

Utilization of Benefits from Government Programmes or Schemes by Farmers in Andhra Pradesh – An Institutional Economic Analysis

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ABSTRACT

This study is mainly focused on estimating annual benefits received by farmers from Government programmes. A sample of 35 farmers each having access to canal irrigation (CIA), ground water irrigation (GIA) and rainfed (RFA) from Krishna district in Andhra Pradesh had chosen for analysis. On an average CIA, GIA and RFA farmers receive an annual benefits of Rs. 8732, Rs. 7518 and Rs. 11202, respectively from Government programmes. Proportion of benefits from programmes to total net returns from all sources per family per year is three per cent for CIA, four per cent for GIA and 16 per cent for RFA farmers. Out of 39 programmes listed by Government departments, on an average around 5 to 6 programmes were utilized by the farmer. The gap in net returns from all sources between irrigated and rainfed farmers was more, hence it is crucial to involve and explore different programmes for rainfed farmers. To enhance the reach of benefit it is necessary for the Government departments to bring out a guide book in Telugu highlighting all the Government programmes.

ANDHRA PRADESH has been a front runner in implementing several types of innovative Government programmes from Participatory Irrigation Management (PIM) in surface irrigation to 'Abhayastham' (for SHG groups) and 'Rajiv Arogya Shree' (free health insurance programme for all BPL families). While the state has been actively and dynamically implementing many such programmes, it is crucial to note how many programmes are devised, formulated and planned; as well as how many programmes are actually in vogue (Gaiha, 2000). This study focuses on the benefits received from Government programmes by farmers in Krishna district of Andhra Pradesh along with the transaction cost spent by them.

The Government programmes focusing for women development are; 1. SHG loan subsidies through DWACRA groups, 2. Widow pension, 3. Deepam (free one time LPG cylinder and gas connection for women in BPL families), 4. Kishori Shakti Yojana (nutritious food for adolescent girls), 5. Santhwana, 6. Swadhar, 7. Janani Suraksha Yojana, 8. Abhaya Hastham (insurance scheme for women in DWACRA groups) and 9. Indira Jeevitha Bima Padhakam.

Efforts were made to list the different Government programmes of Andhra Pradesh aimed

towards benefiting people at micro level (*i.e.*, individual rather than group or macro benefit), using the printed and electronic media including internet. In all 39 Government programmes were listed commencing from Ration card for BPL families on to Indiramma Housing Scheme, on to 'Abhayastha' (interest subsidy for SHG groups) etc. Out of 39 programmes which were found from different sources in Andhra Pradesh, only 19 were found to be actually in vogue (50 %). This shows the first inefficiency in the governance.

The policy makers in their ambition to evolve new programmes do suggest / plan in their budget allocation for innovative programmes. One innovative programme from Tamil Nadu which was proposed by the then Chief Minister Sri K. Kamaraj in 1960s was the Mid Day Meal Scheme that has been adopted by the most states in India. The overall per capita income of an Indian is estimated to at Rs. 53331 during the year 2012. However the per capita income of an average farmer estimated at Rs. 17600 which is at the most $\frac{1}{3}$ of Indian per capita income. The study is mainly focused to find out the share of the benefits from Government programmes in the per capita income of farmers (Patil, 2005). Specific objectives are as follows;

1. To estimate the utilization of benefits from Government programmes and to estimate the extent of reach of Government programmes for women.

2. To analyse the efficiency in the distribution of benefits.

METHODOLOGY

The purpose of this study is to compare the distribution of benefits from Government programmes among canal irrigated area (CIA), groundwater irrigated area (GIA) and rainfed area (RFA) farmers of Krishna district. In Krishna district, 35 farmers possessing canal irrigation (CIA) (from Nagarjuna Sagar Left Bank Canal), 35 farmers possessing groundwater irrigation through bore well (GIA) and 35 farmers totally dependent on rainfall (RFA) have been randomly selected from Gopinenipalem village of Vatsavai mandal, Anigandlapadu village of Penuganchiprolu mandal and Ramachandrunipeta village of Jaggaihpetta mandal, respectively.

The Gopinenipalem village is situated at the latitude of $16^{\circ} 52'$ degrees north and longitude of $80^{\circ} 10'$ degrees east and agriculture is the main source of livelihood in this village. The village has relatively good access to canal irrigation from Nagarjuna Sagar left bank canal enabling farmers to cultivate maize, chilli, cotton and paddy. Anigandlapadu village is situated at the latitude of $16^{\circ} 53'$ degrees north and longitude of $80^{\circ} 17'$ degrees east. Major source of irrigation is groundwater extracted from bore wells. Ramachandrunipeta village situated at the latitude of $16^{\circ} 56'$ degrees north and longitude of $80^{\circ} 05'$ degrees east. Livelihood in this village is mainly from off farm employment. Major crops grown are redgram, cotton, chilli.

