

Transaction Cost Analysis of Benefits Received from Governmental Programmes by Farmers in Krishna District of Andhra Pradesh

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ABSTRACT

This study focused on the transaction cost incurred by the farmers to avail the benefit and their perception regarding reach. 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. In CIA, the average transaction cost per programme per family is Rs. 368 out of which 43 per cent is due to opportunity cost of time spent by farmer in availing benefit. In GIA, the average transaction cost per programme per family is Rs. 759 out of which 51 per cent is due to rent paid exclusively for the programme. In RFA, the average transaction cost per programme per family is Rs. 494 out of which 43 per cent is due to rent paid exclusively for the programme. Around 59 per cent of the programmes are with good governance in CIA whereas in GIA and RFA it is 42 and 54 per cent, respectively. Around, 35 per cent of programmes in GIA are poorly governed, whereas, in CIA and RFA it is 18 and 33 per cent respectively. The highest gap is in case of *pashukranthi padhakam* due to lack of awareness and procedural complexity followed by subsidized seeds where the gap is mainly because of lack of seed supply in time and long waiting time to get the benefit. Panchayath Raj system should be governed well to reduce errors of inclusion and exclusion. This reduces the gap between actual beneficiaries and eligible farmers.

RURAL India is at cross roads due to: (1) increasing non-farm wages, (2) rural to urban migration of people, (3) land conversion to non-agriculture purpose, (4) lack of good governance in implementing Governmental programmes, (5) lack of extension efforts. Despite the fact that there are at least 39 Governmental programmes for rural areas, farmers are benefiting from only around 15 per cent of the programmes is an indicator of poor governance in agriculture and rural development. However, on the other hand successive governments make tall claims of their policies and programmes, though the extent of implementation being relatively poor.

Policy makers have been launching different types of programmes for the benefit of farmers and other citizens. As the details of programmes at any particular place was not available efforts were made to collect the information regarding Governmental programmes in the process it is likely that all the Governmental programmes may not have been listed. In all 39 developmental programmes have been identified in the study. While the number of programmes and the diversity are vital, as each programme is theoretically unique, the governance of

the programme is the most crucial aspect of the development. Without good governance, sheer launching of programmes and schemes has limited application in the developing economies.

The transaction costs arise because the resources for each programme are scarce and all the beneficiaries in a given area cannot be covered in any reasonable time frame. According to a study by Channaveer (2011), the elasticity of benefits received with regard to the transaction cost incurred to obtain the benefit is 0.63. This shows that unless farmers put in their whole and soul onto the developmental programmes, it is not possible to derive the potential benefits from the developmental programmes. This study focused on the transaction cost incurred by the farmers to avail the benefit and their perception regarding reach.

Objectives of the study :

1. To quantify the transaction costs of Governmental programmes for farmers.
2. To analyze the perceptions of farmers regarding reach of programmes.

METHODOLOGY

The comparison made among canal irrigated area (CIA), groundwater irrigated area (GIA) and rainfed area (RFA) farming of Krishna district. In Krishna district, 35 farmers possessing canal irrigation (CIA) (from Nagarjuna Sagar Left Bank Canal), 35 farmers possessing groundwater irrigation (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 Jaggaihpeta mandal, respectively.

The Gopinenipalem village is situated at the latitude of $16^{\circ} 52'$ degrees north and longitude of $80^{\circ} 10'$ degrees east. Agriculture is main provider of livelihood in village. Gopinenipalem is 7.6 km away from its Mandal headquarter main town of Vatsavai. The village has relatively good road access and canal irrigation from Nagarjuna sagar left bank canal enabling farmers to cultivate maize, chilli, cotton and paddy. Anigandlapadu is 4.2 km away from the Mandal headquarters of Penuganchiprolu and is representing the ground water irrigated situation for analysis of benefits from Governmental programmes. 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.

The field data have been collected for 2011 during Jan – Feb 2012 after completing preliminary survey and revising the schedule incorporating the local conditions. Data was collected by personally interviewing individual farmer.

