, exporters of high-value items now have access to new markets because to globalization.
High-value food items are being exported at an increased rate from developing to wealthy nations. The majority of high-value food commodities are labor-intensive, have short gestation periods, and yield quick returns, making them an ideal opportunity for small farmers to use excess labor and increase their incomes (Joshi *et al.* 2002; Barghouti *et al.* 2005; Weinberger

and Lumpkin, 2005) [6, 1, 14]. This makes diversification especially appealing from the standpoint of reducing poverty. Diversification toward high-value food commodities fosters the growth of creative supply chains and creates new opportunities for income growth, job creation, and export expansion, according to earlier research conducted in South and Southeast Asia (Pingali 2004; Deshingkar *et al*. 2003; Wickramasinghe *et al*. 2003; Goletti 1999) [8, 2, 13, 4]. Additionally, regions with agricultural diversification have demonstrated higher levels of food and economic security, especially in favor of aquaculture, horticulture, and animal husbandry (Barghouti *et al*. 2005; Dorjee *et al*. 2002) [1, 3]. However, the transition to high-value agriculture comes with difficulties, especially for small farmers. If the high-value commodities are ones that farmers have never grown before, they may lack sufficient knowledge about production methods, marketing opportunities, and the potential distribution of net returns. This problem is particularly serious when the target market has strict food safety laws and/or exacting standards for quality. Farmers may work hard to get information, of course, but doing so often has a set cost that is independent of production level, which benefits large-scale farmers (Minot and Roy, 2006) [7].

The hazards associated with producing and selling expensive items are sometimes better managed by larger farms. Another layer of risk is that a small farmer that invests in commercial crops usually has to rely on market purchases to meet their food needs. Certain high-value agricultural commodities also need significant financial outlays, such as the use of certain inputs. For example, a farmer often has to plant trees and wait three to five years for them to yield fruit in order to produce fruit. Finally, the production and sale of highly perishable high-value crops benefits from producer farms' proximity to markets and adequate marketing infrastructure (Torero and Gulati, 2004) [5].

Research Methodology

The four blocks of Kota, Marwahi, Lormi, and Gaurela-2 in the Bilaspur district of Chhattisgarh state serve as the basis for this study. From each block, two villages with a high proportion of tribal and non-tribal farmers were chosen; these villages were located 10 kilometers from the block headquarters. Eight villages in all were chosen for the study as a result. Forty responders were chosen at random from every village. From each chosen village, a total of 40 respondents (20 tribal and 20 non-tribal small farmers) participated. Thus, using a random number sampling technique, 320 respondents were chosen for the study from the eight villages.

Results and discussion

Table 1: Correlation analysis of independent variables with the socio-economic status of small tribal and non-tribal farmers of Chhattisgarh plain

S. No.	Independent Variables	Coefficient of correlation (‘*r*’ value)	
		Tribal	Non-tribal
1.	Education	0.218**	0.247**
2.	Caste	0.091	0.136
3.	Family income	0.233**	0.258**
4.	Source of information	0.112	0.169*
5.	Location of house	0.027	0.033
6.	Training need	-0.181*	-0.173*
7.	Crop and cropping pattern	0.099	0.112
8.	Cropping intensity	0.103	-0.075
9.	Size of land holding	0.140	0.129
10.	Irrigation facility	0.371**	0.364**
11.	Animal Possession	0.173*	0.178*
12.	Allocation of time in agriculture	0.138	0.161*
13.	Credit acquisition	0.189*	0.186*
14.	Type of enterprise	0.276**	0.263**

**Significant at 0.01 level of probability
*Significant at 0.05 level of probability

Just as amongst non-tribal respondents’ correlation analysis was also done in case of tribal respondents to ascertain the influence of independent variables on the socio-economic status of small tribal farmers of Chhattisgarh plain. It is evident from the analysed data in Table 1 that the variables caste, sources of information, location of house, crop and cropping pattern, cropping intensity, size of land holding and allocation of time in agriculture had non-significant influence on the socio-economic status of tribal respondents. The variables education, family Income, irrigation facility and type of enterprise had positive and significant relationship with socio economic status of tribal respondents at 0.01 level of probability. Whereas the variables animal possession and credit acquisition had positive and significant relationship with socio economic status of tribal respondents. The variables training need only had negative and significant relationship with socio economic status of tribal respondents. The negatively significant relationship denotes that if the value of variable training need decreases the value of socio-economic status would increase and vice versa. In other words, we can interpret that the higher the socio-economic status the lesser will be the training needs of the small tribal farmers of Chhattisgarh plain.