Measures of central tendency are employed to quantify the magnitude of benefit from Government programmes or schemes (Channaveer, 2011). Percentages are used to find out the share of each programme or benefit to the total. Some of the Government programmes like Indiramma Housing Scheme, Pasukranthi Padhakam, Crop Loss Relief Fund, Subsidy for farm machinery extends benefits

over time. Thus the benefits for such beneficiaries are amortized.

The efficiency in the utilization of benefit from the Government programmes was calculated as the ratio of net returns from all sources (in Rs.) per farm family to the total benefits received from Government programmes (in Rs.) per farm family. Net returns per family from all the sources include, net return per farm family in agriculture, net return per farm from livestock and net return per farm from non farm income. Incomes from different sources in all the three regions were compared.

RESULTS AND DISCUSSION

Farmers participation in Government programmes in the study area: Cent per cent of the sample farmers in CIA received white ration cards obtain Rs.3621 worth of food security ration per year; 80 per cent of the farmers received subsidized interest loan of Rs.1418 under SHG; Panchayath Water Supply (100 %, Rs.180); Crop Loss Relief Fund (97 %, Rs. 7657); and so on. Among high value and low participation lies in Indiramma Housing Scheme from which 11 per cent of the farmers received an amortized benefit of Rs.3340 per family, followed by Pasukranthi Scheme benefiting nine per cent of the farm families deriving an amortized benefit of Rs.1759 per year. The popularity of the Government programmes can be examined by considering the proportion of farmer beneficiary in column 3 (Table I). Accordingly, the most popular Government programmes in CIA are white ration card (BPL card) providing Rs. 3621 per family for 100 per cent of farmers providing food security ration followed by Crop Loss Relief Fund (amortized benefit of Rs. 852, 97 %); subsidy on interest of SHG loans (Rs. 1418, 80 %); Taiwan sprayer subsidy (Rs. 723, 54 %). The type of benefit flow is also provided in the column 5 (Table I).

Benefits to farmers from Government programmes in GIA is indicated in Table II. About 97 per cent of the sample farmers in GIA received white ration cards obtain Rs. 2962 worth of food security ration per year; 63 per cent of the farmers received subsidized interest loan of Rs.1031 under SHG;

TABLE I

Benefit to farmers from Government programmes in CIA area of Krishna District, 2011

(n=35)

Type of the programme or scheme	Name of the programme / scheme	Number of farmers benefitted in the sample	Total annual benefit availed per beneficiary family (Rs.)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (Rs.)
Programmes focusing on providing food and nutritional security	White ration card (BPL card)	35 (100)	3621	monthly	—
Wage Employment	MGNREGA	5(14)	no work allocated	once a year	—
Social security	Old Age Pension	13(37)	2400	monthly	—
	Disability pension	1 (3)	6000	monthly	—
Housing	Indiramma housing	4(11)	30000*	one time long term benefit	Rs. 3340
	NTR Colony Houses	3(9)	12000*	one time	Rs. 1336
SHG	SHG loan subsidy	28 (80)	1418	yearly	—
	Deepam (free one time LPG cylinder and gas connection)	8 (23)	1400*	one time	Rs. 109
Drinking water and sanitation	Panchayath Water Supply	35 (100)	180	daily	—
Health insurance	Rajiv Arogya Shree	5 (14)	11429*	one time	Rs. 1272
Animal husbandry	Pashukranthi Padhakam (one milch buffalo per family)	3 (9)	15800*	one time	Rs. 1759
	Cattle Feed Distribution (From Cooperatives)	2 (6)	1800	monthly	—
ICDS	Mid Day Meal	1 (3)	1530	daily	—
Agriculture	Crop Loss Relief Fund (Rs. 2400 per farm as a relief due to drought or flood)	34 (97)	7657	effected season	Rs. 852
	Subsidized seeds (from Agriculture Department)	14 (40)	1664	twice a year	—
Farm machinery, implements and buildings	Taiwan sprayer subsidy from Agriculture Department	19 (54)	6500*	one year	Rs. 723
	Oil engine (50 per cent subsidy up to Rs. 20000 from Agriculture Department)	13 (37)	20000*	one time	Rs. 1360

TABLE II
Benefit to farmers from Government programmes in GIA of Krishna District, 2001

(n=35)

