

Research Article

Critical analysis of peasantry modernization in agriculture under integrated tribal development project

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SUMMARY : The result revealed that majority of the tribal peasants had medium level of overall modernization. The independent variables viz., education, size of land holding, farm power, organizational participation, annual income, mass media exposure, change agency contact, level of educational aspiration of their son, economic motivation, cosmopolitaness, risk orientation, scientific orientation and attitude toward Integrated Tribal Development Project of the respondents had positive and significant correlation with their level of overall modernization and only age of the respondents found to be negatively and significantly correlated with their overall modernization. Seven variables viz., annual income, economic motivation, social participation, scientific orientation, education, cosmopolitaness and organizational participation to gathered contributed 89.90 per cent variation to the extent of overall modernization and annual income was the key variable in exerting considerable direct and subsequent indirect effect and cosmopolitaness had maximum positive indirect effect.

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KEY WORDS :

Peasantry modernization, Analysis, Independent variables

BACKGROUND AND OBJECTIVES

Modernization of agriculture is not purely technological or economical problem. Its success is frequently dependent on an understanding of the society in which it is to take place, knowledge of the social and cultural factors that conditioning farmers' responsiveness to technological change and the ability to obtain willing co-operation of the people involved. Social and cultural factors are characteristics of the society to which the peasant belongs and dominate human behaviour.

In spite of considerable progress, the progress is not yet to the desired level of satisfaction because it differs from one region to another. There are certain regions where the progress in agriculture is more than the expectations. At the same time, there are other regions showing backwardness in agriculture.

Backwardness is particularly observed in tribal areas of the country, which are a heterogeneous lot, expect in regard to their poverty and lack of material resources to work upon.

The Integrated Tribal Development Project, Vadodara has started it functioning since 1976 to narrow the gap between the level of tribal and other areas of the state and to increase the income from agriculture and there by improve the quality of life of the tribal farmers. Paul (2005) The peasant and tribal economy is predominantly dependent on agriculture Pawde *et al.* (2008) and Bhagath (1983a and b). After independence central and state Government through various agencies spent huge fund for uplifting their living standard and bringing them in to the national main stream. India's real development lies in the development of peasants. The advantage of democracy must reach all sector

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of society. A large number of development projects are in operation but peasants of the state could not reach to the expected level of modernization.

With a view to analyzing these, present study on critical analysis of peasantry modernization in agriculture under Integrated Tribal Development Project. was undertaken with following objectives:

- To measure the level of modernization of the tribal farmers.
- To find out the relationship between the selected independent variables and level of modernization of the tribal farmers.
- To study the relative importance of independent variables in predicting level of modernization.
- To study the direct and indirect effect between antecedents attribute of tribal peasant on level of modernization.

RESOURCES AND METHODS

The present study was undertaken in Integrated Tribal Development Project area of Vadodara district of Gujarat state. Out of five tribal talukas of Vadodara district, two talukas having highest tribal population were selected purposively. Finally, sample of 200 tribal peasants from total 20 villages of two talukas were selected for the study. An interview schedule was developed in accordance with the objectives of the study. The data of this study were collected through personal interview. The statistical measures such as percentage, mean, standard deviation, co-efficient of correlation, stepwise multiple regression, standard partial regression co-efficient and path analysis were used.

OBSERVATIONS AND ANALYSIS

The experimental findings obtained from the present study have been discussed in following heads:

Level of overall modernization of tribal peasants under ITDP:

Level of overall modernization:

The concept of modernization refers to the process of social change in which the individual imbibes certain attitudinal cum personality traits conducive to socio-economic and political development as well as individual

self actualization. These traits have been labeled as modernity. It is an inner quality and lies in the individual. It is part of the personality system. Modernization involves acceptance of scientific rationalism against religious faith and adoption of new innovations and methods of doing things, which challenge and compete with the old ones. For this study, overall modernization is the extent to which a peasant was socially, communicatively, economically and psychologically modern. The data in this regards are presented in Table 1.

It could be seen in Table 1 that majority (53.00%) of the respondents had medium level of overall modernization, followed by 26.00 per cent with low level while, 21.00 per cent had high level of overall modernization. The reasons for above situation might be due to the medium level education, poor mass media exposure, medium extension contact, limited resources, poor economic condition and low adoption of improved technology.

Relationship between independent variables and overall modernization under integrated tribal development project:

To study the relationship between characteristics of tribal peasants and their level of overall modernization is of great importance. These factors play important role in deciding the level of overall modernization of peasants. In order to determine the relationship between the personal, social, economical, communicational and psychological characteristics of the tribal peasants with their overall modernization, a correlation co-efficient was computed and presented in Table 2.

Thirteen variables *viz.*, education, size of land holding, farm power, organizational participation, annual income, mass media exposure, change agency contact, level of educational aspiration of their son, economic motivation, cosmopolitaness, risk orientation, scientific orientation and attitude toward Integrated Tribal Development Project of the respondents had positive and significant correlation with their level of overall modernization and only age of the respondents found to be negatively and significantly correlated with their overall modernization and rest variable *viz.*, occupation, migration habit, social participation and level of aspiration were found to be non-significantly correlated.