Measures of central tendency are employed to quantify the magnitude of benefit from Governmental programmes or schemes. Percentages are used to find percentage of transaction cost to total benefit.

Transaction costs : Transaction cost concept used in this study is the cost involved in congregation

of information regarding the Governmental programme including whether the farmer is eligible to receive benefits for any specific programme, the cost of preparing documents and submitting them to the concerned office, and the rent seeking (bribe if any) paid in order to receive the benefit from the Governmental programme. This is similar to the information cost, contractual cost and enforcement cost as enunciated by Ronald Coase (1960). It involves cost of obtaining information, establishing one's bargaining position, bargaining and arriving at a group decision and enforcing the decision made.

Transaction costs are the costs above the price of the resource involved during exchange. In the context of Governmental programmes benefiting farmers, transaction costs refers to the costs incurred by farmer in receiving the benefit from Governmental programmes / schemes, and it includes the cost borne by farmer in submitting the application, necessary documents to be produced along with the application for a Governmental programme, Time spent by farmer in availing the benefit *i.e.* it is calculated in terms of opportunity cost of labour and amount of rents paid to different officials, middlemen, and local leaders to avail the benefit. In this study transaction cost of farmers is the opportunity cost foregone by the farmers measured in terms of wage rate per day including the managerial cost as followed while estimating the cost of the farmers involved in the CACP (commission for agriculture costs and prices). Wage rate is taken as Rs.125 / day prevailing in the study area and 10 per cent towards the managerial cost and other transaction costs paid out by farmer are rents (bribes) to the officials, middlemen, local leaders and other costs involved in applying for Governmental programme like, documents to be given along with application form. Information costs include time spent by the farmers in availing information regarding Governmental programmes / subsidy scheme, visits to line Department to get information.

RESULTS AND DISCUSSION

Transaction cost incurred by farmers in availing benefit in CIA is represented in Table I. More than half of the benefit (53 %) is going as transaction cost in case of subsidized seeds followed by 23 per cent in case of SHG loan subsidy. The least percentage is in

TABLE I

Transaction cost incurred by farmers in availing benefits from Governmental programmes in CIA area of Krishna District 2011

Name of the programme / scheme	Number of farmers benefited in sample farmers (n=35)	Time spent in availing the benefit (man-days)	Transaction cost incurred to avail benefit (Rs.)	Total benefit availed per beneficiary family (Rs.)	Percentage of transaction cost to total benefit	Number of families eligible to receive the benefit in sample (n=35)	Gap between actual number of beneficiaries and eligible farmers
White ration card (BPL card)	35 (100)	0.14	38	3621	1	35	0 (0)
MGNREGA	5(14)	1.00	145	no work allocated	—	35	30 (86)
Old age pension	13 (68)	0.38	58	2400	2	19	6 (31)
Disability pension	1 (3)	1.00	135	6000	2	1	0 (0)
Indiramma housing	4(57)	3.00	1775	30000	6	7	3 (42)
NTR colony houses	3 (75)	2.00	1030	12000	9	4	1 (25)
SHG loan subsidy	28 (80)	0.70	237	1031	23	35	7 (20)
Deepam (free one time LPG cylinder and gas connection)	8 (67)	0.44	65	1400	5	12	4 (33)
Panchayath water supply	35 (100)	0.00	10	360	3	35	0 (0)
Rajiv Arogya Shree (health insurance)	29 (83)	0.48	80	67250	0.1	35	6 (17)
Pashukranthi Padhakam.(one milch buffalo per family)	3 (11)	3.00	200	15800	1.3	28	25 (89)
Cattle feed distribution (cooperatives)	2 (33)	1.00	135	2640	5	6	4 (67)
Post metric scholarship	2 (50)	0.25	51	3000	1.7	4	2 (50)
Mid day meal	1 (100)	0.00	0		0	1	0 (0)
Crop loss relief fund (Rs. 2400 per farm as a relief due to drought or flood)	34 (97)	1.16	307	11916	3	35 (100)	1 (3)
Subsidized seeds (Agril. Dept.)	14 (40)	1.93	403	750	53	35	21 (60)
Taiwan sprayer subsidy (Agri. Dept.)	19 (54)	1.32	264	6500	4	35	16 (45)
Oil engine subsidy up to Rs. 20000	13 (77)	2.92	658	20000	3.29	17	4 (23)