Type of the programme or scheme	Name of the programme / scheme	Number of farmers benefited in the sample	Total annual benefit availed per beneficiary family (Rs.)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (Rs.)
Programmes focusing on providing food and nutritional security	White ration card (BPL card)	34 (97)	2962	monthly	—
Wage employment	MGNREGA	1 (3)	2500	once a year	—
Social security	Old Age Pension	5 (14)	2400	monthly	—
	Widow Pension	2 (6)	2400	monthly	—
Housing	Indiramma housing	3 (9)	30000*	one time	Rs. 3340
	NTR colony houses	1 (3)	12000*	one time	Rs. 1336
SHG	SHG loan subsidy	22 (63)	1031	yearly	—
	Deepam (free one time LPG cylinder and gas connection)	1 (3)	1400* (20 years)	one time	Rs. 109
Drinking water and sanitation	Panchayath Water Supply	35 (100)	360	daily	—
Health	Rajiv Arogya Shree (health insurance)	5 (14)	67250*	one time	Rs. 7487
Animal Husbandry	Pashukranthi Padhakam (one milch buffalo per family)	1 (3)	15800*	one time	Rs. 1759
	Cattle Feed Distribution (From Cooperatives)	5 (14)	2640	monthly	—
Agriculture	Crop Loss Relief Fund (Rs. 2400 per farm as a relief due to drought or flood)	28(80)	11916*	effected season	Rs. 1327
	Subsidized seeds (from Agriculture Department)	32 (91)	662	twice a year	—
	Subsidies for Micro Irrigation	2 (6)	115665*		Rs. 12877
Farm machinery, implements and buildings	Taiwan sprayer subsidy from Agriculture Department	6 (17)	6500*	one time	Rs. 723

Figures in parentheses indicate percentage to total

* Total benefit from long term programme

Panchayath Water Supply (100 %, Rs. 360); Crop Loss Relief Fund (80 %, Rs.11916); and so on. Among high value and low participation lies in Indiramma Housing scheme from which 9 per cent of the farmers received an amortized benefit of Rs. 3340 per family, followed by Pasukranthi Scheme benefiting 3 per cent of the farm families deriving an amortized benefit of Rs.1759 per year. The popularity of the Government programmes can be examined by considering the proportion of farmer beneficiary in column 3 (Table II). Accordingly the most popular Government programmes in GIA are white ration card (BPL card) providing Rs. 2962 per family for 97 per cent of farmers providing food security ration followed by subsidized seeds (Rs. 662, 91 %); Crop Loss Relief Fund (amortized benefit of Rs. 1327, 80 %); subsidy on interest of SHG loans (Rs. 1031, 63 %).

Benefits to farmers from Government programmes in RFA is indicated in Table III. About 97 per cent of the sample farmers in RFA received white ration cards obtain Rs. 3969 worth of food security ration per year; 89 per cent of the farmers received benefit of Rs. 4500 from MGNAREGA; 86 per cent of the farmers received subsidized interest loan of Rs. 1194 under SHG; Panchayath Water Supply (100 %, Rs. 360); Crop Loss Relief Fund (83 %, Rs. 4072); and so on. Among high value and low participation lies in subsidized seeds from which 11 per cent of the farmers received benefit of Rs. 750 per family, followed by NTR colony houses benefiting 11 per cent of the farm families deriving an amortized benefit of Rs.1336 per year. The popularity of the Government programmes can be examined by considering the proportion of farmer beneficiary in column 3 of the Table III. Accordingly the most popular Government programmes in RFA are white ration card (BPL card) providing Rs. 3969 per family for 97 per cent of farmers providing food security ration followed by MGNAREGA (Rs.4500, 89 %); subsidy on interest of SHG loans (Rs. 1194, 86 %); Crop Loss Relief Fund (amortized benefit of Rs. 4072, 83 %).

It is hypothesized that rainfed farmers are benefiting more from Government programmes compared to irrigated farmers. That, around 97 per cent of the sample farmers had ration card, in itself is

a *prima-face* indicator of receiving at least the basic supply of food. Therefore, the food security is taken care by the Government. The village panchayath is supplying water to all the farmers, indicating the initiative taken by the village panchayath in obtaining macro level benefit from Government. Panchayath is supplying piped water to people in GIA and RFA since past eight years, thereby providing hygienic water to the people.

It is heartening to note that around 85 per cent of the farmers are having Rajiv Arogya shree cards in all the three regions. In Andhra Pradesh, all the BPL card holders are automatically health insured. The BPL card holders just need to enroll their names and the members of the family in the Village Panchayath office to be eligible to receive the benefits. For this health insurance (Rajiv Arogya Shree), the Government of Andhra Pradesh pays the premium amount.

