

**UTILIZATION OF BENEFITS FROM
GOVERNAMENTAL PROGRAMMES OR
SCHEMES BY FARMERS IN ANDHRA
PRADESH – AN INSTITUTIONAL ECONOMIC
ANALYSIS**

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**DEPARTMENT OF AGRICULTURAL ECONOMICS
UNIVERSITY OF AGRICULTURAL SCIENCES
GKVK, BANGALORE-65**

2012

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SRAVANTHI KOLLA

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Thesis submitted to the

University of Agricultural Sciences, Bangalore

In partial fulfillment of the requirements

For the award of the degree of

MASTER OF SCIENCE (Agriculture)

in

Agricultural Economics

BANGALORE

JUNE, 2012



*Affectionately Dedicated
to My Parents &
beloved Brother*

**DEPARTMENT OF AGRICULTURAL ECONOMICS
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CERTIFICATE

This is to certify that the thesis entitled “**UTILIZATION OF BENEFITS FROM GOVERNAMENTAL PROGRAMMES OR SCHEMES BY FARMERS IN ANDHRA PRADESH – AN INSTITUTIONAL ECONOMIC ANALYSIS**” submitted by **Ms. SRAVANTHI KOLLA, ID No. PAL 0090** in partial fulfillment of the requirements for the degree of **MASTER OF SCIENCE (Agriculture)** in **AGRICULTURAL ECONOMICS** to the University of Agricultural Sciences, GKVK, Bangalore is a record of bonafide research work done by her during the period of her study in this university under my guidance and supervision and the thesis has not previously formed the basis for the award of any degree, diploma, associate ship, fellowship or any other similar titles.

Bangalore
June, 2012

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Bangalore

June, 2012

Sravanthi Kolla

**UTILIZATION OF BENEFITS FROM GOVERNAMENTAL
PROGRAMMES OR SCHEMES BY FARMERS IN ANDHRA PRADESH –
AN INSTITUTIONAL ECONOMIC ANALYSIS.**

SRAVANTHI KOLLA

ABSTRACT

Andhra Pradesh has been a role model in designing and implementing several types of innovative Governmental programmes for alleviation of poverty in rural areas. This study focused on estimating annual benefit received by farmers from Governmental 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.

The results indicated that 39 programmes were listed as being operative at the village level. The farmers however listed 17 (44%) programmes in CIA, 17 (44%) in GIA and 15 (38%) in RFA. The annual benefit received per farm family is ` 8732 in CIA from 6, ` 7518 in GIA from 5 and ` 11202 in RFA from 6 programmes. The benefits from governmental programmes formed three percent of net return from all sources in CIA, GIA (4%) and RFA (16%). Transaction cost incurred per family in CIA was ` 1439, ` 1383 in GIA and ` 1351 in RFA.

A RFA farmer gets at least ` 1260 but a CIA and GIA farmer losses an amount of ` 3604 and ` 2484 respectively if s/he does not participate in any governmental programmes. For every increase or percentage change in governmental programme in which the farmer participate the benefit received increases by ` 1558 or 1.18 percent. To enhance the reach of benefit it is necessary for development departments to bring out a guide book in Telugu highlighting all the governmental programmes.

Signature of Student

Signature of Major Advisor

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INTRODUCTION



CHAPTER I

INTRODUCTION

Andhra Pradesh has been a front runner in implementing several types of innovative developmental programmes from Participatory Irrigation Management (PIM) in surface irrigation to 'Abhayahastham' (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, planned and how many programmes are actually in vogue. This study focuses on the benefits from developmental programmes received by farmers in Krishna district of Andhra Pradesh along with the transaction costs expended by them.

The policy makers in their ambition to evolve new programmes do suggest / plan in their budget allocation 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 most states in India. The per capita income of an Indian is estimated to be ` 53331 during the year 2012. However the per-capita income of an average farmer will be ` 17600 which is at the most 1/3rd of Indian per capita income. The study is mainly focused to find the share of the benefits from developmental programmes in the per capita income of farmers.

Efforts were made to list the different developmental 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 developmental programmes were listed commencing from Ration card for BPL families on to Indiramma Housing Scheme, on to 'Abhayahastha' (interest subsidy for

SHG groups) etc. It is expected that all the 39 developmental programmes (listed in the Schedule developed for this study as in Appendix 1) are in vogue in the study villages of Andhra Pradesh. Any deviation in terms of programmes lower than 39, or higher than 39, has serious ramifications. 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.

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.

Several policies and programmes have been designed with the aim of alleviation of rural poverty which has been one of the primary objectives of planned development in India. For example, during green revolution since food production was the main programme such as “grow more food campaign”, Intensive Agriculture Development Programme (IADP) was heralded.

At the time of achieving self sufficiency in food (1982), the programme for distribution of food grains such as fair price shops receives boost. At the same time, subsidy programmes for fertilizers, other agro chemicals and drilling irrigation well were launched, later it resulted in over application of fertilizers and over exploitation of ground water. Such subsidies only consider the supply side ignoring reforms on the demand side.

After learning lessons from experiences, programmes such as subsidies for fertilizers, drip irrigation and sprinkler irrigation which helped the farmers in achieving self sufficiency in input use were

initiated. After achieving 240 million tonnes of food production, policy makers thought of inclusive development where distribution of food grains to the deprived section of the people matters the most. The most recent is the National Food Security bill in this direction.

Governance of developmental programmes in Andhra Pradesh, 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. This study is an attempt to analyze the reach of Governmental programmes for farmers who constitute 70 per cent of the population.

World Development Report (2004) aptly addresses the importance of governance issues. In the review of literature, the references made in World Development Report on India's services are highlighted in this thesis.

Rural India is at cross roads due to: (1) increasing nonfarm wages (2) people rural to urban migration (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 40 Governmental programmes for rural areas, farmers are benefitting 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.

The Governmental programmes can be grouped into five categories. They are:

1. Income enhancement programmes
 - a. Self employment programmes which include IRDP, DWACRA and TRYSEM
 - b. Wage employment programmes which include JRY and MGNAREGA.
2. Programmes which focus on providing food and nutritional security viz., PDS and ICDS.
3. Programmes which provide basic minimum services-housing, sanitation, health, education and income maintenance programmes.
4. Pension schemes for old aged peoples, widows and physically challenged persons, maternity benefit scheme and survival benefit scheme.
5. Natural resource management and livelihoods.

Most of the Governmental programmes are designed by the Centre and implemented by the State on fund sharing basis for financing the programmes. The state of Andhra Pradesh has its own programmes such as “Rajiv Arogya Shree” Community Health Insurance Scheme with an objective to improve access of BPL families to quality medical care, “Pavala Vaddi Padhakam” with an objective of providing interest subsidy on the loans taken by the Self Help Groups. “Pasukranthi Padhakam” for farmers who are members of self-help groups at village level to take up dairy activity successfully as one of the income generation activities.

Successive governments launch new rural development programmes, schemes and initiatives as a political economy move. Currently there are about 154 Governmental programmes in India offered by 20 development departments, repeating the goals, under different nomenclature, largely focusing on rural development (Channaveer, 2011). Many programmes are similar in nature and most programmes are for the same target group.

The Governmental 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) 9. Indira Jeevitha Bima Padhakam.

Rationale of the study

This study is a modest attempt to analyze the benefits received by rainfed farmers (RFA) in comparison to ground water (GIA) and canal irrigated farmers (CIA) and difficulties faced by farmers in availing benefits of Governmental programmes and the extra costs (transaction cost) paid out by the farmer to avail the benefit. The study was carried out with the following objectives.

Objectives of the study

1. To estimate the utilization of benefits from Governmental programmes and to estimate the extent of reach of Governmental programmes for women.
2. To quantify the transaction costs of Governmental programmes for farmers.

3. To document and analyze the perceptions of farmers regarding reach of programmes.
4. To analyze the constraints in seeking the benefits from Governmental programmes.

Hypotheses developed for the above objectives

- a. Utilization of benefits from Governmental programmes is higher by rainfed farmers compared to the irrigated farmers.
- b. There is a thin reach of Governmental programmes for the women.
- c. Transaction costs of receiving the benefit deter the spread of benefits of Governmental programmes.
- d. Benefits received are directly proportional to transaction costs, number of programmes, net returns, and access to irrigation.
- e. There is a gap between actual number of beneficiaries and eligible farmers.

Limitations of the study

As farmers constitute 70 per cent of population in Andhra Pradesh and majority of farmers possess BPL cards, it was difficult to get a sample of farmers who have not received any benefit from Governmental programmes. Hence in this study there is no control farmer in rural areas who has not received any benefit from government. At the threshold all rainfed farmers will have at least a "ration card" which will fetch them around `3000 worth of food grains as food subsidy. Similarly all canal irrigation farmers get a direct subsidy on canal water as (it is one of the pay for him) and as well as on chemical fertilizers, Hence higher the use of chemical fertilizers higher the benefits. Similarly ground water (ground water farmers) implicitly receives the power subsidy and fertilizer subsidy as power subsidy is not charged. In this

study subsidy on ground water and surface water through water rates and fertilizer subsidy have not been accounted. Other important limitation of the study is while interviewing the farmers about reach of Governmental programmes it was not considered whether they really need the benefit or not, even though they are eligible.

The transaction cost in terms of getting identified as beneficiary family has not been estimated in this study and hence is a limitation of this study. 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. Hence those farmers who are in constant touch with the panchayath members, MLAs, local politicians will have a great probability of being chosen as a beneficiary. This is also a transaction cost, which is difficult to measure, but it exists, since farmers without contacts with local leaders, politicians are the most likely the ones to be excluded from receiving the developmental grants, especially those which are of long term nature such as housing grants (Indiramma housing scheme, NTR colony houses, farm implements from agriculture department). Hence even though the transaction cost as a proportion of benefits appears to be a miniscule, this is only the tip of the iceberg of the total transaction cost, which also should include the weight-age for the time and efforts involved in knowing the local leaders, politicians and panchayath members.

Presentation of the study

This study is undertaken in rainfed, ground water and canal irrigated areas of Krishna district in Andhra Pradesh. This thesis is organized into six chapters. The first chapter provides a brief introduction along with the specific objectives and hypothesis. In chapter-II, some pertinent reviews are presented in relation to the study objectives. Chapter-III describes the main feature of the study area,

sampling framework, database and analytical tools employed in the analysis of the data. The empirical results pertaining to study are presented in chapter-IV followed by critical discussion of results are presented in chapter-V. Finally, chapter-VI summarizes the major findings of the study and policy implications.

REVIEW OF LITERATURE



CHAPTER II

REVIEW OF LITURATURE

This study on Utilization of benefits from Governmental programmes or schemes by farmers is of a fairly recent origin especially in developing countries like India. Agriculture is supporting rural population by providing larger amount of employment opportunity and food security; in turn agriculture is supported by various kinds of subsidies and Governmental programmes in rainfed, bore well and canal irrigated areas. Keeping in view the objectives of the study, review are presented under the following headings.

- 2.1 Quantifying the benefits of Governmental programmes/subsidies received by farmers.
- 2.2 Equity in distribution of benefit of Governmental programmes among the farmer.
- 2.3 Transaction costs involved in availing benefit of Governmental programmes.
- 2.4 Socio-economic constraints involved in availing benefits of Governmental programmes.

2.1 Quantifying the benefits of Governmental programmes/ subsidies received by farmers

Nagaraj *et al.* (2003) examined the feasibility of differentially pricing irrigation water in normal and problematic (saline and water logged) soils of command area of Kabini project in Cauvery basin in Karnataka they estimated irrigation cost for paddy as `600 And for sugarcane it is ` 1200 For semi dry crops it is ` 120 per acre per crop.

World Development Report (2004) reported a study in India found that even though educational expenditures on average were not more

pro-poor than a uniform transfer would be, the poor benefited more than proportionately at the margin when enrollments in primary education expanded (since the better-off were already in school). So education expenditures that expand access are better targeted to poor people than resources that exclusively raise quality.

Arshiya (2008) conducted a study on impact of udyogini scheme on economic empowerment of women in Mandya district. Paired t test and impact index were done to estimate the impact of udyogini scheme on socio economic empowerment of women. Major findings of the study are 31 per cent of the beneficiaries taken up dairy as a major activity followed by shop keeping (14 %), tailoring (11 %) and beauty parlor (9 %). The percentage change in investment (77 %), savings (69 %), income (65 %), consumption (38 %) and assets (34 %) of the member after joining the scheme was calculated. Majority of the members opined (58 %); scheme has increased their social participation and was in agreement with the opinion that it had helped them in the overall development of the family. Among the opinions of beneficiaries with respect to banks supporting Udyogini scheme, 53 per cent of the beneficiaries opined that repayment terms are easy.

Rathore *et al.* (2011) analyzed the performance of crop insurance scheme in Udaipur district of Rajasthan. The results show that the returns over variable costs for both maize and wheat crops were higher on beneficiary rather than non beneficiary farms. The positive returns over the cost C3 in wheat were observed on both beneficiary and non beneficiary farm groups, i.e. profit of `21467/ha and `16982/ha, respectively. Thus a crop insurance programme was successful in extending help to the beneficiary farmers and minimizing their loss in crop production.

