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Study on Reinvestment Pattern of Rural Bio - Resource Complex Stakeholders

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Abstract

A comprehensive project called Rural Bio-resource Complex (RBRC) was launched by Department of Biotechnology, Government of India to rebuild the confidence among rural yuth and farmers, and to improve the living conditions of rural people across the country at five centres. Among these, the University of Agricultural Sciences, Bangalore implemented the project entitled "Establishment of DBT - Rural Bio-resource Complex at Bangalore Rural District" during 2005-06. Research study was undertaken on the Impact of RBRC on reinvestment pattern of its stakeholders in Karnataka, which is the only project of its kind in South India. Study was conducted at Doddaballapura Taluk in Bangalore Rural District, where the project is being implemented. Results revealed that the reinvestment pattern of stakeholders is a composite of many aspects such as value addition in education, possession of new materials, land purchase, land development, house construction, house renovation, borewell installation, borewell deepening and repair, loan repayment, savings, purchase of livestock and others. Equal number of the respondents (34%) belonged to high and medium (34%) level of reinvestment pattern category due to RBRC project. The reinvestment pattern of big, small and marginal farmers' and also agricultural labourers' were significant at five per cent level due to the project.

A number of developmental programmes and projects have been implemented by both Central and State Governments from time to time to improve the socio-economic conditions and standard of living of rural people. Inspite of such programmes and projects farmers are loosing interest in farming due to lack of assured market and remunerative price for their produce, less profitable interventions, lack of timely information support system, declining soil productivity and environmental degradation and fragmentation of land holdings. Particularly present day rural youths are migrating towards urban areas in search of new job and in extreme cases farmers are committing suicide. In which situation it was felt necessary for the government to come out with a suitable model to overcome the above problem. Hence, Department of Biotechnology, Government of India started Rural Bio-resource Complex project at five centres in India, among which the project at Tubagere Hobli, Doddaballapur Taluk, Bangalore Rural District is the only project for the entire South India. Location specific models were evolved in these centres within a period of five years for further multiplication of the same in other parts of the country at Hobli level. The RBRC project is different in its approach compared to other programmes and projects, since it aims at developing effective market and end user linkage for the outputs, accelerating income and employment generation with the ultimate goal of improving the living conditions of people in rural areas. Further, after the completion of the project period, Krishi Vigyan Kendra, Bangalore Rural District will continue the works of the project and hence it is a full fledged project. Most of the earlier programmes and projects in this regard failed because they followed piece-meal approach and did not concentrate on marketing aspect. Hence, this DBT-Rural Bio-resource Complex project was planned to implement looking into the earlier lacunae.

Despite the long history of the development programmes, there are no systematic and large-scale impact assessment studies on living conditions of rural people. There is lack of proper indicators and evaluation methods to assess the tangible and intangible economic, social and sustainable impact of the programs. In this context, the present study has been contemplated to assess the reinvestment pattern of Rural Bio-resource Complex project stakeholders which is directly associated with the standard of living of stakeholders participated in the project.

Several studies in the past have concentrated only on assessing the impact of different projects, but there

were no studies on measuring the reinvestment pattern of rural people exclusively.

Reinvestment Pattern : Reinvestment pattern is the investment made be stakeholder out of income realized due to his / her participation in the RBRC project on food consumption pattern, value addition in education, material possession, health status, land purchase and development, house construction and renovation, borewell installation and repair, loan repayment, savings, purchase of livestock and social function.

a. Food consumption pattern : It refers to the frequency and quantity of cereals, pulses, vegetables, furits and milk and milk products consumed by the RBRC stakeholders due to participation in the RBRC project.

b. Value addition in education : It is the degreet to which the change has occurred with respect to eucational facilities provided by a family to his / her childern due to participation in the project.

c. Material possession : It is the possession of new materials by a stakeholder as a result of his / her participation in the RBRC project.

d. Health status : It refers to the health status of a stakeholder due to his or her participation in RBRC project.

e. Land purchase : It is the investment made by stakeholder out of income realized due to income realized due to his / her participation in the RBRC project on purchase of land for cultivation or site for construction of house or cattle shed or silk worm rearing house.

f. Land development : It is the investment made by stakeholder out of income realized due to his / her participation in the RBRC project on development of land in the form of leveling, bunding and others.

g. House construction : It is the investment made by stakeholder out of income realized due to his / her participation in the RBRC project on construction of house or cattle shed or silkworm rearing house.

h. House renovation : It is the investment made by stakeholder out of income realized due to his / her participation in the RBRC project on renovation of house with new flooring, construction of toilets or rooms, alteration of house, plastering of walls and others.