Further, correlation analysis was done to find out the relationship of independent variables with the socio-economic status of the small non-tribal farmers of Chhattisgarh plain. The data in Table 1 shows that the variables caste, location of house, crop and cropping pattern, cropping intensity and size of land holding had a non-significant relationship with socio-economic status, whereas the variables education, family income, irrigation facility and type of enterprise had a positive and significant relationship with socio-economic status at 0.01 level of probability. The variables sources of information, animal possession, allocation of time to agriculture and credit

acquisition had a positive and significant relationship with socio-economic status at 0.05 level of probability. Only training need had a negatively significant relationship with the socio-economic status of non-tribal respondents at 0.05 level of probability.

Table 2: Multiple regression analysis of independent variables with the socio-economic status of small tribal and non-tribal farmers of Chhattisgarh plain

S. No.	Independent Variables	Tribal		Non-tribal	
		Regression coefficient ('b' value)	"*t*" value	Regression coefficient ('b' value)	"*t*" value
1.	Education	3.479**	2.981	2.143**	3.173
2.	Caste	-1.023	0.017	-1.067	0.976
3.	Family income	2.191*	2.876	3.298**	2.712
4.	Source of information	1.675	1.564	1.177	1.796
5.	Location of house	0.877	0.893	0.989	1.181
6.	Training need	-2.156*	2.431	-1.911*	2.102
7.	Crop and cropping pattern	-1.974	0.642	-0.923	1.731
8.	Cropping intensity	-1.281	0.915	1.627	1.564
9.	Size of land holding	1.672	0.021	-0.873	1.813
10.	Irrigation facility	2.891**	2.637	2.191**	2.907
11.	Animal Possession	1.763	1.472	1.699*	1.989
12.	Allocation of time in agriculture	2.986	1.013	1.321*	2.115
13.	Credit acquisition	1.183*	2.173	0.976*	2.160
14.	Type of enterprise	3.117**	2.761	2.162**	2.762

**Significant at 0.01 level of probability
*Significant at 0.05 level of probability

Multiple regression analysis showed (Table 2) that the variables caste, sources of information, location of house, crop and cropping pattern, cropping intensity, size of land holding, animal possession and allocation of time in agriculture had non-significant contributions towards the socio-economic status of the tribal respondents. The variables education, irrigation facility and type of enterprise had positive and significant contributions towards socio-economic status at 0.01 level of probability whereas the variables family income and credit acquisition had positive and significant contributions at 0.05 level of probability. Only the variable training need had a negatively significant contribution towards socio-economic status of tribal respondents. The negatively significant contribution signifies that for each unit decrease in training need there would be 2.156 increase in the socio-economic status of the small tribal farmers of Chhattisgarh plain.

Further, multiple regression analysis was also done to find out the contribution of different independent variables on the socio-economic status of the non-tribal small farmers of Chhattisgarh plain. As observed from the data in Table 2 the variables - caste, sources of information, location of house, crop and cropping pattern, cropping intensity and size of land holding had a non-significant contribution towards their socio-economic status. The variables education, family income, irrigation facility and type of enterprise has positive and significant contributions towards socio-economic status at 0.1 level of probability whereas the variables animal possession, allocation of time in agriculture and credit acquisition had positive and significant contributions towards their socio-economic status at 0.05 level of probability. Only training need showed a negative and significant contribution towards the socio-economic status of small non-tribal respondents at 0.05 level of probability.

Conclusion

In conclusion, the correlation analysis and multiple regression analysis shed light on the socio-economic position of small tribal and non-tribal farmers of Chhattisgarh plain. For the tribal respondents, education level, family income, irrigation facility, and even type of enterprise owned, animal possession, and access to credit had a positive and significant relationship with their socio-economic status, whereas training need negatively and significantly affected the socio-economic status. In the same way, for the non-tribal respondents, education, income earned received by the family, irrigation facility provision, running an enterprise, spending time in agriculture, owning animals, and having credit were all positive and had a significant effect on their socio-economic standing. These findings make it easier for targeting policies to improve the economic condition of small farmers through specific measures.

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