Channaveer (2011) studied the Economic Impact of Governmental programmes in Peri-urban area of Magadi town of Ramanagar District, Karnataka. The study compared the benefits received and the transaction cost incurred to get the benefit from Governmental programmes by the rural and peri urban farmers. Rural farm family received an average benefit of `16, 540 per year from 7 Governmental programmes (out of 56). Where as in Peri-urban farm family received an average benefit of ` 8363 per year from 3 Governmental programmes. The effort put by farmer for getting benefit per programme (transaction cost) varied from ` 299 in rural area to ` 306 in peri-urban area, while the benefit per programme ranged from ` 200 to ` 10453 per family in rural area, and from ` 200 to ` 9444 in peri-urban area. Which implies that the Governmental benefit received was almost 50 per cent lower by peri-urban than by rural farmer.

2.2 Equity in distribution of benefit of Governmental programmes among farmers

Gaiha (2000) in his paper argues for a shift of emphasis from larger outlays on two major anti-poverty schemes – the rural public works and integrated rural development programmes to improve their design and implementation. based on National Sample Survey data for 1987-88 results shows that at all India level 3.1 proportion of non poor were included (inclusion or e error) and 23.6 proportion of poor were excluded (exclusion or f error) for RPW programme and 3.3 proportion of non poor included and 24 proportion of poor were excluded for IRDP programme. In nine out of seventeen states (e+f error) exceeds the 25 per cent for both Rural Public Work and IRDP. The shares of both poor and non poor participating in both programmes were about the same 2.8 and 2.7 per cent respectively.

World development report (2004) reports that in Nepal 46 per cent of education spending accrues to the richest fifth, only 11 per cent to the poorest. In India the richest fifth receives three times the curative health care subsidy of the poorest fifth. In India 35 per cent of the public spending is to the rich and 10 per cent is to the poor. In India districts with a higher proportion of lower castes and some religious groups have fewer doctors and nurses per capita, and health outreach workers are less likely to visit lower-caste and poor households.

Patil (2005) conducted a study on knowledge, extent of participation and benefits derived by participant farmers of the watershed development programme. Regarding extent of participation, 70 per cent of respondents had medium extent of participation in watershed development programme activities. Around 82 per cent of the respondents expressed benefits like helps to check soil and water erosion followed by helps in ground water recharge, increase infiltration rate of water, increases yield and increase the cropping intensity. Regarding suggestions for better implementation of watershed development programme 59 per cent of the respondents expressed that, they need financial assistance for maintenance of watershed practices followed by the bank loan should be made available at lower interest rate, large area should be covered under this programme and more extension work on technical information/guidance.

Sharma (2009) studied on beneficiaries of fertilizer subsidy, the study shows that fertilizer subsidy is more concentrated in few states namely Uttar Pradesh, Andhra Pradesh, Maharashtra, Madhya Pradesh and Punjab. Rice is heavily subsidized crop followed by wheat, sugarcane and cotton. These four crops account for two-third of total fertilizer subsidy. They estimated the state wise intensity of fertilizer subsidy, Andhra Pradesh ranks second in the country after Punjab with per

hectare subsidy of ` 3561. Fertilizer use on unirrigated lands has increased by 42 per cent between 1996-97 and 2001-02 (35.8 kg/ha to 50.9 kg/ha).

Reddy (2011) analysed the utilization of crop insurance in Gadag district of Karnataka. The study reveals that 48 per cent of district farm population was covered under crop insurance programme out of coverage 11 per cent of insured farmers were beneficiaries. The study reveals that about 67 per cent of the sample respondents know about the programme through the government initiatives. About 95 per cent of the respondents felt that they are getting information on time and 95 per cent of the respondents felt that the compensation provided by AIC was low and highly skewed adversely for the insured that the compensation received by the insured farmers does not even cover 50 per cent of cost of cultivation. 61 per cent of the respondents felt that crop insurance was ineffective and 47 per cent of the respondents suggested that AIC should accurately assess the multi risks in agriculture and fix the premium so as to rationally and reasonably pay compensation against crop failure.

2.3 Transaction costs involved in availing benefit of Governmental programmes

Guia (1991) conducted a study on borrower transaction costs in rural financial markets and their role in the rationing of credit in the Philippines. The conclusions can be drawn from the results of this study that transaction costs play an important role in the demand for credit and in the rationing of credit among borrower classes, the lifting of interest rate restrictions decreased the absolute level of transaction costs in the deregulated period compared to the regulated period, but the change was not statistically significant, indicating that some barriers may be preventing its full effect and transaction costs have a regressive impact on borrowers, which instead of improving after deregulation, has

proven to be of greater magnitude.

World development report (2004) reports that Karnataka state in India has pioneered Bhoomi (meaning land), a computerized land record system serving 6.7 million rural clients. Its main function is to maintain records of rights, tenancy, and cultivation—crucial for transferring or inheriting land and obtaining loans. The evaluation estimates that on average Bhoomi annually saves clients 1.32 million work days in waiting time and (net of the higher user fee) ` 806 million in bribes.

Saxena (2007) presented a paper with objective to explore the extent to which the anti poverty programmes are reaching their target groups effectively in India and identifies the specific factors responsible for the underperformance. The study mentioned that ` 60 out of ` 100 in wage scheme is reserved for wages but in reality `10 to `15 actually goes to labour and the rest is illegal income for bureaucracy, contactors and politicians. Instances of corruption to the tune of ` 5000 to ` 8000 per house out of ` 25000 have also been detected. Only about 57 per cent of the households are covered by TPDS due to error of wrong inclusion.

2.4 Socio-economic constraints involved in availing benefits of Governmental programmes

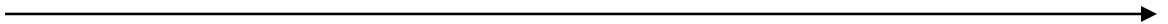
Deshpande (2008) conducted a study named Rural Development Programmes in Karnataka: People's Perception. The study was conducted in Bidar district of Karnataka. Here author opine that farmers participation in Governmental programmes is affected by different factors namely, illiteracy, lack of information, huge rents, involvement of local leaders in distribution of benefit and lack of congenial environment to avail the benefit of Governmental programmes. He suggested to government that instead of proliferating the number of programmes with almost similar centers over a period of time, it is desirable to restrict the

number of programmes and increase the breadth of programme beneficiaries.

Kumar *et al.* (2011) analyzed the farmers' perception and awareness towards crop insurance as a tool for risk management in Tamil Nadu. The probit regression was performed to identify the factors that influence the awareness of farmers. Social participation and education level of the farmers were found to be significantly influence the farmer's awareness about the crop insurance schemes and products. Participation in social and community based organizations like farmers association, self help groups, watershed associations, and cooperative credit societies increased the probability of being aware. The tobit regression was undertaken to identify the factors that are actually contributing to the premium amount paid by the farmers for the crop insurance scheme. The results of tobit regression showed that the factors such as gross cropped area, income other than agriculture sources, presence of risk in farming are found to be significantly and positively influence adoption of insurance premium paid by the farmers

Raghupathi *et al.* (2011) find out the opinion of the farmers towards functioning of RSK and their willingness to have sustained linkages with Raitha Samparka Kendra (RSK) for further technical guidance and other help. The study reveals that 67.5 per cent of the respondents are satisfied with quality of seeds and 53.75 per cent are satisfied with timely supply of seeds 27.5 per cent of farmers preferred the seeds supplied by RSK compared to other agencies because of subsidy, quality, and high yielding. 11.25 per cent of the farmers prefer because of subsidy, 16.25 per cent because of subsidy and quality of seeds. 11.25 per cent of respondents preferred because of subsidy and high yielding.

METHODOLOGY



CHAPTER III

METHODOLOGY

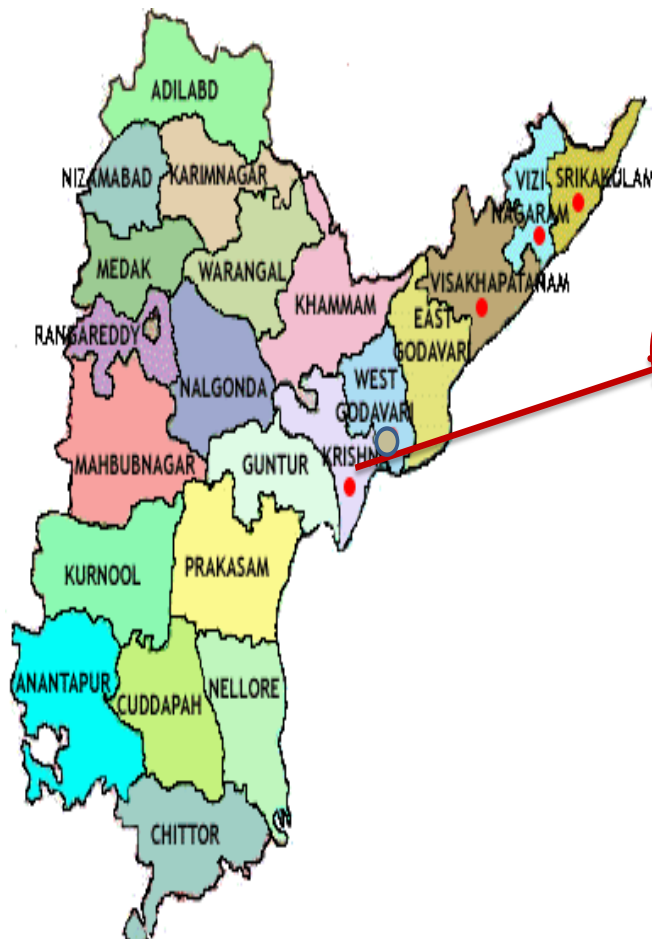
This chapter deals with the portrayal of the study area, the sampling procedure followed and techniques used for data analysis. The study area belongs to Krishna district of Andhra Pradesh. The chapter has the following details:

- 3.1. Profile of study area
- 3.2. Sampling framework
- 3.3. Analytical framework

3.1. Profile of Study Area

3.1.A. Location: Canal irrigated area (CIA): Gopinenipalem village, Vatsavai Mandal, Krishna district

The purpose of this study is to compare the distribution of benefits from Governmental programmes among canal irrigated area (CIA), groundwater irrigated area (GIA) and rainfed area (RFA) farmers of Krishna district. The CIA is represented by Gopinenipalem village of Vatsavsi mandal. The Gopinenipalem village is situated at the latitude of 16° 52' degrees North and longitude of 80° 10' degrees east. Agriculture is main provider of livelihood in village. Gopinenipalem is 7.6 kms 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. The village has a population of 3486. Total agriculture land is 846 acres of which 214 acres (25%) are irrigated by Nagarjuna sagar left bank canal and 209 acres (24.7%) are irrigated by lifting water by using oil engine and current motors and remaining 423 acres (50%) is rainfed.



Districts of Andhra Pradesh



Krishna District

(Circle indicate the study area)

Fig. 3.1: Map of the study area.

3.1.B. Groundwater irrigated area (GIA): Anigandlapadu village of Penuganchiprolu mandal

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° 53' degrees North and longitude of 80° 17' degrees east. Major source of irrigation is groundwater extracted from bore wells. Total agriculture land is 2132 acres of which 822 acres (38.5 %) are irrigated under bore wells and 412 acres (19 %) are irrigated under canal and remaining 898 acres (42 %) is rainfed land. Agriculture and livestock are the main providers of livelihood in village. The population is 8962 as per 2001 census. Major crops grown are paddy, cotton, chilli, maize and mango orchards

3.1.C. Rainfed area (RFA): Ramachandrunipeta village of Jaggiahpeta mandal

Ramachandrunipeta is eight kms away from the mandal headquarters of Jaggayyapeta which is representing the rainfed area with regard to assessment of benefits from Governmental programmes. This village is in the jurisdiction of Takkellapadu panchayath. Total agriculture land area of the village is 923 acres, of which 586 acres (63 %) are irrigating under open wells and bore wells and rainfed area is 337 acres (37 %). The population is 723 as per 2001 census. Ramachandrunipeta village situated at the latitude of 16° 56' degrees North and longitude of 80° 05' degrees east. Livelihood in this village is mainly from off farm employment. Major crops grown are Red gram, Cotton, Chilli.



Plate 1: Kolla Sravanthi (student researcher), interviewing rainfed farmer in Ramachandrunipeta village, Krishna district, Andhra Pradesh, February 2012.



Plate 2: Kolla Sravanthi (student researcher), interviewing groundwater farmer in Anigandlapadu village, Krishna District, Andhra Pradesh, February 2012. .



Plate 3: Farmer beneficiary cultivating paddy in canal irrigated area, Gopinenipalem village, Krishna District, February 2012. (Picture by Sravanthi)



Plate 4: Oil engine drawing water from canal, Gopinenipalem village, Krishna District, Andhra Pradesh, February 2012 (Picture by Sravanthi).

3.2 Sampling

This study focuses on the analysis of distribution of benefits to farmers in canal irrigated, groundwater irrigated and rainfed areas of Andhra Pradesh. Krishna district has been chosen as the study area as it has all the three areas. It is hypothesized that the benefits distributed is according to the canal irrigation, groundwater irrigation and rainfed farm endowments, which implies that farmers with access to irrigation would receive lower benefits and *vice versa*. The type of irrigation infrastructure is hypothesized to be the key farm endowment in deciding the degree of benefits farmers receive from Governmental programmes. However in the measurement of benefits only plan benefits have been included, and benefits such as fertilizer subsidy, power subsidy are not considered in this study.