i. Borewell installation : It is the investment made by stakeholder out of income realized due to his / her participation in the RBRC project on new borewell installation.

j. Borewell repair : It is the investment made by stakeholder out of income realized due to his / her participation in the RBRC project on repairing or deepening of existing borewell.

k. Loan repayment : It is the investment made by stakeholder out of income realized due to his / her participation in the RBRC project to reimburse the loan amount taken previously.

l. Savings : It is the savings made by stakeholder out of income realized due to his / her participation in the RBRC project through savings bank, fixed deposit, National Savings Certificate, recurring certificate, pigmi and others.

m. Purchase of livestock : It is the investment made by stakeholder out of income realized due to his / her participation in the RBRC project on purchase of livestock like sheep, goat, fishery, poultry, piggery, cow, buffalo and bullock.

n. Social function : It is the unproductive investment made by stakeholder out of income realized due to his / her participation in the RBRC project on marriage, festivals, anniversaries, village ceremonies and others.

METHODOLOGY

The study was conducted in Tubagere Hobli of Doddaballapura Taluk in Bangalore Rural District of Karnataka, where the RBRC project is being implemented. Respondents were selected from five village panchayaths *i.e.*, Hadonally, Melekote, S. S. Ghati, Tubagere and Hegdehally of Tubagere Hobli. From each panchayath, 40 respondents were selected

randomly giving equal representation for all five panchayaths. The criteria followed was, there should be equal representation of all categories of farmers, *i.e.,* ten each from small farmers, marginal farmers, big farmers and landless labourers. Thus, the total number of respondents for the study was 200, which constituted the total sample size. Looking into the nature of research problem, expost facto research design was selected, as the present investigation deals with a phenomenon which has already occurred. The variables selected were either already occurred or could not be manipulated. The comprehensive interview schedule was developed and pre-tested.

The importance of any research study mainly depends on the variables taken into account. The project envisaged improving the living conditions of rural people, hence the component which is directly associated with living condition of rural people *i.e.,* reinvestment pattern of its stakeholders in the project area was considered as the dependent variables. Fourteen independent variables were selected and classified under personal, socio-psychological, economic and communication variables.

Results and Discussion

Majority of the respondents in the study area utilised the income obtained gainfully by reinvesting it on value addition in education, possession of new materials, land purchase, land development, house construction, house renovation, borewell installation, borewell deepening and repair, loan repayment, savings and purchase of livestock. In addition, they also used the income for consumption of nutritive food and improving their health status, besides utilisation for celebrating social function.

Distribution of respondents based on their reinvestment pattern : Nearly equal number of respondents (34, 34 and 32%) belonged to high, medium and low reinvetment pattern categories due to RBRC projects, whereas, before implementation of the project 37.0 per cent of the respondents belonged to low reinvestment pattern categories, followed by medium (34.5%) and high (28.5%) reinvestment pattern categories as shown in Table I. The data subjected for

Table I

Distribution of different categories of RBRC stakeholders based on their level of reinvestment pattern

Reinvestment pattern level	Category of RBRC Stakeholders																	
	Big farmers (n=50)				Small farmers (n=50)				Marginal farmers (n=50)				Agricultural labour (n=50)				Over all (n=50)			
	Before		After		Before		After		Before		After		Before		After		Before		After	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low	-	-	-	-	08	16	07	14	21	42	17	34	45	90	40	80	74	37	64	32
Medium	10	20	03	06	30	60	27	54	24	48	28	56	05	10	10	20	69	35	68	34
High	40	80	47	94	12	24	16	32	05	10	05	10	-	-	-	-	57	28	68	34
Total	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	200	100	200	100
Paired 't' value	2.138*				2.009*				2.027*				2.045*				2.174*			

* Significant at 5% level

statistical test indicated significant differences in the reinvestment pattern of RBRC and it was found significant at five per cent level.

Majority of the respondents in the study area utilised the income obtained gainfully by reinvesting it on value addition in education, possession of new materials, land purchase, land development, house construction, house renovation, borewell installation, borewell deepening and repair, loan repayment, savings and purchase of livestock. Result is on par with the studies of Basu Angsuman (1988), Bheemappa (1987) and Hyma Jyothi *et al.* (2003).

Association of personal, socio-psychological, economic and communication factors of RBRC stakeholders with reinvestment pattern : It is Observed from Table II that five variables were found significantly associated with the reinvestment pattern of RBRC stakeholders at one per cent level. These were occupation, economic motivation, management orientation and credit orientation, whereas, five variables like education, family type, risk orientation, mass media participation and extension contact were found to be associated with the social status at five per cent level.