Figures in parentheses indicate percentage to eligible farmer

Rajiv Arogya Shree with 0.1 per cent followed by white ration card with one per cent. The highest gap between actual number of beneficiaries and eligible farmers is 89 per cent in *pashukranthi padhakam* due to lack of awareness and procedural complexity to obtain the benefit, followed by MGNREGA, where 86 per cent of the gap is mainly due to disinterest

towards the programme, only 14 per cent are enrolled their names eventhough, all farmers are eligible. In case of subsidized seeds, 60 per cent of the gap is mainly because of lack of seed supply in time and long waiting time of 1.93 mandays to get the benefit.

In Table II, transaction cost incurred by RFA farmers is indicated. Farmers incurred around 60 per cent of transaction cost to total benefit in case of subsidized seeds as two mandays were spent to avail benefit followed by 41 per cent in case of SHG loan subsidy. Rajiv Arogya Shree with 0.1 per cent followed by white ration card with one per cent are the programmes where farmers availed benefit with low transaction cost. *Pashukranthi padhakam* did not reach any farmer due to lack of awareness and procedural

complexity to obtain the benefit followed by cattle feed distribution with 89 per cent gap in implementation due to lack of awareness. MGNREGA is the most popular programme in RFA as 89 per cent of the farmers enrolled their names to get subsistence income as income from agriculture is low.

Transaction cost incurred by GIA farmers in availing benefit is represented in Table III. The percentage of transaction cost to total benefit extends

TABLE II

Transaction cost incurred by farmers in availing benefits in RFA of Krishna District 2011

Name of the programme / scheme	Number of farmers benefited in sample farmers (n=35)	Time spent in availing the benefit (man-days)	Transaction cost incurred to avail benefit (Rs.)	Total benefit availed per beneficiary family (Rs.)	Percentage of transaction cost to total benefit	Number of families eligible to receive the benefit in sample (n=35)	Gap between actual number of beneficiaries and eligible farmers
White ration card (BPL card)	34(97)	0.168	41	3959	1	35	1(3)
MGNREGA	31(89)	0.96	141	4500	3	34	3(11)
Old age pension	5(33)	0.75	103	2400	4	15	10(67)
Indiramma housing	10(46)	3	2215	30000	7	22	12(54)
NTR colony houses	4(67)	3.25	1456	12000	12	6	2(33)
SHG loan subsidy	31(89)	2.2	494	1194	41	35	4(11)
Deepam (free one time LPG cylinder and gas connection)	18(69)	1	145	1400	10	26	8(31)
Panchayath water supply	35(100)	0	30	360	8	35	0
Rajiv Arogya shree (health insurance)	33 (94)	0.25	51	50000	0.1	35	2(6)
Pashukranthi Padhakam.(one milch buffalo per family)	0(0)	0	0	0	0	31	31(100)
Cattle feed distribution (cooperatives)	2(6)	0.91	135	1800	7.5	35	33(94)
Mid day meal	6(17)	0	0	1530	0(0)	6	0(0)
Crop loss relief fund (Rs. 2400 per farm as a relief due to drought or flood)	29(93)	1	328	2400	14	31	2(7)
Subsidized seeds (Agril. Dept.)	4(11)	2	450	750	60	35	31(89)
Taiwan sprayer subsidy (Agri. Dept.)	9(42)	3	475	6500	7	21	12(68)

Figures in parentheses indicate percentage to eligible farmer

to 53 per cent in case of subsidized seeds followed by 46 per cent in case of SHG loan subsidy. The least percentage of transaction cost is in case of white ration card (2 %) followed by crop loss relief fund with 6 per cent. The highest gap in implementation of governmental programme is 97 per cent in MGNREGA eventhough, all farmers are eligible due to disinterest, only 3 per cent farmers enrolled their

names. In case of subsidy for Taiwan sprayer from agriculture department, it is 83 per cent due to long waiting time to get benefit followed by old age pension scheme, where 40 per cent of the gap is mainly because of threshold pension of Rs. 200 was considered as low. About, 37 per cent of the gap exists in SHG loan subsidy due to disinterest and improper distribution of money among group members.