There are nine agro-climatic zones in Andhra Pradesh. The Krishna zone is one of the coastal zones of Andhra Pradesh with good irrigation infrastructure and hence chosen for this study. 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.

3.2.A. Collection of field data

The field data have been collected for 2011 during Jan – Feb 2012 after completing preliminary survey and revising the schedule incorporating the local conditions (Appendix).

3.2.B. Governmental programmes

This section contains the details of the Governmental programmes from which farmers benefited in the three regions are provided. Efforts have been made to obtain an exhaustive list of programmes implemented. But as there is no full proof method to obtain and verify this information, it is likely that a few important programmes/ schemes may have been missed. Here are the programmes which were mentioned by the Development Departments:

1. Ration card: The Holders of Ration Card depending upon their annual income are eligible to buy food and fuel at PDS prices. There are two categories in which benefit is distributed:

APL ration card (pink card) The Above Poverty Line ration card is for families with a total annual income from all sources above ` 60,000. The APL card holder is eligible to buy Wheat up to 10 kgs per card at a price of ` 7; and 3 litres of kerosene at ` 9.75 per liter per month on per card basis.

BPL ration card (white card) The Below Poverty Line ration card is for families with a total annual income from all sources below ` 60, 000. The BPL ration card holder is eligible to receive Rice at ` 4 kg per head up to 20 kgs per family at ` 1 per kg; wheat up to 10 kgs per card at ` 7 per kg; Sugar 1 kg per card at ` 13.50 per kg; Kerosene (only to Non- LPG connection holders) at ` 9.75 per liter; Palm oil 1 litre per card at ` 35 per liter and Red gram Dal of 1 kg per card at ` 30 per kg per month

2. National Old Age Pension Scheme

Under the National Social Assistance Programme (NSAP), National Old Age Pension scheme is providing minimum social assistance to the

old age poor in the form of pension of ` 200 per month. A person who is above 65 years old can get benefit from this programme.

3. Rajiv Arogya Shree Community Health Insurance Scheme

Rajiv Arogya shree is the community health insurance scheme of the Government of Andhra Pradesh. All BPL families are eligible for health insurance. The objective is to improve access of BPL families to quality medical care for treatment of diseases involving hospitalization through an identified network of health care providing hospitals/nursing homes. The scheme shall provide coverage for meeting expenses of hospitalization, surgical procedures of the insured members up to ` 1.5 lakh per family per year subject to limits, in any of the network hospitals. The insurance benefit for the family will be on floater basis i.e. the total eligible indemnity of ` 1.5 lakh can be availed individually or collectively by members of the family as the case may be.

4. Subsidy for Seeds

The Department of Agriculture distributes seeds to farmers with subsidy in all seasons. Farmers can avail this benefit by producing the right land records (documents) from the Revenue Department.

5. Subsidy for Machinery

Institutional credit is available to the farmers besides subsidy for the purchase of various identified equipments. The subsidy for machinery varies according to the type of machinery and programme. The subsidy is up to 50 per cent. For Taiwan sprayer and oil engine, 50 per cent of its cost is given as subsidy.

6. National Horticulture Mission (NHM)

The NHM is a programme of the Government of India for the overall development of Horticulture. The main objective is to improve the

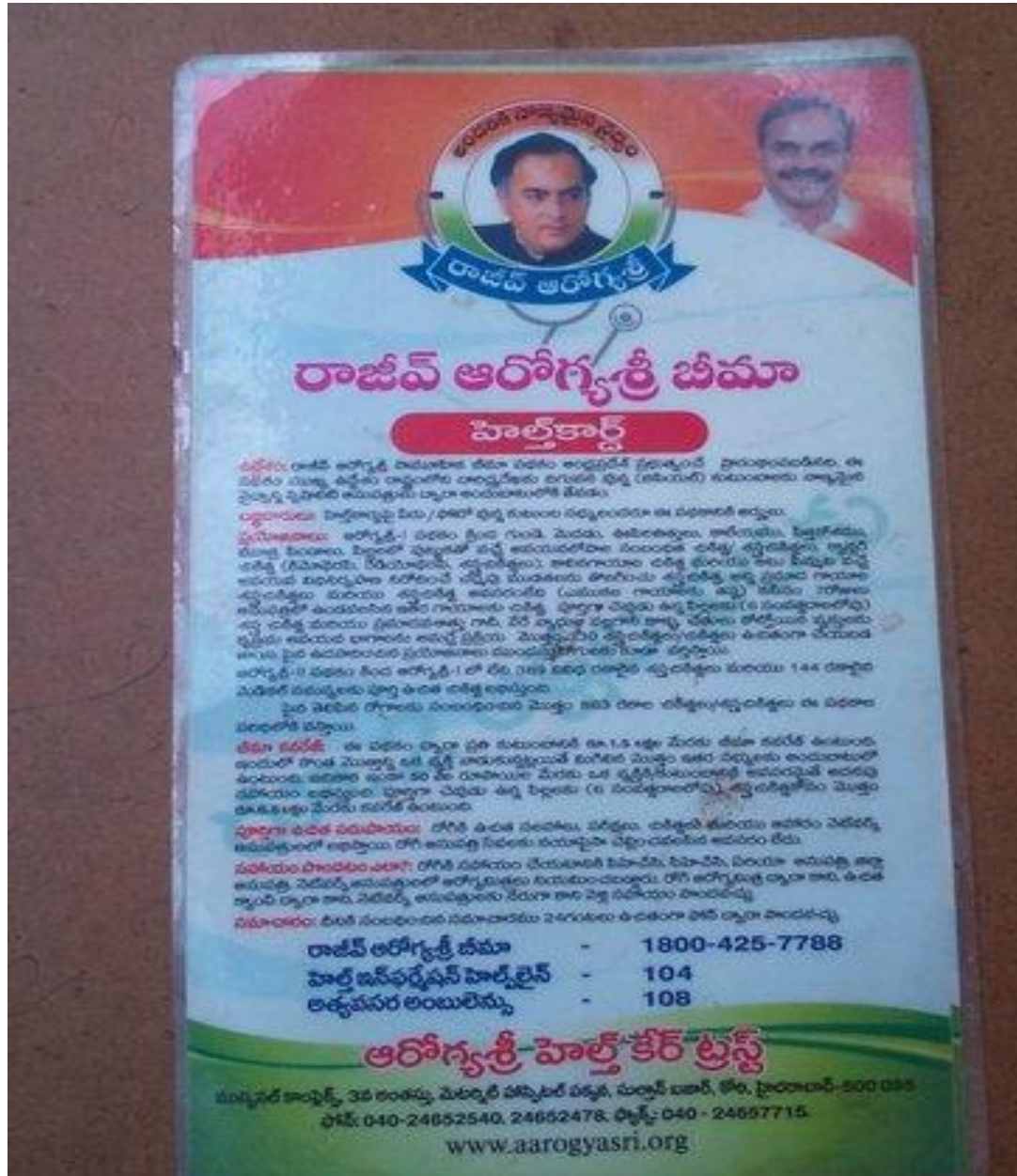


Plate 5: Rajiv Arogya Shree card distributed to beneficiary during 2010. (Picture by Sravanthi)



Plate 6: White ration card with pictures of family members, February 2012, Gopinenipalem, Andhra Pradesh. (Picture by Sravanthi)

production and productivity of Horticultural crops. It is a holistic approach covering all aspects of production, post harvest technology and marketing.

7. Mahatma Gandhi National Rural Employment Guarantee Act (MGNAREGA)

MGNREGA is a flagship programme of the Government of India to provide a maximum of 100 days of employment to every rural poor farm family in a year, with a wage rate of ₹ 125 per man-day. This programme aims to check the migration of rural people to urban area for livelihood. The farm family has to register in gram panchayath by enrolling their name and obtain the job card.

8. Pavaala Vaddi Scheme

This is an interest subsidy scheme started during 2004 with an objective of providing interest subsidy for the loans taken by the Self Help Groups under SHG Bank Linkage Programme. The incentive will be in the form of reimbursement of interest whatever above 3 per cent interest. For example, if the bank charges 10 per cent interest rate for SHGs, Pavaala Vaddi scheme will offer subsidy of 7 per cent, so that the SHG can pay only 3 per cent.

9. Indiramma Housing Scheme

Aims to provide housing for BPL family by assisting them financially and technically for construction of pukka house. The financial assistance is provided from various schemes of state and central governments. The Andhra Pradesh Housing Corporation Limited supplies building material at reasonable cost to the beneficiaries including cement at subsidized prices. The beneficiaries are provided with an amount ₹ 30,000 for house construction. The beneficiaries must not have been



Plate 7: Women farmer beneficiary in Anganawadi centre, Gopinenipalem, Andhra Pradesh February 2012. (Picture by Sravanthi)

benefited under any other housing scheme and they should possess title over land proposed for construction.

10. Pasukranthi Padhakam

Government of Andhra Pradesh supports Self-help groups with the supply of high yielding milch animals/ heifers on 50 per cent subsidy basis, to further enable them to generate regular and needy income apart from nutritional supplementation. Further in order to lift the SC and ST families above BPL status. they are provided with high yielding milch animals on subsidy basis. Besides it is proposed to provide feed at `5000 per animal on subsidy and medicines at ` 300 per animal.

11. Watershed Department Scheme

Watershed department has several schemes for the benefit of farmers aiming at *in situ* moisture conservation. In the study area several farmers received benefit as subsidy for construction of Nala bunds and check dams in their farm.

12. Mid-day Meal Scheme

Mid day meal is offered to children studying in I to X standard to improve their nutritional status in Government, Government aided schools. The purpose is to encourage poor children from disadvantaged sections, to attend school regularly to concentrate on classroom activities. Further, this provides nutritional support to children during summer vacation. The purpose is also to promote school participation, prevent classroom hunger, facilitate healthy growth of children, fostering social equality, enhancing gender equity.

13. Deepam Scheme

Government of Andhra Pradesh has been implementing distribution of one time 14.2 kg (single LPG cylinder) or 5 kg (double LPG



Plate 8: Kolla Sravanthi (student researcher) at the Primary Credit Cooperative society in Anigandlapadu village, Krishna District, Andhra Pradesh, February 2012.

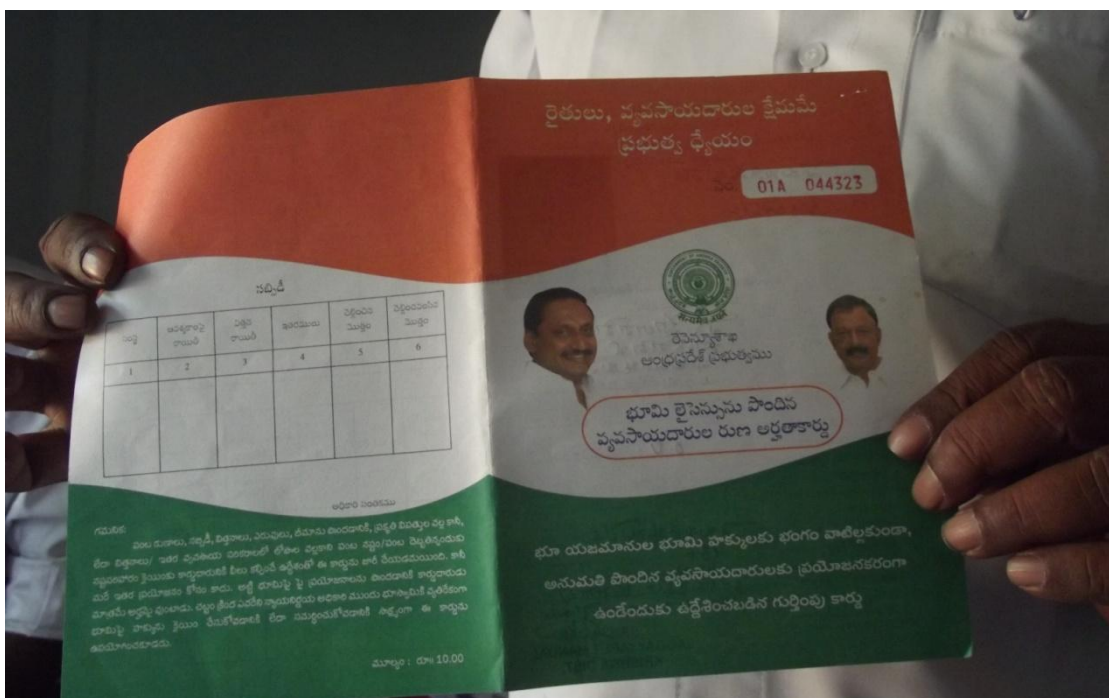


Plate 9: Tenant Farmer beneficiary showing land license card for Agriculture loan, distributed in 2011 in Krishna District, Andhra Pradesh (picture by Sravanthi)



Plate 10: Kolla Sravanthi (student researcher), interviewing farmer benefited from fodder distribution scheme.



