

Correlate of Socio-Techno Economic Changes at Rehabilitated Place of Project Affected Farmers

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ABSTRACT

The present study was conducted in 121 vasahat of five talukas of Baroda district and planned to measure the socio-techno economic changes of PAFs at rehabilitated place and factors influencing on it. For the measurement of socio-techno-economic changes, the scale developed by Prajapati (1993) was used. The results of the study depicts that the majority of the PAFs had medium socio-techno economic changes. It is also found that socio-techno economic changes of PAFs was significantly influenced by six variables namely social participation, type of house, material possession, socio-economic status, annual income, and innovativeness. Hence these factors are showing greater importance towards the socio-techno-economic changes of PAFs at rehabilitated place.

Keywords : Socio techno economic change, Project affected farmers, Rehabilitation, Socio economic status

INTRODUCTION

Sardar Sarovar Project (SSP) on the river Narmada is one of the important projects and promises to be the new life line for Gujarat state as we enter the new millennium. The SSP on completion would generate a lot of benefits to four states i.e. Gujarat, Madhya Pradesh, Maharashtra and Rajasthan.

Dams are intended to play a pivotal role in achieving certain developmental goal, most of which bear some relation to the kind of human welfare concerns which most people would share. In condition of widespread poverty, frequent occurrence of drought and acute scarcity of drinking water considered as solutions. Constructing big dam for development had become inevitable. After independence many big dams have been constructed so far as a part of development models but during the process, rehabilitation and resettlement of affected people's has never been paid due attention. The rehabilitation and resettlement (RR) of the affected people's of the SSP has become a sensitive issue and have been given the highest priority in its implementation. A generous and most liberal rehabilitation policy in the world has been formulated by the Government of Gujarat for the

affected people's. For speedy and efficient implementation, a separate agency called the Sardar Sarovar Punarvasavat Agency (SSPA) is established. The primary objective of the policy is to significantly improve the economic condition of the affected people's after resettlement. The success of any development programme depends on degree of involvement of the farmers in the programme. But the involvement of the farmers will depend on the attitude and satisfaction of the individual towards functionaries and feasibility of the programme. Therefore, the present study was planned to measure socio techno economic changes at rehabilitated place in Project Affected Farmers (PAFs)

METHODOLOGY

The present study was purposively carried out in five talukas (i.e. Dabhoi, Naswadi, Sankheda, Savali and Waghodia) of Baroda district, where large number of Project Affected Farmers (PAFs) were resettled. All *vasahats* falling under selected talukas were included in the study. Thus, total 121 *vasahats* from five talukas were selected for the study. From the availability of PAFs in each *vasahat* of five talukas, five per cent of PAFs were selected through proportionate random sampling technique. Thus, total 250 PAFs were

randomly selected as respondents for the present study. For the measurement of socio-techno-economic changes, the scale developed by Prajapati (1993) was used. The data were collected with the help of pretested structured interview schedule.

RESULTS AND DISCUSSION

Socio-techno-economic changes

The changes in this study are the resultant changes that occurred among the PAFs at rehabilitated place due to favourable attitude towards rehabilitated place and adoption of modern agricultural technology. It is the assessment of changes in terms of socio-techno economic aspects. The resultant changes that occurred after rehabilitation at new place and adoption of modern agricultural technology viz., change in farm machinery/farm implements, household items, saving and investments, food habit, clothing, housing, social status, social relationship and self sufficiency were considered as socio-techno economic changes at rehabilitated place.

Table 1: Distribution of the respondents according their socio-techno economic changes n= 250

Sr. No.	Category	No.	Per cent
1	Low (upto 49 score)	71	28.40
2	Medium (50 to 58 score)	117	46.80
3	High (above 58 score)	62	24.80

Mean 53.27

SD 4.53

The data presented in Table 1 reported that nearly half of the respondents (46.80 per cent) had medium level of socio-techno economic changes followed by 28.40 per cent and 24.80 per cent of the respondents had low and high level of socio-techno economic changes.

Thus, it can be concluded that majority (71.60 per cent) of the respondents had medium to high level of socio-techno economic changes. The probable reason might be that medium annual income, animal possession, risk orientation, scientific and favourable attitude towards rehabilitated place and extent of adoption of recommended agricultural technology which had led to higher socio-techno economic changes in farming and also in style of living.