Subsidies for seeds are the most popular programme of the Department of Agriculture in the case of GIA farmers, where 91 per cent of the farmers are getting benefit. In CIA 40 per cent of the farmers and in RFA 11 per cent of the farmers are receiving seed subsidy. This difference is because, the Farmers' Cooperatives are functioning well in GIA. In RFA 90 per cent of the people are benefiting from MGNAREGA, while in GIA and CIA, less than 15 per cent are benefiting from MGNAREGA due to disinterest towards the programme. A larger number of RFA farmers are participating in MGNAREGA compared with CIA and GIA farmers due to low net returns from different sources. Around 85 per cent of the farmers in all the three sample areas received compensation towards crop loss by floods, protecting the farmer from the risk due to natural calamities.

Around 97 per cent of the farmers in the three sample areas have BPL cards and are connected with drinking water supply. About 85 to 95 per cent of the BPL families have been health insured and this demonstrates the Government of Andhra Pradesh's commitment, and concern in creating awareness about the health insurance programme. The government of Andhra Pradesh, the Health Department and the Food and Civil Supplies Department deserve full appreciation for comprehensive health insurance among farmers and people living in the rural areas.

TABLE III

Benefit to farmers from Government programmes in RFA of Krishna District, 2011

(n=35)

Type of the programme or scheme	Name of the programme / scheme	Number of farmers benefited in the sample	Total annual benefit availed per beneficiary family (Rs.)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (Rs.)
Programmes focusing on providing food and nutritional security	White ration card (BPL card)	34 (97)	3969	monthly	—
Wage Employment	MGNREGA	31 (89)	4500	once a year	—
Social security	Old Age Pension	5 (14)	2400	monthly	—
Housing	Indiramma housing	10 (29)	30000*	one time	Rs. 3340
	NTR Colony Houses	4 (11)	12000*	one time	Rs. 1336
SHG	SHG loan subsidy	31 (86)	1194	yearly	—
	Deepam (free one time LPG cylinder and gas connection)	18 (51)	1400	one time	Rs. 109
Drinking water and sanitation	Panchayath Water Supply	35 (100)	360	daily	—
Health	Rajiv Arogya Shree (health insurance)	3 (9)	50000	one time.	Rs. 5566
ICDS	Mid Day Meal	6 (17)	1530	daily	—
Agriculture	Crop Loss Relief Fund (Rs. 2400 per farm as a relief due to drought or flood)	23(83)	4072*	effected season	Rs. 453
	Subsidized seeds (from Agriculture Department)	4 (11)	750	twice a year	—
Farm machinery, implements and buildings	Taiwan sprayer subsidy from Agriculture Department	9 (26)	6500*	one time	Rs. 723

Figures in parentheses indicate percentage to total

* Total benefit from long term programme

The total benefit received by sample farmers from Government benefit across three regions is indicated in Table IV. On an average CIA farmer receives benefit of Rs. 8732 from six Government programmes out of 39 listed Government programmes. A GIA farmer receives an average benefit of Rs.7518 from five Government programmes. A RFA farmer receives an average benefit of Rs. 11202 from six Government programmes. CIA and RFA participated in 15 per cent of the total programmes listed by line departments and GIA farmers participated in 12 per cent of total programmes.

In CIA 26 per cent of the farmers are benefiting from 5 Government programmes getting benefit up to Rs. 6078. Around another 26 per cent of farmers benefiting from 6 Government programmes getting benefit up to Rs. 8053. About 23 per cent of the farmers benefiting from 7 Government programmes getting a benefit of Rs. 10566 on an average in CIA each family is getting benefit up to Rs. 8732 from 6 Government programmes and the coefficient of variation is around 30 per cent. In GIA 40 per cent of the farmers getting benefit up to Rs. 4389 from four Government programmes and coefficient of variation is around 22 per cent. About 31 per cent of the farmers getting on an average a benefit of Rs. 10096 from six Government programmes and the coefficient of variation is around 64 per cent. Each family is getting benefit up to Rs. 7518 from five Government programmes. In RFA, 26 per cent farmers received benefit up to Rs.10143 from five Government programmes with 18 per cent as coefficient of variation

and 17 per cent farmers received benefit up to Rs. 11381 from six Government programmes with eight per cent of coefficient of variation and 26 per cent of the farmers received on an average benefit of Rs.11993 from seven Government programmes with 13 per cent of coefficient of variation. Each farmer in RFA receives annual benefit on an average up to Rs.11202 from 6 Government programmes.