Plate 11: Kolla Sravanthi (student researcher), interviewing farmer beneficiary deriving non farm income by having a medical shop in Krishna District, Andhra Pradesh.

cylinders) gas connections to BPL family through DWACRA through SHG in the rural areas from July, 1999. This to reduce dependence on forest for fire wood, improves their health status, remove drudgery due to conventional cooking and improve the general environment. The Government of Andhra Pradesh has been paying refundable Security Deposit to PSU Oil Companies on behalf of the beneficiaries for release of LPG connections towards cylinder & regulator deposit up to ` 1,000/- per connection.

14. Crop Loss Relief Fund

Government of Andhra Pradesh through the Department of agriculture in 2011 provided Crop Loss Relief Fund to farmers. For instance, the cotton, paddy areas affected by floods received a compensation of ` 2400 per acre.

3.3 Analytical framework

3.3.1.A. Measures of Central Tendency and percentages

Measures of central tendency are employed to quantify the magnitude of benefit from Governmental programmes or schemes. Percentages are used to find the share of each programme or benefit or transaction cost to the total. Average and percentage analysis were used to examine benefits availed by farmers in canal irrigated, ground water irrigated and rainfed areas from Governmental programmes and Transaction costs involved in availing the benefit.

3.3.1.B. Amortization of benefit availed from Governmental programmes

Some of the Governmental programmes like Indiramma Housing Scheme, Pasukranthi Padhakam, Crop Loss Relief Fund, Subsidy for

Farm Machinery extends benefits over time. Thus, benefit for such beneficiaries is amortized using the rule.

$$A = P \frac{r(1+r)^n}{(1+r)^n - 1}$$

Where,

A = Amortized Benefit per year from Governmental programme

P = Total initial benefit received by beneficiary farmer

r = interest rate per period, r is taken as 2 per cent since the benefits are from Social welfare schemes over a long period of time

n = total number of years of benefit flow, n is the total number of years for each programme

(for e.g. For Indiramma housing scheme, house construction for rural poor is taken as 10 years, Crop Loss Relief Fund is 10 years as the area prone to floods is once in 10 years, Pasukranthi padhakam for 10 years, subsidy for Deepam (gas connection) is for 15 years, Rajiv Arogya shree health insurance scheme for 10 years and for oil engine it is 15 years, (the subsidy for micro irrigation such as drip and sprinklers is 10 years).

3.3.2 Efficiency in utilization of benefit from Governmental programmes

The efficiency in the utilization of benefit from the Governmental programmes was calculated as the ratio of the total benefit received from Governmental programmes (in `) per farm family to Net returns from all sources (in `) 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. Further, the net returns from live stock and off farm were calculated per working population. Incomes from different sources in all the three regions were compared. Ratios such as For every Rupee of benefit received by Canal

farmer benefit received by RFA farmer, For every Rupee of benefit received by groundwater farmer the benefit received by RFA farmer, For every Rupee of net return earned from all sources by canal farmer the net return earned by RFA farmer, For every Rupee of net return earned from all sources by groundwater farmer the return earned by RFA farmer, For every Rupee of net return earned from agriculture by canal farmer the net return earned by RFA farmer, For every Rupee of net return earned from agriculture by ground water farmer the net return earned by RFA farmer, For every Rupee of net return earned from livestock by canal farmer the net return earned by RFA farmer, For every Rupee of net return earned from livestock by ground water farmer the net return earned by RFA farmer, For every Rupee of net return earned from off farm by canal farmer the net return earned by RFA farmer and For every Rupee of net return earned from off farm, by ground water farmer the net return earned by RFA farmer is calculated.

3.3.3 Economic dimensions influencing the distribution of benefits from Governmental programmes

In order to condense the information contained in the number of original variables which influence the receipt of benefits from different Governmental programmes such as, gross irrigated area and net returns so on into a smaller set of new, composite dimensions with minimum loss of information, principle component analysis (PCA) was estimated. By using this technique, the variables having greater effect on total benefit were identified. Here, Varimax rotational approach with Kaiser Normalization was used to maximize the sum of variances of required loadings of the factor matrix and to clearly indicate the positive or negative association between the variables and factors. The variables in the components which are explaining major per cent of variation are used in linear and multiplicative regression models as under.

$$P_1 = a_{11} X_1 + a_{12} X_2 + a_{13} X_3 + \dots + a_{119} X_{19}$$

$$P_2 = a_{21} X_1 + a_{22} X_2 + a_{23} X_3 + \dots + a_{219} X_{19}$$

$$\begin{matrix} . & . & . & . & . \\ . & . & . & . & . \end{matrix}$$

$$P_n = a_{n1} X_1 + a_{n2} X_2 + a_{n3} X_3 + \dots + a_{n19} X_{19}$$

P_1, p_2, p_n = number of components extracted.

a 's = factor loadings on respective variables in respective components.

X 's = predictors or independent variables.

X_1 = canal irrigated area, X_2 = rainfed area, X_3 = bore well irrigated area, X_4 = benefits from food subsidy, X_5 = benefit from employment programmes, X_6 = Benefit from education programmes, X_7 = benefits from social security programmes, X_8 = benefits from housing schemes, X_9 = number of programmes, X_{10} = benefits from drinking water and sanitation programmes, X_{11} = benefits from animal husbandry department, X_{12} = benefits from agricultural department, X_{13} = type of farmer, X_{14} = land holding, X_{15} = total income from off farming, X_{16} = income from agriculture, X_{17} = total income from livestock, X_{18} = total income from implements, X_{19} = transaction cost incurred in availing benefits from Governmental programmes.

3.3.4 Relationship between Total benefit from Governmental programmes and explanatory variables in sample areas

It is hypothesized that the benefits received from Governmental programmes by farmer is determined by explanatory variables such as: (1) the net returns per acre of gross cropped area, (2) transaction costs involved in receiving the benefits from Governmental programmes, (3) the number of Governmental programmes which benefitted the farmer and (4) access to irrigation (determined by 2 dummy variables: (1, 0) if

the farmer has access to surface (canal) irrigation and 0 otherwise, (0,1) if the farmer has access to groundwater irrigation and 0 otherwise and (0,0), if the farmer has no access to irrigation as the farmer may be a rainfed farmer. The linear model proposed is as under:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 D_1 + \beta_5 D_2 + u \dots\dots (1)$$

Where

Y = Total benefits received by farmer from Governmental programmes (₹ per family per year)

X₁ = The net returns per farm (₹)

X₂ = Transaction costs involved in receiving the benefits from Governmental programmes (₹ per year)

X₃ = The number of Governmental programmes which has benefitted the farmer (number)

D₁ = Dummy variable for surface irrigation farmer (1, 0)

D₂ = Dummy variable for groundwater irrigation farmer (0, 1)

u = error

It is hypothesized that the total benefits are positively related with X₃, and negatively related with X₁ and X₂. The total benefits received would fall with increase in net returns and transaction costs. As the transaction costs incurred in receiving benefits from Governmental programmes increase, the benefits would fall. The total benefits are hypothesized to increase with the number of Governmental programmes the farmer is participating. The total benefits are hypothesized to fall with access to surface water / groundwater irrigation. The total benefits are hypothesized to increase for rainfed farmers.

From the linear model (1) above, the total benefits for the three categories of farmers sampled in this study namely the CIA farmers; the GIA farmers and the rainfed farmers will be estimated.

In order to estimate the response elasticity of the total benefits received from Governmental programmes with regard to net returns, transaction costs, and the number of Governmental programmes, a multiplicative model was estimated as under

$$Y = \gamma X_1^{\delta_1} X_2^{\delta_2} X_3^{\delta_3} e^{\delta_4 D_1} e^{\delta_5 D_2} e^u$$

Where the variables X_1 , X_2 , X_3 , D_1 and D_2 are as defined for linear model

Upon applying logarithms on both the sides we have

$$\ln Y = \ln \gamma + \delta_1 \ln X_1 + \delta_2 \ln X_2 + \delta_3 \ln X_3 + \delta_4 D_1 + \delta_5 D_2 + u$$

The total benefits received by farmers are also estimated using the linear model. Using the multiplicative model the elasticity of total benefit with respect to net returns, transaction costs and the number of programmes participated are estimated and interpreted.

3.3.5 Transaction cost involved in availing the benefit

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 (The problem of Social cost, 1960, The Journal of Law and Economics). It involves cost of obtaining information,

establishing one's bargaining position, bargaining and arriving at a group decision and enforcing the decision made (Alan Randall, 1982).

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 labor and amount of rents paid to different officials, middlemen's, 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 `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.

3.3.6 Relative share of Governmental programmes

In order to analyse what types of different developmental programmes are sought by farmers ceteris paribus any developmental programme, a symmetric matrix of all developmental programmes in vogue is prepared. The cells in the matrix indicate the average benefit per developmental programme, and the proportion of farmers deriving such a

benefit. Thus, this gives the relative share of different Governmental programmes obtained by farmers.

The proportion of farmers benefitted from Governmental programmes as well as the absolute benefit received by farmers is thus obtained from the 22 X 22 matrix. The average benefit received by the farmers from each of the different Governmental programmes, as well as the number of farmers who received the benefits from the Governmental programmes and the percentage of beneficiaries to total sample was calculated.

RESULTS



CHAPTER IV

RESULTS

The results of the study are presented in this chapter under the following headings:

- 4.1 Socio-Economic features of sample farmers in the study area
- 4.2 Participation of farmers in different organizations
- 4.3 Farmers participation in Governmental programmes in the study area
- 4.4 Efficiency in availing the benefit of Governmental programmes
- 4.5 Transaction cost involved in availing the benefit from Governmental programmes
- 4.6 Factors influencing differential distribution of benefit among sample farmers.
- 4.7 Economic dimensions influencing the distribution of benefits from Governmental programmes
- 4.8 Relative share of Governmental programmes for farmers

4.1 Socio-Economic features of sample farmers in the study area

The average family size of the household indicated in table 4.1. In canal irrigated area (CIA) and rainfed area (RFA) it is five people. Where as in ground water irrigated area (GIA) it is four people. Proportion of joint families in CIA, GIA and RFA is about 40 per cent, 23 per cent, and 34 per cent respectively. In CIA under caste composition 86 per cent belongs to general category and 14 per cent belongs to scheduled tribes. In GIA 91 per cent belong to general category and nine per cent belong to backward castes. In RFA 89 per cent belong to general category and 11 per cent belong to backward castes. It represents most of the farmers in

all three villages are belong to general category. The proportion of joint family is around 40 per cent among CIA farmers, 23 per cent among GIA farmers and 34 per cent among RFA farmers. In CIA and RFA almost 30 per cent of the households have land in the name of female member, in GIA it is around 23 per cent.

The average land holding of the CIA, GIA and RFA is 9.02, 6.75 and 4.26 acres respectively. Out of total land holdings on an average CIA farmer are having 5.81 acres of average CIA and 3.2 acres of average RFA. Out of total land holdings on an average GIA farmer is having 1.1 acres of average CIA and 0.53 acres of RFA and 5.12 acres of GIA. In CIA the market value of the land with canal irrigation is around ` 600000 per acre and rain fed land is around ` 400000 per acre. In GIA market value of land with ground water irrigation is around ` 1000000 per acre and Rain fed land is ` 500000 per acre. In RFA market value for land is ` 300000 per acre. It represents land with irrigation facility are having high market value compared to RFA land.

In CIA 11 per cent of the households possess draught animals and in GIA 9 per cent and in RFA it is 23 per cent. In surface and GIA 83 per cent and 63 per cent of the households possess buffaloes respectively. In RFA only 37 per cent of the households possess buffaloes. It represents most of the households in irrigated areas possess dairy compared to RFA.

In CIA and GIA 11 per cent and 9 per cent of farm households possess tractor where as in RFA no household possess tractor. It represents there was farm mechanization in irrigated area compared to RFA, where draught animals are used mostly for farm operations. About 74 per cent of the households in CIA possess sprayer, in GIA it is 54 per cent and in RFA it is 60 per cent. About 51 per cent of the households in CIA possess oil engine and no households in GIA and RFA possess it.

Table 4.1: Socio-economic features of sample farmers in Krishna District, Andhra Pradesh 2011.