Relationship with independent variables and socio-techno economic changes

Table 2: Relationship of independent variables with socio-techno economic changes n = 250

Sr. No.	Independent variable	Correlation Coefficient
(A) Socio- personal Characteristics		
X1	Age	-0.436**
X2	Education	0.280**
X3	Type of family	0.151*
X4	Size of family	0.147*
X5	Social Participation	0.289**
(B) Economic Characteristics		
X6	Type of house	0.250**
X7	Occupation	0.0722 ^{NS}
X8	Animal possession	0.163*
X9	Material possession	0.648**
X10	Land holding	0.147*
X11	Socio-economic status	0.481**
X12	Annual income	0.492**
(C) Communication Characteristics		
X13	Extension contact	0.363**
X14	Sources of information	0.289**
(D) Psychological Characteristics		
X15	Innovativeness	0.576**
X16	Risk orientation	0.501**
X17	Scientific orientation	0.399**
X18	Attitude towards modern agriculture	0.555**

* Significant at 0.05 level of probability

** Significant at 0.01 level of probability

(A) Socio- personal characteristics

The data in Table 2 revealed that age of the respondents had significant but negative correlation with their socio-techno economic changes. The negative trend indicated that as age decreases, the socio-techno economic changes increases. It means younger farmers seemed to be better in socio-techno economic changes than aged. This might be because of the lacuna that the aged farmers would be less capable and enthusiastic than the younger ones. Whereas the educational level of the PAFs was positively and significantly correlated with their socio-techno economic changes. The reason attributed may be that the educated individuals would generally have the broader outlooks and capabilities to comprehend and interpret new ideas which resulted in change in behaviour.

Table 2 indicated that size and type of family was positively and significantly related with socio-techno economic changes. It means that PAFs with joint families' level of adoption was higher than the PAFs with nuclear families. It is also evidence from Table 2 that the social participation of the respondents was positively and significantly related with their socio-techno economic changes. This indicates that higher social participation develops wider outlook, higher contacts with the outsiders, high degree of knowledge and finally necessary socio-techno economic changes in an individual.

(B) Economic characteristics

It was observed from Table 2 that the type of house of the PAFs was positively and significantly association with their socio-techno economic changes. Whereas the occupation of the PAFs was non significantly associated with their socio-techno economic changes. It might be due to the fact that occupation is the main source of earning income, favourable annual income or financial position of an individual are highly responsible for expected socio-techno economic changes.

Animal possession and material possession of the PAFs had positively and significantly related with their socio-techno economic consequences, indicating that these variables had played a significant role in increasing socio-techno economic changes. It is natural that person with more number of milking animals will have more possibility to earn money through the selling of more milk and finally more scope of socio-techno economic changes. This might be the possible reason for above finding. Similar results are reported by Prajapati (1993), Patel (2000) and Sharma (1990).

Land holding of the PAFs was positively and significantly correlated with their socio-techno economic changes. Farmers with large size of land holdings tend to go for more intensive cultivation of crops. Large farm sized land holder comparatively have resource base and can afford to take risk leading to accept new innovations.

It is evidence from the Table 2 that socio-economic status and annual income of the PAFs was found to be positively and significantly related with their socio-techno economic changes. It proves that the objective of rehabilitation policy i.e. to increase the standard of living. This might be due to the

fact that education upto primary level, mixed housing pattern, more participation in social organization, medium animal and material possession, minimum two hectare of land and more annual income tends to high socio-economic status.

(C) Communication Characteristics

It is evidence from the Table 2 that extension contact and sources of information utilized by the PAFs were positively and significantly associated with their socio-techno economic changes. Higher extension contact and utilization of various formal, informal and mass media sources help to get knowledge regarding new innovations and also develop a wider outlook in the PAFs lead towards higher contacts with the outside world, which makes them knowledgeable and change their behaviour and this changed behaviour brings socio-techno economic changes among them.

(D) Psychological Characteristics

Regarding the psychological characteristics of PAFs i.e. innovativeness and risk orientation were positively and significantly related with their socio-techno economic changes. Significant relationship of the risk orientation indicates that a person who is higher risk oriented, higher would be his level of adoption, income and level of socio-techno economic changes.