Table 1: Distribution of respondents according to their level of overall modernization

Sr. No.	Level of overall modernization	Number	Per cent
1.	Low (< 30.26 score)	52	26.00
2.	Medium (between 30.27 to 60.30 score)	126	53.00
3.	High (> 60.30 score)	42	21.00
	Total	200	100.00
Mean (\bar{x}) = 45.28			S.D. = 15.02

Table 2: Relationship between independent variables and overall modernization (n=200)

Sr. No.	Independent variables	Correlation co-efficient (r value)
Personal		
1.	Age	- 0.447**
2.	Education	0.540**
Socio-economic		
3.	Occupation	0.003 NS
4.	Size of land holding	0.219*
5.	Farm power	0.193
6.	Migration habit	0.096 NS
7.	Organizational participation	0.218*
8.	Social participation	-0.003 NS
9.	Annual income	0.747**
Communication		
10.	Mass media exposure	0.574**
11.	Change agency contact	0.462**
Psychological		
12.	Level of aspiration	-0.014 NS
13.	Level of aspiration of son	0.549**
14.	Economic motivation	0.546**
15.	Cosmopolitaness	0.677**
16.	Risk orientation	0.696**
17.	Scientific orientation	0.449**
18.	Attitude towards integrated tribal development project (ITDP)	0.629**

* and ** indicate significance of values at P=0.05 and 0.01, respectively
NS=Non-significant

Relative importance of independent variables in predicting overall modernization:

Generally, in behavioural science no dependent variable can influence by any single independent variable. As such the extent of overall modernization is in reality, not influenced by any of the independent variables singly. It is found to be

influenced by more than one of these independent attributes jointly through their reciprocal and interactive relationship. In order to assess the contribution (Influence) of each independent variable to the dependent variable, the stepwise regression was carried out. The results are presented in Table 3.

From the Table 3, it can be observed that out of 18 independent variables only 7 variables were exerting influence on the extent of overall modernization of the tribal farmers under Integrated Tribal Development Project. All the seven variables together were contributing 90.90 per cent variation as indicated by (R²) value for the extent of overall modernization.

It can be inferred that 55.50 per cent variation in overall modernization is contributed by annual income of the tribal farmers. However, annual income + economic motivation accounted for 80.00 per cent, annual income + economic motivation + social participation accounted for 84.30 per cent, annual income + economic motivation + social participation + scientific orientation contributed 87.70 per cent, annual income + economic motivation + social participation + scientific orientation + education contributed 89.90 per cent, annual income + economic motivation + social participation + scientific orientation + education + cosmopolitaness contributed 89.60 per cent, annual income + economic motivation + social participation + scientific orientation + education contributed 88.80 per cent and annual income + economic motivation + social participation + scientific orientation + education + cosmopolitaness + organizational participation contributed 89.90 per cent change in dependent variable. The R² values at each stage of step up regression were found to be significant at 0.01 level of probability. Contribution of all the variables included in the study was found to be 90.90 per cent as overall R² was 0.909.

The partial 'b' values of these four variables were converted into standard partial 'b' values which were 0.659 for annual income, (Rank I) 0.280 for economic motivation, (Rank II) -0.333 for social participation, (Rank III), 0.269 for scientific orientation 0.128, (Rank IV) for education 0.115

Table 3 : Step-wise multiple regression analysis of overall modernization

Sr. No.	Independent variable	Multiple co-relation co-efficient (R)	Co-efficient of determination (R ²)	'F' values	Partial regression co-efficient (b)	't' value	Standard partial regression co-efficient (SPRC)	Rank
1.	X ₉	0.745	0.555	240.407	3.585	15.77	0.659	II
2.	X ₉ +X ₁₄	0.895	0.800	354.984	0.692	6.88	0.280	IV
3.	X ₉ +X ₁₄ +X ₈	0.918	0.843	340.951	-4.052	-9.3	-0.333	III
4.	X ₉ +X ₁₄ +X ₈ + X ₁₇	0.936	0.877	338.620	0.662	6.31	0.269	V
5.	X ₉ +X ₁₄ +X ₈ + X ₁₇ +X ₂	0.942	0.888	300.424	1.764	4.42	0.128	VI
6.	X ₉ +X ₁₄ +X ₈ + X ₁₇ +X ₂ +X ₁₅	0.946	0.896	209.167	0.358	3.72	0.115	VII
7.	X ₉ +X ₁₄ +X ₈ +X ₁₇ +X ₂ +X ₁₅ +X ₇	0.948	0.899	238.588	0.353	2.577	0.740	I

** indicate significance of value at P=0.01

R² = 0.909

(Rank V) for cosmopolitanism and 0.740 (Rank VII) for organizational participation.

It can be inferred from the above results that the independent variables such as annual income, economic motivation, social participation, scientific orientation, education, cosmopolitanism and organizational participation contributed 89.90 per cent variation in extent of overall modernization. The findings are suggestive of the fact that the variables which influenced the overall modernization should be reckoned while making any policy decision to boost modernization process.