Particulars	CIA n=35	GIA n=35	RFA n=35
Average family size (no.)	5	4	5
Average adult male per family (no.)	2	2	2
Average adult female per family (no.)	2	1	2
Children per family (no.)	1	1	1
Working population per family (no.)	3	2	3
Number of joint family households	14 (40)	8 (23)	12 (34)
Number of farmers belong to general category	30 (86)	32 (91)	31 (89)
Number of farmers belong to ST	5 (14)	0	0
Number of farmers belong to OBC	0	3 (9)	4 (11)
Land in name of farm women (no.)	11 (31)	8 (23)	10 (29)
Land Holding			
Average land holding per farm family (acre)	9.02	6.75	4.26
Net cropped area under surface irrigation (acre)	5.81	1.1	0.0
Land value with surface irrigation (₹.)per acre	600000	800000	0
Net cropped area under ground water irrigation	0.0	5.12	2.2*
Land value with ground water irrigation (₹.)per acre	0	1000000	0
Net cropped area under rainfed.	3.2	0.53	2.06
Land value of rainfed area (₹.)per acre	400000	500000	300000

Particulars	CIA n=35	GIA n=35	RFA n=35
House Holds Possessing Live Stock			
Draught Animals	4 (11)	3 (9)	8 (23)
Local Cow	0 (0)	3 (9)	1 (3)
Buffaloes	29 (83)	22 (63)	13 (37)
Cross Bred Cows	0 (0)	0 (0)	0 (0)
Calves and Heifers	29 (83)	25 (71)	8 (23)
Sheep	1 (3)	1 (3)	0 (0)
Goat	1 (3)	0 (0)	0 (0)
Poultry	5 (14)	0 (0)	3 (9)
Number Of Households Possessing Farm Inventory			
Tractor	4 (11)	3 (9)	0 (0)
Power Tiller	0 (0)	1 (3)	0 (0)
Sprayer	26 (74)	19 (54)	21 (60)
Bullock Cart	3 (9)	1 (3)	4 (11)
Country Plough	2 (6)	2 (6)	4 (11)
Oil Engine	18 (51)	0 (0)	0 (0)
Two wheeler	25 (71)	23 (66)	13 (37)

Note: Figures in parentheses indicate percentage to total.

*Presence of water markets in RFA (paying ₹.6000 for water and ₹.6000 for land per year per acre).

About 71 per cent and 66 per cent of the farm households in surface and GIA possess two-wheeler where as in RFA 37 per cent of the households possesses two wheeler.

4.2 Participation of farmers in local organizations

The extent of CIA farmers participation in local organization indicated in table 4.2. In CIA 80 per cent of the farm households are members of SHG. The average loan obtained under SHG for the year 2011 is around ` 23464. The average savings per farm household is ` 17480. About 17 per cent of the farmers participated in cooperatives and obtained an average loan of ` 20000.

Table 4.2: Farmers benefited from local organizations in CIA of Krishna District, 2011

Organization n=35	Number of Farm Families who took loan	Average Savings 2011 (`)	Average Loan per farmer 2011 (`)	Activities of The Organization
SHG	28 (80)	17480	23464	Savings & Micro Financing
Farmers Cooperatives	6 (17)	0	20000	Availing Government Subsidy Schemes and Obtaining Loan

Note: Figures in parentheses indicate percentage to total.

Farmers benefited from local organizations in GIA are indicated in table 4.3. In GIA 66 per cent of the farm households are members of SHG. The average loan obtained under SHG per farm family is ` 18087. The average savings per farm family is ` 4539. About 23 per cent of the farmers participated in cooperatives and obtained an average loan of ` 41250.

Table 4.3: Farmers benefited from local organizations in GIA of Krishna District, 2011

Organization n=35	Number of Farm Families Benefited	Average Savings 2011 (₹)	Average Loan 2011 (₹)	Activities of The Organization
SHG	23 (66)	4539	18087	Savings & Micro Financing
Farmers Cooperative Society	8 (23)	0	41250	Availing Government Subsidy Schemes and Obtaining Loan

Note: Figures in parentheses indicate percentage to total.

Farmers benefiting from local organizations in RFA are indicated in table 4.4. Around 94 per cent of the farm households are members of SHG. The average loan obtained under SHG per farm family is ₹ 20212. The average savings per farm family is ₹ 8000. About 26 per cent of the farmers are members in Raitu mitra groups and obtained an average loan of ₹ 7750.

Table 4.4: Farmers benefited from local organizations in RFA of Krishna District, 2011

Organization n=35	Number of farm families	Average savings 2011 (₹)	Average loan 2011 (₹)	Activities of the organization
SHG	33 (94)	8000	20212	Savings & Micro financing
Raitu mitra	9 (26)	0	7750	Availing government subsidy schemes and obtaining loan

Note: Figures in parentheses indicate percentage to total.

4.3 Farmers participation for Governmental programmes in the study area

About 100 per cent of the sample farmers in CIA received white ration cards obtain `3621 worth of food security ration per year; 80 per cent of the farmers received subsidized interest loan of `1418 under SHG; Panchayath Water Supply (100 %, ` 180); Crop Loss Relief Fund (97 %, ` 7657.4); 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 `3340 per family, followed by pasukranthi scheme benefiting 9 per cent of the farm families deriving an amortized benefit of `1759 per year. The popularity of the Governmental programmes can be examined by considering the proportion of farmer beneficiary in column 2 of the table 4.5. Accordingly the most popular Governmental programmes in CIA are white ration card (BPL card) providing ` 3621 per family for 100 per cent of farmers providing food security ration followed by Crop Loss Relief Fund (amortized benefit of ` 852, 97 %); subsidy on interest of SHG loans (` 1418, 80%); Taiwan sprayer subsidy (` 723, 54%). The type of benefit flow is also provided in the column 5 of table 4.5.

Benefit to Farmers from Governmental programmes in GIA is indicated in table 4.6. About 97 per cent of the sample farmers in GIA received white ration cards obtain ` 2962 worth of food security ration per year; 63 per cent of the farmers received subsidized interest loan of `1031 under SHG; Panchayath Water Supply (100%, ` 360); Crop Loss Relief Fund (80%, ` 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 `3340 per family, followed by pasukranthi scheme benefiting 3 per cent of the farm families deriving an amortized benefit of ` 1759 per year. The popularity of the Governmental programmes can be examined by considering the

Table 4.5: Benefit to Farmers from Governmental programmes in CIA area of Krishna District, 2011

Type of the programme or scheme	Name of the programme/scheme	Number of farmers benefited in the sample (n=35)	Total annual benefit availed per beneficiary family (₹.)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (₹.)
1.Programmes focusing on providing food and nutritional security	White ration card (BPL card)	35 (100)	3621	monthly	-----
2.Wage Employment	MGNREGA	5 (14)	no work allocated	once a year	-----
3.Social security	Old Age Pension	13 (37)	2400	monthly	-----
	Disability pension	1 (3)	6000	monthly	-----
4.Housing	Indiramma housing	4 (11)	Total benefit 30000 *	one time long term benefit	Amortized benefit ₹. 3340
	NTR colony houses	3 (9)	Total benefit 12000*	one time	Amortized benefit ₹. 1336
5. SHG	SHG loan subsidy	28 (80)	1418	yearly	-----
	Deepam (free one time LPG cylinder and gas connection)	8 (23)	Total benefit 1400*	one time	Amortized benefit ₹. 109
6. Drinking water and sanitation	Panchayath Water Supply	35 (100)	180	daily	-----
7. Health insurance	Rajiv Arogya Shree	5 (14)	Total benefit 11429*	one time	Amortized benefit ₹. 1272

Type of the programme or scheme	Name of the programme/scheme	Number of farmers benefited in the sample (n=35)	Total annual benefit availed per beneficiary family (₹.)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (₹.)
8. Animal husbandry	Pashukranthi Padhakam.(one milch buffalo per family)	3 (9)	Total benefit 15800*	one time	Amortized benefit ₹. 1759
	Cattle Feed Distribution (From Cooperatives)	2 (6)	1800	monthly	-----
9. ICDS	Mid Day Meal	1 (3)	1530	daily	-----
10. Agriculture	Crop Loss Relief Fund. (₹. 2400 per farm as a relief due to drought or flood)	34 (97)	7657	effected season	Amortized benefit ₹. 852
	Subsidized seeds (from Agriculture Department)	14 (40)	1664	twice a year	-----
11. Farm machinery, implements and buildings	Taiwan sprayer subsidy from Agriculture Department	19 (54)	Total benefit 6500*	one time	Amortized benefit ₹. 723
	Oil engine (50 per cent subsidy up to ₹. 20000 from Agriculture Department)	13 (37)	Total benefit 20000*	one time	Amortized benefit 1360

Note: Figures in parentheses indicate percentage to total.

* Total benefit from long term programmes

proportion of farmer beneficiary in column 2 of the table 4.6. Accordingly the most popular Governmental programmes in GIA are white ration card (BPL card) providing ` 3621 per family for 97 per cent of farmers providing food security ration followed by subsidized seeds (` 662, 91%); Crop Loss Relief Fund(amortized benefit of ` 1327, 80%); subsidy on interest of SHG loans (` 1031, 63%).

Benefit to Farmers from Governmental programmes in RFA is indicated in table 4.7. About 97 per cent of the sample farmers in RFA received white ration cards obtain ` 3969 worth of food security ration per year; 89 per cent of the farmers received benefit of ` 4500 from MGNAREGA; 86 per cent of the farmers received subsidized interest loan of ` 1194 under SHG; Panchayath Water Supply (100%, ` 360); Crop Loss Relief Fund (83%, ` 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 ` 750 per family, followed by NTR colony houses benefiting 11 per cent of the farm families deriving an amortized benefit of `1336 per year. The popularity of the Governmental programmes can be examined by considering the proportion of farmer beneficiary in column 2 of the table 4.7. Accordingly the most popular Governmental programmes in RFA are white ration card (BPL card) providing ` 3969 per family for 97 per cent of farmers providing food security ration followed by MGNAREGA (`4500, 89%); subsidy on interest of SHG loans (` 1194, 86%); Crop Loss Relief Fund(amortized benefit of ` 4072, 83%).

Transaction cost incurred by farmers in availing benefit in CIA is represented in Table 4.8. In CIA the highest gap lies between actual number of beneficiaries and eligible farmers in Pashukranthi padhakam that is 89 per cent followed by MGNAREGA that is 86 per cent. In case of subsidized seeds the gap extends up to 60 per cent where only 40 per

Table 4.6: Benefit to Farmers from Governmental programmes in GIA of Krishna District, 2011

Type of the programme or scheme	Name of the programme/ scheme	Number of farmers benefited in the sample (n=35)	Total annual benefit availed per beneficiary family (₹)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (₹)
1.Programmes focusing on providing food and nutritional security	White ration card (BPL card)	34 (97)	2962	monthly	-----
2.Wage employment	MGNREGA	1 (3)	2500	once a year	-----
3.Social security	Old Age Pension	5 (14)	2400	monthly	-----
	Widow Pension	2 (6)	2400	monthly	-----
4.Housing	Indiramma Housing	3 (9)	30000 *	one time	Amortized benefit ₹. 3340
	NTR colony houses	1 (3)	12000*	one time	Amortized benefit ₹. 1336
5. SHG	SHG loan subsidy	22 (63)	1031	yearly	-----
	Deepam (free one time LPG cylinder and gas connection)	1 (3)	1400* (20 years)	one time	Amortized benefit ₹. 109
6. Drinking water and sanitation	Panchayath Water Supply	35 (100)	360	daily	-----
7. Health	Rajiv Arogya shree (health insurance)	5 (14)	67250*	one time	Amortized benefit ₹. 7487

Type of the programme or scheme	Name of the programme/ scheme	Number of farmers benefited in the sample (n=35)	Total annual benefit availed per beneficiary family (₹)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (₹)
8. Animal husbandry	Pashukranthi Padhakam.(one milch buffalo per family)	1 (3)	15800*	one time	Amortized benefit ₹. 1759
	Cattle Feed Distribution (from cooperatives)	5 (14)	2640	monthly	-----
9. Agriculture	Crop Loss Relief Fund. (₹. 2400 per farm as a relief due to drought or flood)	28 (80)	11916*	effected season	Amortized benefit ₹. 1327
	Subsidized seeds (from Agriculture Department)	32 (91)	662	twice a year	-----
	Subsidies for Micro Irrigation	2 (6)	115665*		Amortized benefit ₹. 12877
10. Farm machinery,impliments and buildings	Taiwan sprayer subsidy from Agriculture Department	6 (17)	6500*	one time	Amortized benefit ₹. 723

Note: Figures in parentheses indicate percentage to the total.

* Total benefit from long term programmes

Table 4.7: Benefit to Farmers from Governmental programmes in RFA of Krishna District, 2011.

Type of the programme or scheme	Name of the programme/ scheme	Number of farmers benefited in the sample (n=35)	Total annual benefit availed per beneficiary family (₹)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (₹)
1. Programmes focusing on providing food and nutritional security	White Ration Card (BPL card)	34 (97)	3969	monthly	-----
2. Wage Employment	MGNREGA	31 (89)	4500	once a year	-----
3. Social security	Old Age Pension	5 (14)	2400	monthly	-----
4. Housing	Indiramma Housing	10 (29)	30000 *	one time	Amortized benefit ₹. 3340
	NTR Colony Houses	4 (11)	12000*	one time	Amortized benefit ₹. 1336
5. SHG	SHG loan subsidy	31 (86)	1194	yearly	-----
	Deepam (free one time LPG cylinder and gas connection)	18 (51)	1400*	one time	Amortized benefit ₹. 109
6. Drinking water and sanitation	Panchayath Water Supply	35 (100)	360	daily	-----
7. Health	Rajiv Arogya Shree (health insurance)	3 (9)	50000	one time	Amortized benefit ₹. 5566
8. ICDS	Mid Day Meal	6 (17)	1530	daily	-----

Type of the programme or scheme	Name of the programme/ scheme	Number of farmers benefited in the sample (n=35)	Total annual benefit availed per beneficiary family (₹)	Frequency of benefit flow	Amortized benefit availed from long term programme per beneficiary per year (₹)
9. Agriculture	Crop Loss Relief Fund. (₹. 2400 per farm as a relief due to drought or flood)	29 (83)	4072*	effected season	Amortized benefit ₹. 453
	Subsidized seeds (from Agriculture Department)	4 (11)	750	twice a year	-----
10. Farm machinery,impliments and buildings	Taiwan sprayer subsidy from Agriculture Department	9 (26)	6500*	one time	Amortized benefit ₹. 723

Note: Figures in parentheses indicate percentage to total.