In case of scientific orientation and attitude towards of modern agriculture were positively and significantly related with their socio-techno economic changes. It might be due to the true fact that scientifically oriented farmers are likely to have more inclination to use scientific methods in farming, having adopted modern ideas like hybrid varieties, plant protection chemicals etc. requiring high knowledge, skill and technical completeness on the part of the adopters. This might have necessitated them to go for a scientific thinking and knowledge on modern innovations. Therefore, it is logical to assume that farmers having scientific orientation will have more advancement level and favourable perception towards new innovations which lead to adopt more improved farm technologies resulting in higher socio-techno economic changes. Significant relationship of attitude towards modern agriculture indicates that more favourable attitude towards modern agriculture played significant role in improving level of adoption and finally socio-techno economic changes.

Stepwise regression analysis of independent variables on Socio-techno economic changes

Table 3: Stepwise multiple regression analysis of Socio-techno-economic changes

n=250

Sr. No.	Name of Variables	Partial Regression Coefficient	SE of Regression Coefficient	't' value	'F' value	Standard Partial Regression Coefficient	Rank
1	Social participation (X5)	1.4943	0.8599	1.7371 ^{NS}	3.02	0.0123	VI
2	Type of house (X6)	1.4601	0.3862	3.7807*	14.293	0.0556	IV
3	Material possession (X9)	1.6829	0.3313	5.0797*	25.802	0.096	II
4	Socio-economic status (X11)	0.1711	0.0741	2.309*	5.329	0.0215	V
5	Annual income (X12)	0.1369	0.0315	4.346*	18.845	0.072	III
6	Innovativeness (X15)	0.4998	0.0724	6.9033*	47.65	0.1639	I

Constant = 16.8494

R= 0.7753

R² = 0.6012*

* Significant at 0.05 level of probability

** Significant at 0.01 level of probability

It is clear from the Table 3 that out of eighteen variables, six variables namely, social participation, type of house, material possession, socio-economic status, annual income, and innovativeness were accounting influence on the socio- techno economic changes of the PAFs. All the six independent variables together accounted 60.12 per cent of variation as indicated by R² value for socio-techno economic changes.

As a result of stepwise regression analysis, the following regression model was obtained.

$$Y_4 = a + b_5x_5 + b_6x_6 + b_9x_9 + b_{11}x_{11} + b_{12}x_{12} + b_{15}x_{15}$$

Where,

Y₄ = Socio-techno economic changes

a = The intercept i.e. 16.8494 (Constant)

b₅ = Coefficient of partial regression of y₄ on x₅ i.e. 1.4943

b₆ = Coefficient of partial regression of y₄ on x₆ i.e. 1.4601

b₉ = Coefficient of partial regression of y₄ on x₉ i.e. 1.6829

b₁₁ = Coefficient of partial regression of y₄ on x₁₁ i.e. 0.1711

b₁₂ = Coefficient of partial regression of y₄ on x₁₂ i.e. 0.1369

b₁₅ = Coefficient of partial regression of y₄ on x₁₅ i.e. 0.4998

x₅, x₆, x₉, x₁₁, x₁₂ and x₁₅ are independent variables as stated in Table 3

Therefore the fitted regression equation should be as

$$Y_4 = 16.8494 + 1.4943x_5 + 1.4601x_6 + 1.6829x_9 + 0.1711x_{11} + 0.1369x_{12} + 0.4998x_{15}$$

The partial regression coefficient (by_{ij}) value of these six variables were converted into standard partial regression coefficient (b'y_{ij}) value. The 't' value of partial regression coefficient were observed to be significant for the variables viz., social participation, material possession, socio-economic status, annual income, and innovativeness. Whereas in case of type of house the 't' value was non significant. Based on the absolute values of standard partial regression coefficient, they were ranked from highest to lowest order of contribution as shown in Table 3

The extent of variation accounted by different independent variables on socio-techno economic changes