TABLE III

Transaction cost incurred by farmers in availing benefit in GIA of Krishna District 2011

Name of the programme / scheme	Number of farmers benefited in sample farmers (n=35)	Time spent in availing the benefit (man-days)	Transaction cost incurred to avail benefit (Rs.)	Total benefit availed per beneficiary family (Rs.)	Percentage of transaction cost to total benefit	Number of families eligible to receive the benefit in sample (n=35)	Gap between actual number of beneficiaries and eligible farmers
White ration card (BPL card)	34(97)	0.29	56	2962	2	34	0(0)
MGNREGA	1(3)	0.16	35	2500	1.4	35	34(97)
Old age pension	5(26)	0.6	85	2400	4	19	14(74)
Widow pension	2(100)	0.42	73	2400	3	2	0(0)
Indiramma housing	3(60)	3	4675	30000	16	5	2(40)
NTR colony houses	1(50)	4	1550	12000	13	2	1(50)
SHG loan subsidy	22(63)	1.45	477	1031	46	35	13(37)
Deepam (free one time LPG cylinder and gas connection)	1(17)	1	145	1400	10	6	5(83)
Panchayath water supply	35(100)	0	30	360	8	35	0(0)
Rajiv Arogya Shree (health insurance)	32(94)	0.2	35	67250	—	34	2(6)
Pashukranthi Padhakam. (one milch buffalo per family)	1(4)	3	1675	15800	11	23	22(96)
Cattle feed distribution (cooperatives)	5(23)	1	135	2640	5	22	17(77)
Crop loss relief fund (Rs. 2400 per farm as a relief due to drought or flood)	28(83)	0.5	664	11916	6	34	6(17)
Subsidized seeds (Agril. Dept.)	32(91)	2	350	662	53	35	3(9)
Subsidies for micro irrigation	2(40)	5	1275	115665	1	5	3(60)
NHM	1(25)	4	1300	32500	4	4	3(75)
Taiwan sprayer subsidy (Agri. Dept.)	6(100)	2	350	6500	5	6	0(0)

Figures in parentheses indicate percentage to eligible farmer

TABLE IV

Level of governance of Governmental programmes across sample areas

Level of governance	CIA (n=35)	GIA (n=35)	RFA (n=35)
Good governance	10 (59)	7 (42)	8 (54)
Average governance	4 (23)	4 (23)	2 (13)
Poor governance	3 (18)	6 (35)	5 (33)
Total number of programmes benefited	17	17	15

Figures in parentheses indicate percentage to total programmes benefited.

A comparison of transaction cost incurred for different programmes between CIA, GIA and RFA indicate that on an average the transaction cost of around Rs. 310 was spent in CIA areas and Rs.760 was paid in GIA and in RFA it is around Rs. 456. However, the benefits ranged from Rs. 109 to Rs. 5566 in CIA areas, while ranging from Rs. 109 to Rs. 11566 in GIA and Rs. 109 to Rs. 4500 per family in RFA.

Level of governance of Governmental programmes across three areas is compared in Table IV. Around 59 per cent of the programmes are with good governance in CIA, whereas, in case of GIA and RFA it is 42 and 54 per cent, respectively. Around 35 per cent of programmes in GIA are poorly governed, whereas, in CIA and RFA it is 18 and 33 per cent, respectively.

If gap between eligible farmers and beneficiary farmers is less than 33 per cent then it is good governance, if it is between 33 and 66 per cent then it is average governance and if it is more than 66 per cent it is poor governance.

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