* Total benefit from long term programmes.

cent are benefiting. The least gap is in case of white ration card 100 per cent of farmers benefited, followed by Crop Loss Relief Fund with three per cent gap. Column 4 represents the Percentage of transaction cost to total benefit. The percentage extends to 24 per cent in case of subsidized seeds followed by 17 per cent in case of SHG loan subsidy. The least Percentage of transaction cost to total benefit is in case of mid day meal scheme with one per cent followed by pension scheme with two per cent.

Transaction cost incurred by farmers in availing benefit in RFA is represented in Table 4.9. In RFA the highest gap lies between actual number of beneficiaries and eligible farmers in Pashukranthi padhakam that is 100 per cent followed by Cattle feed distribution scheme with 94 per cent and Old age pension scheme that is 67 per cent. The least gap is in case of Panchayath Water Supply 100 per cent of farmers benefited, followed by white ration card with three per cent. In case of Crop Loss Relief Fund the gap is seven per cent. Column 4 represents the Percentage of transaction cost to total benefit. The percentage extends to 60 per cent in case of subsidized seeds followed by 41 per cent in case of SHG loan subsidy. No transaction cost to total benefit in case of mid day meal scheme. In case of white ration card it is one per cent followed by MGNAREGA with three per cent.

Transaction cost incurred by farmers in availing benefit in GIA represented in table 4.10. In GIA the highest gap lies between actual number of beneficiaries and eligible farmers in MGNAREGA that is 97 per cent followed by pashukranthi padhakam that is 96 per cent and then cattle Deepam that is 83 per cent. The least gap is in case of Panchayath Water Supply and white ration card where 100 per cent of farmers benefited followed by Rajiv Arogya shree health card the gap is six per cent and subsidized seeds nine per cent. Column 4 represents the Percentage of transaction cost to total benefit. The percentage extends to

Table 4.8: Transaction cost incurred by farmers in availing benefit in CIA area of Krishna District, 2011

Sl. No.	Name of the programme/scheme	Number of farmers benefited in sample farmers (n=35)	Transaction cost incurred to avail benefit (₹)	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
1	White ration card (BPL card)	35 (100)	38	1	35	0 (0)
2	MGNREGA	5(14)	145	--	35	30 (86)
3	Old Age Pension	13 (68)	58	2	19	6 (31)
4	Disability pension	1 (3)	135	2	1	0 (0)
5	Indiramma housing	4(57)	1775	6	7	3 (42)
7	NTR colony houses	3 (75)	1030	9	4	1 (25)
8	SHG loan subsidy	28 (80)	237	17	35	7 (20)
9	Deepam (free one time LPG cylinder and gas connection)	8 (67)	65	5	12	4 (33)
10	Panchayath Water Supply	35 (100)	10	6	35	0 (0)
11	Rajiv Arogya shree (health insurance)	29 (83)	80		35	6 (17)
12	Pashukranthi padhakam.(one milch buffalo per family)	3 (11)	200	1.3	28	25 (89)
13	Cattle feed distribution (from cooperatives)	2 (33)	135	7.5	6	4 (67)
14	Post metric scholarship	2 (50)	51	1.7	4	2 (50)

Sl. No.	Name of the programme/scheme	Number of farmers benefited in sample farmers (n=35)	Transaction cost incurred to avail benefit (₹)	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
15	Mid day meal	1 (100)	0	0	1	0 (0)
16	Crop loss relief fund. (₹. 2400 per farm as a relief due to drought or flood)	34 (97)	307	4	35 (100)	1 (3)
17	Subsidized seeds (from Agriculture Department)	14 (40)	403	24	35	21 (60)
18	Taiwan sprayer subsidy from Agriculture Department	19 (54)	264	4	35	16 (45)
19	Oil engine 50% subsidy up to ₹. 20000 (from Agriculture Department)	13 (77)	658	3.29	17	4 (23)

Note: Figures in parentheses indicate percentage to eligible farmers

Table 4.9: Transaction cost incurred by farmers in availing benefit in RFA of Krishna District, 2011.

S. No.	Name of the programme/ scheme	Number of farmers benefited in sample farmers (n=35)	Transaction cost incurred to avail benefit (₹)	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
1	White ration card (BPL card)	34 (97)	41	1	35	1 (3)
2	MGNREGA	31 (89)	141	3	34	3 (11)
3	Old age pension	5 (33)	103	4	15	10 (67)
6	Indiramma housing	10 (46)	2215	7	22	12 (54)
7	NTR colony houses	4 (67)	1456	12	6	2 (33)
8	SHG loan subsidy	31 (89)	494	41	35	4 (11)
9	Deepam (free one time LPG cylinder and gas connection)	18 (69)	145	10	26	8 (31)
10	Panchayath Water Supply	35 (100)	30	8	35	0
11	Rajiv Arogya shree (health insurance)	33 (94)	51		35	2 (6)
12	Pashukranthi padhakam.(one milch buffalo per family)	0 (0)	0	0	31	31 (100)

S. No.	Name of the programme/ scheme	Number of farmers benefited in sample farmers (n=35)	Transaction cost incurred to avail benefit (₹)	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
13	Cattle feed distribution (from cooperatives)	2 (6)	135	7.5	35	33 (94)
14	Mid day meal	6 (17)	0	0(0)	6	0 (0)
15	Crop loss relief fund. (₹ 2400 per farm as a relief due to drought or flood)	29 (93)	328	8	31	2 (7)
16	Subsidized seeds (from Agriculture Department)	4 (11)	450	60	35	31 (89)
17	Taiwan sprayer subsidy from Agriculture Department	9 (42)	475	7	21	12 (68)

Note: Figures in parentheses indicate percentage to eligible farmers

Table 4.10: Transaction cost incurred by farmers in availing benefit in GIA of Krishna District, 2011.

S. No.	Name of the programme/ scheme	Number of farmers benefited in sample farmers (n=35)	Transaction cost incurred to avail benefit (₹)	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
1	White ration card (BPL card)	34 (97)	56	2	34	0 (0)
2	MGNREGA	1 (3)	35	1.4	35	34 (97)
3	Old Age Pension	5 (26)	85	4	19	14 (74)
4	Widow pension	2 (100)	73	3	2	0 (0)
5	Indiramma housing	3 (60)	4675	16	5	2 (40)
6	NTR colony houses	1 (50)	1550	13	2	1 (50)
7	SHG loan subsidy	22 (63)	477	46	35	13 (37)
8	Deepam (free one time LPG cylinder and gas connection)	1 (17)	145	10	6	5 (83)
9	Panchayath Water Supply	35 (100)	30	8	35	0 (0)
10	Rajiv Arogya shree (health insurance)	32 (94)	35	--	34	2 (6)
11	Pashukranthi padhakam.(one milch buffalo per family)	1 (4)	1675	11	23	22 (96)
12	Cattle feed distribution (from cooperatives)	5 (23)	135	5	22	17 (77)

S. No.	Name of the programme/ scheme	Number of farmers benefited in sample farmers (n=35)	Transaction cost incurred to avail benefit (₹)	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
13	Crop loss relief fund. (₹ 2400 per farm as a relief due to drought or flood)	28 (83)	664	6	34	6 (17)
14	Subsidized seeds (from Agri Dept)	32 (91)	350	53	35	3 (9)
15	Subsidies for micro irrigation	2 (40)	1275	1	5	3 (60)
16	NHM	1 (25)	1300	4	4	3 (75)
17	Taiwan sprayer subsidy from Agriculture Department	6 (100)	350	5	6	0 (0)

Note: Figures in parentheses indicate percentage to eligible farmers

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 subsidies for micro irrigation with one per cent followed by MGNAREGA with 1.4 per cent in case of white ration card it is two per cent.

Reasons for Gap in Implementation of Governmental programmes in CIA are indicated in table 4.11. The highest gap is 86 per cent in MGNAREGA due to disinterest only 14 per cent are enrolled their names even though all farmers are eligible. In case of pashukranthi padhakam it is 71 per cent due to lack of awareness and procedural complexity to obtain the benefit. Followed by subsidized seeds where 60 per cent of the gap is mainly because of lack of seed supply in time and long waiting time to get the benefit. About 46 per cent of the gap exists in getting subsidy for Taiwan sprayer due to long waiting time to get the benefit.

Reasons for gap in implementation of Governmental programmes in RFA are indicated in table 4.12. The highest gap is 89 per cent in pashukranthi padhakam due to lack of awareness and procedural complexity to obtain the benefit. In case of Deepam padhakam it is 49 per cent due to lack of awareness and delay in applying to obtain the benefit. Followed by Indiramma housing scheme where 34 per cent of the gap is mainly because of political interference in selecting the beneficiaries and huge rents has to pay to get the benefit. About 34 per cent of the gap exists in getting subsidy for Taiwan due to long waiting time to get the benefit. Presence of political interference in selection of beneficiaries in old age pension scheme the gap extends up to 29 per cent.

Reasons for gap in implementation of Governmental programmes in GIA are indicated in table 4.13. The highest gap is 97 per cent in MGNAREGA due to disinterest only 3 per cent are enrolled their names

Table 4.11: Reasons for Gap in Implementation of Governmental programmes in CIA area of Krishna District, 2011.

S. No.	Name of the Programme/Scheme	Number of farmers Benefited in the sample (n=35)	No. of Families (percentage) eligible to receive the benefit in the sample (n=35)	Gap between actual number of beneficiaries and eligible farmers	Perception of farmers regarding the gap in implementation
1	White ration card (BPL card)	35 (100)	35	0 (0)	All families had ration card, hence no gap
2	MGNREGA	5(14)	35	30 (86)	Only 14 per cent of the farmers enrolled, though all were eligible.
3	Old Age Pension	13 (68)	19	6 (31)	Threshold pension of ₹. 200 was considered low.
4	Disability pension	1 (3)	1	0 (0)	No gap
5	Indiramma housing scheme	4(57)	7	3 (42)	Political Interference in selection of beneficiaries
6	NTR colony houses	3 (75)	4	1 (25)	Politicians interference in selection of beneficiaries
7	SHG loan subsidy	28 (80)	35	7 (20)	Disinterest & improper distribution of money among group members
8	Deepam (free one time LPG cylinder and gas connection)	8 (67)	12	4 (33)	Lack of awareness and delayed application
9	Panchayath Water Supply	35 (100)	35	0 (0)	Macro level scheme, no gap

S. No.	Name of the Programme/Scheme	Number of farmers Benefited in the sample (n=35)	No. of Families (percentage) eligible to receive the benefit in the sample (n=35)	Gap between actual number of beneficiaries and eligible farmers	Perception of farmers regarding the gap in implementation
10	Rajiv Arogya shree (health insurance)	29 (83)	35	6 (17)	Lack of awareness and delayed application
11	Pashukranthi padhakam. (one milch buffalo per family)	3 (11)	28	25 (89)	Lack of awareness & procedural complexity
12	Cattle feed distribution (from cooperatives)	2 (33)	6	4 (67)	Feed supplied was of no good quality
13	Post metric scholarship	2 (50)	4	2 (50)	No gap
14	Mid day meal	1 (100)	1	0 (0)	No gap
15	Crop loss relief fund. (₹. 2400 per farm as a relief due to drought or flood)	34 (97)	35	1 (3)	Political Interference in selection of beneficiaries
16	Subsidized seeds (from Agri Dept)	14 (40)	35	21 (60)	Lack of seed supply in time and long waiting time to get benefit
17	Taiwan sprayer subsidy from Ag Dept	19 (54)	35	16 (45)	Long waiting time to get benefit & lack of stock
18	Diesel engine 50 per cent subsidy up to ₹. 20000 (from Agriculture Department)	13 (77)	17	4 (23)	Long waiting time to get benefit and delayed application

Note: figures in parentheses indicate percentage to eligible farmers.

Table 4.12: Reasons for Gap in implementation of Governmental programmes in RFA of Krishna District, 2011.