Direct and indirect effect of antecedents attribute of tribal peasant on overall modernization under integrated tribal development project :

To study the influence of one variable on other variable both directly as well as through other variables presented in the situation. Hence, the significant variables were subjected to path analysis. The result of path analysis is presented in Table 4.

Direct effect:

The data in Table 4 revealed that the variables, education, land holding, farm power, annual income, mass media exposure, extension contribution, level of aspiration, cosmopolitanism, risk orientation and attitude towards Integrated Tribal Development Project exhibited positive direct effect whereas organizational participation scientific orientation, age and economic motivation exerted negative direct effect on overall modernization.

Annual income had maximum positive direct effect (0.6530) on overall modernization followed by level of

educational aspiration of son (0.2391), risk orientation (0.1541), education (0.1143), cosmopolitanism (0.0947), attitude towards Integrated Tribal Development Project (0.0754), land holding (0.0427), farm power (0.0297) and mass media exposure (0.0545), whereas organizational participation had the highest negative direct effect (-0.3201) followed by scientific orientation (-0.0359) and age (-0.0203).

It can be inferred that major variables contributing the maximum direct and positive effect on overall modernization were annual income and level of educational aspiration of son, whereas organizational participation had exerted direct and negative effect on overall modernization.

Total indirect effect:

So far, total indirect effect is concerned thirteen variables and one variable had positive and negative total indirect effect on modernization. Further, it can be observed that cosmopolitanism had maximum total indirect effect (0.5723) followed by economic motivation (0.5630), risk orientation (0.5450), attitude towards Integrated Tribal Development Project (0.5536) and mass media exposure (0.5195) whereas age had maximum negative indirect effect (-0.45696) on overall modernization.

Substantial indirect effect:

It was further revealed that out of 28 substantial indirect effects, eleven routed through annual income, six through organizational participation, five through risk orientation, three each through economic motivation and through scientific orientation.

With regards to substantial indirect effect the first substantial positive indirect effect on modernization was put

Table 4: Direct and indirect effect of independent variables on overall modernization under integrated tribal development project

Sr. No.	Variables	Direct effect	Total indirect effect	Substantial indirect effect through				
				First order	Second order			
1.	Age	X ₁	-0.0203	-0.45696	-0.2440	X ₉	-0.0789	X ₁₆
2.	Education	X ₂	0.1143	0.42614	0.3603	X ₉	-1.061	X ₇
3.	Land holding	X ₄	0.0427	0.1763	0.1515	X ₉	0.0487	X ₁₆
4.	Farm power	X ₅	0.0297	0.16284	0.0509	X ₁₄	0.0477	X ₁₆
5.	Organizational participation	X ₇	-0.3201	0.5380	0.4135	X ₉	0.0592	X ₁₇
6.	Annual income	X ₉	0.6530	0.0944	0.2027	X ₇	0.0727	X ₁₆
7.	Mass media exposure	X ₁₀	0.0545	0.5195	0.3030	X ₉	0.0815	X ₁₆
8.	Change agency contact	X ₁₁	0.0720	0.39018	0.3105	X ₉	-1.236	X ₇
9.	Level of educational aspiration of son	X ₁₃	0.2391	0.3099	0.0977	X ₁₇	0.0522	X ₇
10.	Economic motivation	X ₁₄	-0.017	0.5630	0.3637	X ₉	-1.179	X ₇
11.	Cosmopolitanism	X ₁₅	0.0947	0.5723	0.3862	X ₉	0.0622	X ₁₇
12.	Risk orientation	X ₁₆	0.1541	0.5450	0.3061	X ₉	0.1515	X ₁₄
13.	Scientific orientation	X ₁₇	-0.0359	0.5080	0.3293	X ₉	-1.412	X ₇
14.	Attitude towards ITDP	X ₁₈	0.0754	0.5536	0.2397	X ₉	0.1346	X ₁₄

forth by organizational participation (0.4135) followed by cosmopolitanism (0.3862), education (0.3603), scientific orientation (0.3293) through annual income. However, substantial negative indirect effect on modernization was put forth by age (-0.2440) through annual income.

It could be concluded that annual income was the key variable in exerting considerable direct and subsequent indirect effect and cosmopolitanism had maximum positive indirect effect. Similarly Chauhan (1994) also studied on peasantry modernization in Dungarpur district of Rajasthan and Patel (2005) also studied on peasantry modernization in Dahod district of Gujarat.

Conclusion:

To epitomize the results it can be said that majority of the tribal peasants had medium level of overall modernization. The independent variables *viz.*, education, size of land holding, farm power, organizational participation, annual income, mass media exposure, change agency contact, level of educational aspiration of their son, economic motivation, cosmopolitanism, risk orientation, scientific orientation and attitude toward Integrated Tribal Development Project of the respondents had positive and significant correlation with their level of overall modernization and only age of the respondents was found to be negatively and significantly correlated with their overall modernization. Seven variables *viz.*, annual income, economic motivation, social participation, scientific orientation, education, cosmopolitanism and organizational participation to gathered contributed 89.90 per cent variation in extent of overall modernization and annual income was the key variable in exerting considerable direct and subsequent indirect effect and cosmopolitanism had

maximum positive indirect effect.

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