Findings reveal that individual with higher economic motivation and credit orientation, large land holdings with better management orientation in his occupation, medium education with more risk bearing ability due to nuclear family type had contact with extension agents and participated in mass media, which resultued in better reinvestment pattern.

Contribution of personal, socio-psychological, economic and communication factors of RBRC stakeholders towards reinvestient pattern : Table III shows that all the selected thirteen variables could explain 74.15 per cent of the variation in reinvestmen tpattern of the RBRC stakeholders as indicated by the R^2 value of 0.7415. Out of the total prediction the variables like education, occupation, family type, risk orientation, family dependency ratio and land holding were found to be significantly

TABLE II

Association between reinvestment pattern of RBRC stakeholders and their personal, socio-psychological, economic and communication characteristics

(n=200)

Characteristics	Chi - Square Value	Contingency coefficients
Age	4.2349	0.0491
Education	16.2414 *	0.2404
Occupation	27.0624 **	0.3614
Family type	14.1340 *	0.2360
Risk orientation	17.1352 *	0.2591
Economic motivation	36.2488 **	0.3952
Management orientation	39.4950 **	0.4087
Family dependent ratio	5.1487	0.0521
Land holdings	48.0819 **	0.4240
Credit orientation	29.1605 **	0.3413
Mass media participation	15.1065 *	0.2683
Extension participation	7.2124	0.1417
Extension contact	17.1357 *	0.2593

** = Significant at 1 % level ; ** = Significant at 5 % level

TABLE III

Extent of contribution of independent variables on reinvestment pattern of RBRC stakeholders

(n=200)

Characteristics	Regression coefficients (B)	Standard Error (SE)	't' Value
Age	0.002	0.004	0.514
Education	0.031	0.039	2.809 *
Occupation	0.731	0.094	7.754 *
Family type	0.279	0.121	2.299 *
Risk orientation	0.033	0.010	3.233 *
Economic motivation	0.008	0.010	0.772
Management orientation	0.003	0.002	1.375
Family dependent ratio	0.001	0.008	2.372 *
Land holdings	0.072	0.010	6.965 *
Credit orientation	0.019	0.017	1.073
Mass media participation	0.002	0.016	0.124
Extension participation	0.004	0.014	0.347
Extension contact	-0.001	0.013	-0.013

* = Significant at 5% level ;
F value : 44.92%
R^2 Valure = 74.15%

contributing to the varioation in reinvestiment pattern of RBRC stakeholders.

The RBRC stakeholders with nuclear family type having big land holdings, low family dependency and better eduction are ready to take more risk in their occupation, resulting in better reinvestment pattern. Further, the increased annual income due to RBRC interventions has helped them to reinvest on personal consumption, profitable ventures, repayment of loans and savings.

The hypothesis presumed befor study were rejected based on the change in reinvestment pattern of RBRC stakeholders after implementation on RBRC, singificant association between reinvestment pattern of RBRC stakeholders and personal, socio-psychological, economic and communication variables and significat contribution by RBRC stakeholders' personal, socio-psychological, economic and communication variables towards their reinvestment pattern.

The study revealed that there is significant difference in the reinvestment pattern of all types of RBRC stakeholders due to impact of RBRC project. Stakeholders have utilised the income obtained gainfully by reinvestment it on value addition in education, possession of new materials, land purchase, land development, house construction, house renovation, borewell installation, borewell deepening and repair, loan repayment, saving, and purchase of livestock. The change agency may upscale / strengthen such projects for higher continued benefits, particularly for weaker sections. It is also found that education, occupation, family type, risk orientation, family dependency ration and land holdings of the RBRC stakeholders were the major manipulable variables for better reinvestment patter. Therefore, the agencies concerned with implementation of developmental programmes should concentrate on these dimension for including berrter reinvestment pattern, which leads to improve standard of living.

References

Basu Angsuman, 1988, Garibi hatao - A study of Integrated Rural Development programme in Noida district. Kurukshetra, **36** (7) : 22 - 25.

Bhemappa, A., 1987, Impact of integrated Rural Development programme on beneficiaries of diary project in Dharwad Taluk (Karnataka). *M.Sc. (Agri.) thesis*, (Unpub.), Univ. Agril. Sci., Dharwad.

Hyma Jyothi, S., Umamaheshwara Reddy, S. and Raju, V. T., 2003, Economics of Buffalo milk production in West Godavri district of Andhra Pradesh- A case study. *Andhra Agril. J.*, **50** (1&2) : 14 - 143.

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