S. No.	Name of the Programme/Scheme	Number of farmers benefited in the sample (n=35)	No. of Families (percentage) eligible to receive the benefit in the sample (n=35)	Gap between actual number of beneficiaries and eligible farmers	Perception of farmers regarding the gap in implementation
1	White ration card (BPL card)	34 (97)	35	1 (3)	Delayed application
2	MGNAREGA	31 (89)	34	3 (11)	Minimum wage rate is low.
3	Old age pension	5 (33)	15	10 (67)	Political Interference in selection of beneficiaries
4	Indiramma housing	10 (46)	22	12 (54)	Political interference and huge rents has to pay and lack of funds
5	NTR colony houses	4 (67)	6	2 (33)	Political Interference in selection of beneficiaries
6	SHG loan subsidy	31 (89)	35	4 (11)	Disinterest & improper distribution of money among group members
7	Deepam (free one time LPG cylinder and gas connection)	18 (69)	26	8 (31)	Lack of awareness and delayed application
8	Panchayath Water Supply	35 (100)	35	0	Macro level scheme, no gap

S. No.	Name of the Programme/Scheme	Number of farmers benefited in the sample (n=35)	No. of Families (percentage) eligible to receive the benefit in the sample (n=35)	Gap between actual number of beneficiaries and eligible farmers	Perception of farmers regarding the gap in implementation
9	Rajiv Arogya shree (health insurance)	33 (94)	35	2 (6)	Lack of awareness and delayed application
10	Pashukranthi padhakam.(one milch buffalo per family)	0 (0)	31	31 (100)	Lack of awareness & procedural complexity
11	Cattle feed distribution (from cooperatives)	2 (6)	35	33 (94)	Lack of awareness & Feed supplied was of no good quality.
12	Mid day meal	6 (17)	6	0 (0)	No gap
13	Crop loss relief fund. (₹. 2400 per farm as a relief due to drought or flood)	29 (93)	31	2 (7)	Political Interference in selection of beneficiaries
14	Subsidized seeds	4 (11)	35	31 (89)	Lack of seed supply in time and long waiting time to get benefit
15	Taiwan sprayer subsidy from Agriculture Department	9 (42)	21	12 (68)	Long waiting time to get benefit & lack of stock

Note: Figures in parentheses indicate percentage to eligible farmers.

Table 4.13: Reasons for Gap in implementation of Governmental programmes in GIA of Krishna District, 2011.

S. No.	Name of the Programme/Scheme	Number of farmers benefited in the sample (n=35)	Number of Families (percentage) eligible to receive the benefit in the sample (n=35)	Gap between actual number of beneficiaries and eligible farmers	Perception of farmers regarding the gap in implementation
1	White ration card (BPL card)	34 (97)	34	0 (0)	All families had ration card, hence no gap
2	MGNREGA	1 (3)	35	34 (97)	Only 3 per cent of the farmers enrolled, though all were eligible.
3	Old Age Pension	5 (26)	19	14 (74)	Threshold pension of ₹. 200 was considered low.
4	Widow pension	2 (100)	2	0 (0)	No gap
5	Indiramma housing	3 (60)	5	2 (40)	political interference and huge rents has to pay and lack of funds
6	NTR colony houses	1 (50)	2	1 (50)	Political Interference in selection of beneficiaries
7	SHG loan subsidy	22 (63)	35	13 (37)	disinterest & improper distribution of money among group members
8	Deepam (free one time LPG cylinder and gas connection)	1 (17)	6	5 (83)	Lack of awareness and delayed application
9	Panchayath Water Supply	35 (100)	35	0 (0)	Macro level scheme, no gap

S. No.	Name of the Programme/Scheme	Number of farmers benefited in the sample (n=35)	Number of Families (percentage) eligible to receive the benefit in the sample (n=35)	Gap between actual number of beneficiaries and eligible farmers	Perception of farmers regarding the gap in implementation
10	Rajiv Arogya shree (health insurance)	32 (94)	34	2 (6)	Lack of awareness and delayed application
11	Pashukranthi padhakam.(one milch buffalo per family)	1 (4)	23	22 (96)	lack of awareness & procedural complexity
12	feed distribution (from cooperatives)	5 (23)	22	17 (77)	Disinterest & feed supplied is not good quality
13	Crop loss relief fund. (₹ 2400 per farm as a relief due to drought or flood)	28 (83)	34	6 (17)	political interference and huge rents has to pay and lack of funds
14	Subsidized seeds	32 (91)	35	3 (9)	Lack of seed supply in time and long waiting time to get benefit
15	Subsidies for micro irrigation	2 (40)	5	3 (60)	lack of awareness & procedural complexity
16	NHM	1 (25)	4	3 (75)	lack of awareness & procedural complexity
17	Taiwan sprayer from Agriculture Department	6 (100)	6	0 (0)	

Note: Figures in parentheses indicate percentage to total eligible farmers.

even though all farmers are eligible. 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 ` 200 was considered low. About 37 per cent of the gap exists in SHG loan subsidy due to disinterest and improper distribution of money among group members.

Level of governance of Governmental programmes across three areas is compared in the table 4.14. Around 59 per cent of the programmes are with good governance in CIA where as 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 where as in CIA and RFA it is 18 and 33 per cent respectively.

The total benefit received by sample farmers from Governmental benefit across three regions is indicated in table 4.15. On an average CIA farmer receives benefit of ` 8732 from six Governmental programmes out of 39 listed Governmental programmes. A GIA farmer receives an average benefit of ` 7518 from five Governmental programmes. A RFA farmer receives an average benefit of ` 11202 from six developmental programmes.

Range of benefits received by sample farmers indicated in table 4.16. In CIA 51 per cent of farmers receives benefit between ` 5,000 and ` 10,000. In case of RFA 71 per cent of farmers receive benefit between ` 10,000 and 15,000. In GIA 49 per cent of farmers receive benefit between ` 5000 and 10000. About 31 per cent of farmers received benefit of less than ` 5000.

Benefit received by farmers in CIA indicated in table 4.17. In CIA 26 per cent of the farmers are benefiting from 5 Governmental

Table 4.14: 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

Note: Figures in parentheses indicate percentage to total programmes benefited.

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

Table 4.15: Benefits accrued to farmers from Governmental programmes in CIA, GIA and RFA, 2011

Location (Area)	CIA	GIA	RFA
Total number of programmes listed in Line Departments of the Government	39	39	39
Average number of programmes benefiting per family	6	5	6
Average benefit received per family per year (₹)	8732	7518	11202

Table 4.16: Frequency of farmers receiving benefits from Governmental programmes in CIA, GIA, and RFA, 2011.

Range of benefit received (₹) per farm family per year	CIA (n=35) No. of farm families getting the benefit	Range (₹)	RFA (n=35) No. Of farm families getting the benefit	Range (₹)	GIA (n=35) No. Of farm families getting the benefit	Range (₹)	Total number of farm families getting benefit across CIA, GIA, RFA
<5000	4 (11)	4031 to 4686	1 (3)	4551	11 (31)	3229 to 4531	16 (15)
5000 to 10000	18 (51)	5459 to 9867	7 (20)	5031 to 9951	17 (49)	5029 to 9840	42 (40)
10000 to 15000	13 (37)	10204 to 14127	25 (71)	10021 to 14672	5 (14)	10904 to 13352	43 (41)
15000 to 20000	0 (0)	0	2 (6)	15987 to 17597	0 (0)	0	2 (2)
>20000	0 (0)	0	0 (0)	0	1 (3)	27651	1 (1)

Note: Figures in parentheses indicate percentage to total

Table 4.17: Benefit received by farmers in CIA of Krishna District, 2011

Number of Governmental programmes participated per family	Sample Farmers benefitting (per cent to total)	Average benefit received from Governmental programmes per family per year (₹)	Number of short term programmes	Short term benefit per family (₹)	Number of long term programmes	Long term benefit per family (₹)	Coefficient of variation of Total benefit (%)
4	2(6)	5670	3 (75)	4710	1 (25)	960	0.97
5	9(26)	6078	3 (60)	4544	2 (40)	1379	31
6	9(26)	8053	3 (50)	6151	3 (50)	1902	32
7	8(23)	10566	4 (57)	7973	3 (43)	2593	17
8	5(14)	11566	5 (62.5)	9576	3 (37.5)	1991	22
9	2(6)	13057	5 (55.5)	10617	4 (44.5)	2440	0

Note: Figures in parentheses indicate percentage to total.

programmes getting benefit up to ` 6078. Around another 26 per cent of farmers benefiting from 6 Governmental programmes getting benefit up to ` 8053. About 23 per cent of the farmers benefiting from 7 Governmental programmes getting a benefit of ` 10566 on an average in CIA each family is getting benefit up to ` 8732 From 6 Governmental programmes and the coefficient of variation is around 30 per cent. Short term benefits are contributing more to total benefit compared to long term benefits.

Benefit received by farmers in GIA indicated in table 4.18. In GIA 40 per cent of the farmers getting benefit up to ` 4389 from four Governmental programmes and coefficient of variation is around 22 per cent. About 31 per cent of the farmers getting on an average a benefit of ` 10096 from six Governmental programmes and the coefficient of variation is around 64 per cent. Each family is getting benefit up to ` 7518 from five Governmental programmes. Short term benefits are contributing more to total benefit compared to long term benefits.

Benefit received by farmers in RFA indicated in Table 4.19. In RFA 26 per cent farmers received benefit up to ` 10143 From five Governmental programmes with 18 per cent as coefficient of variation and 17 per cent farmers received benefit up to ` 11381 from six Governmental programmes with eight per cent of coefficient of variation and 26 per cent of the farmers received on an average benefit of `11993 from seven Governmental programmes with 13 per cent of coefficient of variation. Each farmer in RFA receives annual benefit on an average up to ` 11202 from 6 Governmental programmes.

Benefits received by farmers from Governmental programmes across three areas are indicated in table 4.20. Rainfed farmers are getting more benefit compared to the canal and ground water irrigated

Table 4.18: Benefit received by farmers in GIA of Krishna District, 2011

Number of Governmental programmes participated per family	Sample Farmers benefitting (per cent to total)	Average benefit received from Governmental programmes per family per year (₹)	Number of short term programmes	Short term benefit per family (₹)	Number of long term programmes	Long term benefit per family (₹)	Coefficient of variation of Total benefit (%)
3	2(6)	5074	3 (100)	5074	(0)	(0)	0
4	14(40)	4389	3 (75)	3798	1(25)	591	22
5	3(9)	8662	4(80)	7382	1(20)	1280	12
6	11(31)	10097	4.5 (75)	6345	1.5 (25)	3752	64
7	3(9)	11026	4.5 (64)	6936	2.5 (36)	4839	19
10	1(3)	12958	6 (60)	9974	4 (40)	2983	0

Note: Figures in parentheses indicate percentage to total.

Table 4.19: Benefit received by farmers in RFA of Krishna District, 2011

Number of Governmental programmes participated per family	Sample Farmers benefitting (per cent to total)	Average benefit received from Governmental programmes per family per year (₹)	Number of short term programmes	Short term benefit per family (₹)	Number of long term programmes	Long term benefit per family (₹)	Coefficient of variation of Total benefit (%)
3	1(3)	4551	3 (100)	4551	0	0	0
4	3(9)	7271	3 (75)	6951	1(25)	320	27
5	9(26)	10143	4 (80)	10083	1(20)	491	18
6	6(17)	11381	4(66)	9295	2 (34)	1233	8
7	9(26)	11993	4 (57)	10025.33	3 (43)	1968	13
8	4(11)	14542	5 (62)	12489	3 (38)	2052	20
9	3(9)	13758	6 (66)	12417	3 (34)	1340	7

Note: Figures in parentheses indicate percentage to the total

farmers from the same number of Governmental programmes on an average a CIA farmer is getting a benefit of `5670 and ground water irrigated farmer is getting a benefit of `4389 and rainfed farmer is getting a benefit of `7271 from four Governmental programmes.

Table 4.20: Benefits received by farmers from Governmental programmes in sample areas, 2011

Number of programmes farmers benefitting from	Benefits received per family per year in CIA (`)	Benefits received per family per year in GIA (`)	Benefits received per family per year in RFA (`)
3	0	5074	4551
4	5670	4389	7271
5	6078	8662	10143
6	8053	10097	11381
7	10566	11026	11993
8	11566	0	14542
9	13057	0	13758
10	0	12958	0

4.4 Transaction cost involved in availing the benefit from Governmental programmes

Transaction costs (TC) are costs involved in making an economic exchange. In the context of Governmental programmes, TCs are those involved in participating and deriving benefit from development programmes. The three components of the TCs are (1) *Search and information costs* incurred in finding about the different Governmental programmes which has different benefit flows; (2) *Bargaining costs* are the contractual costs involved in documentation necessary to obtain the

benefits; (3) *Policing and enforcement costs* are the costs of confirming and obtaining the benefit from Governmental programmes making sure that the Government machinery sticks to the rules and provides services according to the stipulations of the beneficial programme. The TCs include rents paid to official machinery / middlemen while obtaining documents and the benefits from the programme. These are under the ambit of institutional economics where due to bounded rationality, rationality of farmers is limited by the information they have, the cognitive limitations of their mind, and the limited time they have to make decisions. Transaction costs included the (1) value of the time spent in preparing documents and applying for the programme, (2) Expenditure involved in documents to be produced, (3) rents paid towards sanction of the benefit.

Transaction cost incurred by farmers in availing benefit from Governmental programmes in CIA is indicated in table 4.21. In CIA the highest transaction cost of `1775 per family was incurred while applying for Indiramma housing scheme (rural housing scheme) of which 21 per cent is the opportunity cost of labor, 63 per cent is the rent paid and 15 per cent is the documentation cost. Similarly, ` 1030 per family was incurred while applying for NTR colony houses (housing scheme) of which 73 per cent is the rent paid, 24 per cent is the opportunity cost of labor and three per cent is documentation cost. To get subsidy for oil engine, farmers incurred transaction cost of ` 658 of which 56 per cent is opportunity cost of labor and 44 per cent is documentation cost. The average transaction cost per programme per family is ` 368 out of which 43% is due to opportunity cost of time spent by farmer in availing benefit.