Efficiency in availing the benefit of Government programmes

Efficiency in availing benefit of Government programmes in CIA, GIA and RFA is indicated in Table V. The net return from all sources per family in CIA is Rs. 261756, in GIA it is Rs.183434 and in RFA it is Rs. 58327. Relative efficiency of RFA farmers over CIA and GIA farmers can be examined by considering the net returns realized from all sources per rupee of benefit received from Government programmes. Accordingly the CIA farmer is realizing Rs. 29.97 of net return per rupee of benefit received; the GIA farmer is realizing Rs. 24.39 per rupee of benefit received, while RFA farmer is realizing Rs. 5.20 per rupee of benefit received. Thus, eventhough the benefits received from the Government programmes place the RFA farmer to receive Rs. 11202 which is higher than that received by the CIA farmer Rs. 8732 and GIA farmer Rs. 7518 respectively. The CIA and GIA farmer is receiving 57 and 64 per cent of income from agriculture, 15 and 14 per cent of income from livestock, 28 and 22 per cent of income from off farm activities, respectively. While, the RFA farmer

TABLE IV

Benefits accrued to farmers from Government programmes in CIA, GIA and RFA, 2011

Location (Area)	CIA (n=35)	GIA (n=35)	RFA (n=35)
Total number of programmes listed in Line Departments of the Government	39	39	39
Average number of programmes benefiting per family	6 (15%)	5 (12%)	6 (15%)
Average benefit received per family per year (Rs)	8732	7518	11202

Figures in parentheses indicate percentage of programmes participated to total programmes listed by line departments

TABLE V

Efficiency in availing benefit from Government programmes in CIA, GIA and RFA of Krishna District, 2011

(n=35)

Particulars	CIA	GIA	RFA
Size of the holding	9.02	6.75	4.26
Net returns from crops per farm family per year	149509	114359	1683
Net returns from livestock per farm family per year	37904	28810	8672
Net returns from non farm income (wage income etc) per farm family	74342	40264	47971
Net returns per acre of gross cropped area from crops	12042	10666	979
Net returns from all sources per farm family	261756	183434	58327
Net returns per capita	55863	49894	13171
Net returns per worker*	80364	75141	16871
Net return from Livestock (Rs.) / per worker for farm families having live stock	34807	34614	11149
Net return from non farm income (Rs)/ working population for farm families having off farming income	29908	76056	16960
Total benefit (Rs) from government programmes per family	8732	7518	11202
Net returns per rupee of benefit received per year	1 : 29.97	1 : 24.4	1 : 5.2
Benefit received per rupee of net returns from all sources	0.03	0.04	0.19
Net returns from all sources + the benefit received from Government programmes per family per year (Rs.)	270488	190952	69529
Proportion of benefit from Government programmes to total net returns from all sources per year per family (%)	3	4	16
For every Rupee of benefit received by Canal farmer, the benefit received by RFA farmer (Rs.)		1.28	
For every Rupee of benefit received by groundwater farmer, the benefit received by RFA farmer (Rs.)		1.49	
For every Rupee of net return earned from all sources by canal farmer the net return earned by RFA farmer (Re.)		0.22	
For every Rupee of net return earned from all sources by groundwater farmer the return earned by RFA farmer (Rs)		0.32	
For every Rupee of net return earned from agriculture, by ground water farmer the net return earned by RFA farmer (Re)		0.014	
For every Rupee of net return earned from livestock, by canal farmer the net return earned by RFA farmer (Re)		0.23	
For every Rupee of net return earned from livestock, by ground water farmer the net return earned by RFA farmer (Re)		0.3	
For every Rupee of net return earned from off farm, by canal farmer the net return earned by RFA farmer (Re)		0.64	
For every Rupee of net return earned from off farm, by ground water farmer the net return earned by RFA farmer (Re)		1.19	

* Average is calculated for number of family members who are earning income.

in contrast is receiving 3 per cent income from agriculture and 15 per cent of income from livestock and 82 per cent of income from off farm employment. Ceteris paribus, the CIA and GIA farmers are exhibiting relatively higher economic efficiency compared with RFA farmer, eventhough the Government benefit received is almost 76 and 67 per cent of the benefit received by RFA farmer. This efficiency of canal and ground water irrigated farmers can be attributed to the intensive cultivation of crops, rearing of dairy and development of integrated farming systems due to availability of irrigation.

The gap in net returns from all sources between irrigated and rainfed farmers is substantial, hence it is crucial to involve, explore and improve governance of different programmes for rainfed farmers. It is necessary for the developmental departments to bring out a guide book in Telugu highlighting all the governmental programmes, details of documents to be submitted, last date, eligibility to avail benefit,

number of days of waiting period, to whom to submit and follow-up actions by the farmer. The guide book should be revised as and when changes occur.

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