Table 4: Stepwise variation accounted by different independent variables on socio-techno economic changes

n=250

Step No.	Variable included	Multiple correlation coefficient (R)	Total variation accounted (% R ²)
I	X9 (Material possession)	0.6475	41.93
II	X9 + X15 (Innovativeness)	0.7072	50.01
III	X9 + X12 (Annual income) + X15	0.738	54.46
IV	X5 (Social participation) + X9 + X12+ X15	0.7659	58.65
V	X5 + X9 + X11 (Socio-economic status) + X12 + X15	0.7721	59.62
VI	X5 + X6 (Type of house) + X9 + X11 + X12 + X15	0.7753	60.12

It is to be noted that about 41.93 per cent socio-techno economic changes had occurred due to high material possession followed by material possession and innovativeness was accounted for 50.01 per cent of variation, material possession + annual income + innovativeness (54.46 per cent), social participation + material possession + annual income + innovativeness was accounted 58.65 per cent, social participation + material possession + socio-economic status + annual income + innovativeness was accounted 59.62 per cent. While above mentioned all variables along with type of house had together accounted for 60.12 per cent of variation in socio-techno economic changes.

From forgoing discussion it can be concluded that the socio-techno economic changes was found to be predicted by six independent variables namely, social participation, material possession, socio-economic status, annual income, and innovativeness, which had jointly contributed to 60.12 per cent of the total variation on socio-techno economic changes. At rehabilitated place, the implementing agency SSPA had provide fertile land, productive assets, financial help for construction of house to each PAFs and PAFs are cultivating cash crops. Therefore, these PAFs are generally found economically sound due to higher income through agriculture. Moreover, their participation in organization and high socio-economic status may led them for socio-techno economic changes. Hence, implementing agency and other extension agencies including Government and NGO's had to strengthening their positive efforts towards rehabilitation work.

CONCLUSION

It can be concluded from the above discussion that the majority of the PAFs had medium socio-techno economic changes. It is also found that socio-techno economic changes of PAFs was significantly influenced by six variables namely social participation, type of house, material possession, socio-economic status, annual income, and innovativeness. Hence these factors are showing greater importance towards the socio-techno-economic changes of PAFs at rehabilitated place. At rehabilitated place, the implementing agency SSPA had provide fertile land, productive assets, financial help for construction of house to each PAFs and PAFs are cultivating cash crops. Therefore, these PAFs are generally found economically sound due to higher income through

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REFERENCES:

- Chauhan, N. B. (1994). A Study on Peasantry Modernization in Dungarpur District of Rajasthan. Ph.D. (Unpub.) Thesis, R. A. U., Bikaner, Rajasthan.
- Patel, N. R., Pandya, D. N. and Patel, B. T. (1995). Techno-economic Change Among Beneficiary Farmers in Watershed area. *Maha. J. Ext. Edn.* 14: 25-32.
- Patel, P. P. and Sangle, G. K. (1994). Techno-economic Consequent upon Adoption of selected Agricultural practices in Tribal Farming System. *Guj. J. Ext. Edn.* 4&5: 51-55.
- Patel, R. C. (2000). A Study on the Consequences of Adoption of Watershed Management Technology by Beneficiary Farmers in Watershed Area of Kheda district of Gujarat State. Ph.D. (Unpub.) Thesis, G. A. U., Anand.
- Prajapati, M. R. (1993). Socio-economic Impact of Social Forestry Programme on Beneficiaries in Kheda District of Gujarat State. Ph.D. (Unpub.) Thesis, G. A. U., Anand.
- Sharma, M. L.; Sharma, R. K. and Sengar, R. S. (1990). Peasantry Modernization in Context of Socio-economic Development. *Maha. J. Ext. Edn.* 9 : 96-99.
- Shinde, V. G., Kulkarni, R. R. and Dikle, R. N. (1995-96). Sway of Selected Factors on Change in Socio-economic conditions of the Dairy Farmers. *Guj. J. Ext. Edn.* 6&7 : 157-160.
- Tawade, N. D. and Nalband, S. B. (1993). Impact of IRDP Assistance on Socio-economic Condition of Farmers. *Maha. J. Ext. Edn.* 12: 19-24.
- Thakur, K. K. and Sinha, R. R. (1989). Analysis of Agricultural Credit in Relation to Socio-economic Development of Farmers. *Maha. J. Ext. Edn.* 6 : 119-122.