Transaction cost incurred by farmers in availing benefit from Governmental programmes in GIA is indicated in table 4.22. In the GIA,

**Table 4.21: Transaction cost incurred by farmers in availing benefit from Governmental programmes in
CIA of Krishna District, 2011**

S. No.	Name of the Programme/Scheme	Time spent in availing the benefit (man-day)	Transaction costs			Total Transaction cost (₹)
			Opportunity cost of labour in availing the benefit (₹)	Expenditure involved in obtaining documents plus associated rent (₹)	Rent paid exclusively for the programme (₹)	
1	White ration card (BPL card)	0.14	17.8 (47)	20 (53)	0 (0)	38
2	MGNREGA	1.00	125 (86)	20 (14)	0 (0)	145
3	Old age pension	0.38	48 (36)	10 (17)	0 (0)	58
4	Disability pension	1.00	125 (93)	10 (7)	0 (0)	135
5	Indiramma housing	3.00	375 (21)	275 (15)	1125 (63)	1775
6	NTR colony houses	2.00	250 (24)	30 (3)	750 (73)	1030
7	SHG loan subsidy	0.70	87 (37)	50 (21)	100 (42)	237
8	Deepam (free one time LPG cylinder and gas connection)	0.44	55 (85)	10 (15)	0 (0)	65
9	Panchayath Water Supply	0.00	0.00	10 (100)	0 (0)	10
10	Rajiv Arogya shree (health insurance)	0.48	60 (75)	20 (25)	0 (0)	80
11	Pashukranthi padhakam.(one milch buffalo per family)	3.00	375 (67.3)	20 (10)	162 (81)	557
12	Feed distribution (from cooperatives)	1.00	125 (93)	10 (7)	0 (0)	135

S. No.	Name of the Programme/Scheme	Time spent in availing the benefit (man-day)	Transaction costs			Total Transaction cost (₹)
			Opportunity cost of labour in availing the benefit (₹)	Expenditure involved in obtaining documents plus associated rent (₹)	Rent paid exclusively for the programme (₹)	
13	Post metric scholarship	0.25	31 (39)	20 (39)	0 (0)	
14	Mid day meal	0.00	0.00	0.00	0 (0)	
15	Crop loss relief fund. (₹ 2400 per farm as a relief due to drought or flood)	1.16	145 (47)	20 (7)	162 (53)	307
16	Subsidized seeds	1.93	241 (60)	162 (40)	0 (0)	403
17	Taiwan sprayer from Agriculture department	1.32	164 (62)	100 (38)	0 (0)	264
18	Diesel engine 50 per cent subsidy up to ₹ 20000 (from Agriculture department)	2.92	365 (56)	292 (44)	0 (0)	658
Average transaction cost per programme per family		1.2	150 (43%)	62 (18%)	135 (39%)	368

Note: Figures in parentheses indicate percentage to the total transaction cost.

**Table 4.22: Transaction cost incurred by farmers in availing benefit from Governmental programmes in
GIA of Krishna District, 2011**

S. No.	Name of the Programme/Scheme	Time spent in availing the benefit (man-day)	Transaction costs			Total Transaction cost (₹)
			Opportunity cost of labour in availing the benefit (₹)	Expenditure involved in obtaining documents plus associated rent (₹)	Rent paid exclusively for the programme (₹)	
1	White ration card (BPL card)	0.29	37 (66)	20 (36)	0	56
2	MGNREGA	0.16	20 (57)	15 (43)	0	35
3	Old Age Pension Scheme	0.6	75 (88)	10 (12)	0	85
4	Widow pension	0.42	53 (73)	20 (27)	0	73
5	Indiramma housing scheme	3	375 (8)	300 (6)	4000 (86)	4675
6	NTR colony houses	4	500 (32)	300 (19)	750 (48)	1550
7	SHG loan subsidy	1.45	182 (38)	195 (41)	100 (21)	477
8	Deepam (free one time LPG cylinder and gas connection)	1	125 (86)	20 (14)	0	145
9	Panchayath Water Supply	0	0 (0)	30 (100)	0	30
10	Rajiv Arogya shree (health insurance)	0.2	25 (71)	10 (29)	0	35
11	Pashukranthi padhakam.(one milch buffalo per family)	3	375 (22)	300 (18)	1000 (60)	1675

S. No.	Name of the Programme/Scheme	Time spent in availing the benefit (man-day)	Transaction costs			Total Transaction cost (₹)
			Opportunity cost of labour in availing the benefit (₹)	Expenditure involved in obtaining documents plus associated rent (₹)	Rent paid exclusively for the programme (₹)	
12	Feed distribution scheme (from cooperatives)	1	125 (93)	10 (7)	0 (0)	135
13	Crop loss relief fund. (₹. 2400 per farm as a relief due to drought or flood)	0.5	62.5 (9)	26 (4)	575 (87)	663
14	Subsidized seeds	2	250 (71)	100 (29)	0	350
15	Subsidies for micro irrigation	5	625 (49)	650 (51)	0	1275
16	NHM	4	500 (38)	800 (62)	0	1300
17	Taiwan sprayer from Agriculture Department	2	250 (71)	100 (29)	0	350
Average transaction cost per programme per family		1.7	211 (27)	171 (22)	402 (51)	759

Note: Figures in parentheses indicate percentage to the total transaction cost.

the highest transaction cost of ₹4675 was incurred on Indiramma housing scheme of which 8 per cent is the opportunity cost of labor, 86 per cent is the rent paid and 6 per cent is the documentation cost. Followed by, ₹1675 was incurred in pashukranthi padhakam programme of which 22 per cent is opportunity cost of labor, 60 per cent is rent paid and 18 per cent is expenditure on documentation. Subsidies for micro irrigation, transaction cost of ₹1275 were incurred of which 49 per cent is opportunity cost of labor and 51 per cent is the expenditure on documentation cost. The average transaction cost per programme per family is ₹759 out of which 51% is due to Rent paid exclusively for the programme by farmer in availing benefit.

Transaction cost incurred by farmers in availing benefit of Governmental programmes in RFA is indicated in table 4.23. In RFA the highest transaction cost of ₹2215 per family was incurred while applying for Indiramma housing scheme (rural housing scheme) of which 17 per cent is the opportunity cost of labor, 72 per cent is the rent paid and 11 per cent is the documentation cost. Similarly, ₹1456.25 per family was incurred while applying for NTR colony houses (housing scheme) of which 52 per cent is the rent paid, 28 per cent is the opportunity cost of labor and 21 per cent is documentation cost. To get subsidy for seeds, farmers incurred transaction cost of ₹450 of which 56 per cent is opportunity cost of labor, and 44 per cent is documentation cost. The average transaction cost per programme per family is ₹494 out of which 43% is due to Rent paid exclusively for the programme by farmer in availing benefit.

A comparison of transaction cost incurred for different programmes between CIA, GIA and RFA indicate that on an average the transaction cost of around ₹310 was spent in CIA areas and ₹760 was paid in GIA and in RFA it is around ₹456. However, the benefits ranged

Table 4.23: Transaction costs incurred by farmers in availing benefit of Governmental programmes in RFA of Krishna District, 2011

S. No.	Name of the Programme/Scheme	Time spent in availing the benefit (man-day)	Transaction costs			Total Transaction cost (₹)
			Opportunity cost of labour in availing the benefit (₹)	Expenditure involved in obtaining documents plus associated rent (₹)	Rent paid exclusively for the programme (₹)	
1	White ration card (BPL card)	0.168	21(51)	20(49)	0	41
2	MGNREGA	0.96	121(86)	20(14)	0	141
3	Old Age Pension Scheme	0.75	94(90)	10(10)	0	103.75
4	Indiramma housing scheme	3	375(17)	240(11)	1600(72)	2215
5	NTR colony houses	3.25	406(28)	300(21)	750(52)	1456
6	SHG loan subsidy	2.2	274(56)	219(44)	0	494
7	Deepam (free one time LPG cylinder and gas connection)	1	125(86)	20(14)	0	145
8	Panchayath Water Supply	0	0(0)	30(100)	0	30
9	Rajiv Arogya shree (health insurance)	0.25	31(61)	20(39)	0	51
10	Crop loss relief fund. (₹. 2400 per farm as a relief due to drought or flood)	1	125(38)	20(6)	183(56)	328
11	Subsidized seeds	2	250(56)	200(44)	0	450
12	Taiwan sprayer from Agriculture Department	3	375(79)	100(21)	0	475
Average transaction cost per programme per family		1.5	183 (37%)	100 (20%)	211 (43%)	494

Note: Figures in parentheses indicate percentage to the total transaction cost.

from ₹ 109 to ₹ 5566 in CIA areas, while ranging from ₹. 109 to ₹ 11566 in GIA and ₹ 109 to ₹ 4500 per family in RFA.

4.5 Efficiency in availing benefit of Governmental programmes in CIA, GIA and RFA

Efficiency in availing benefit of Governmental programmes in CIA, GIA and RFA is indicated in table 4.24. The net return from all sources per family in CIA is ₹ 261756, in GIA it is ₹ 183434 and in RFA it ₹ 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 Governmental programmes. Accordingly the CIA farmer is realizing ₹ 29.97 of net return per rupee of benefit received; the GIA farmer is realizing ₹ 24.39 per rupee of benefit received, while RFA farmer is realizing ₹ 5.20 per rupee of benefit received. Thus, even though the benefits received from the Governmental programmes place the RFA farmer to receive ₹ 11202 which is higher than that received by the CIA farmer ₹ 8732 and GIA farmer ₹ 7518 respectively. The CIA and GIA farmer is receiving 57 per cent and 64 per cent of income from agriculture, 15 per cent and 14 per cent of income from live stock, 28 per cent and 22 per cent of income from off farm activities respectively. While the RFA farmer in c with access to irrigation 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, even though the Governmental benefit received is almost 76 per cent 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.

Table 4.24: Efficiency in availing benefit from Governmental programmes in CIA, GIA and RFA of Krishna District, 2011.

Particulars	Surface water (Canal) irrigated farmers (n=35)	Ground water irrigated farmers (n=35)	Rainfed farmers (n=35)
Size of the holding	9.02	6.75	4.26
Net returns from crops per farm family per year (A)	149509	114359	1683
Net returns from livestock per farm family per year (B)	37904	28810	8672
Net returns from non farm income (wage income etc) per farm family (C)	74342	40264	47971
Net returns per acre of gross cropped area from crops	12042	10666	979
Net returns from all sources per farm family (A+B+C)	261756	183434	58327
Net returns per capita	55863	49894	13171
Net returns per worker*	80364	75141	16871
Net return from Livestock (₹)/ per worker for farm families having live stock	34807	34614	11149
Net return from non farm income (₹)/ working population for farm families having off farming income	29908	76056	16960
Total benefit (₹) 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 developmental programmes per family per year (₹)	270488	190952	69529
Proportion of benefit from Governmental programmes to total net returns from all sources per year per family (%)	3	4	16

Particulars	Surface water (Canal) irrigated farmers (n=35)	Ground water irrigated farmers (n=35)	Rainfed farmers (n=35)
For every Rupee of benefit received by Canal farmer, benefit received by RFA farmer is ₹.	1.28		
For every Rupee of benefit received by groundwater farmer, the benefit received by RFA farmer is	1.49		
For every Rupee of net return earned from all sources by canal farmer the net return earned by RFA farmer is (Re)	0.22		
For every Rupee of net return earned from all sources by groundwater farmer the return earned by RFA farmer is (Re)	0.32		
For every Rupee of net return earned from agriculture, by canal farmer the net return earned by RFA farmer is (Re)	0.011		
For every Rupee of net return earned from agriculture, by ground water farmer the net return earned by RFA farmer is (Re)	0.014		
For every Rupee of net return earned from livestock, by canal farmer the net return earned by RFA farmer is (Re)	0.23		
For every Rupee of net return earned from livestock, by ground water farmer the net return earned by RFA farmer is (Re)	0.3		
For every Rupee of net return earned from off farm, by canal farmer the net return earned by RFA farmer is (Re)	0.64		
For every Rupee of net return earned from off farm, by ground water farmer the net return earned by RFA farmer is (Re)	1.19		

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

Table 4.25: Efficiency in availing benefit from Governmental programmes in CIA, GIA and RFA areas of Krishna District, 2011.

Particulars	Surface water (Canal) irrigated farmers (n=35)	Ground water irrigated farmers (n=35)	RFA farmers (n=35)
Size of the holding	9.02	6.75	4.26
Net returns from crops per farm family	149509	114359	1683
Net return from Livestock (₹)/ farm families having live stock	104421	69228	33447
Net returns from non farm income (wage income etc) per farm family having off farm income (wage income etc)	89724	152112	50880
Net returns from all sources per farm family	261756	183434	58327
For every Rupee of net return earned from livestock, by canal farmer the net return earned by RFA farmer is (Re)	0.32		
For every Rupee of net return earned from livestock, by ground water farmer the net return earned by RFA farmer is (Re)	0.48		
For every Rupee of net return earned from off farm, by canal farmer the net return earned by RFA farmer is (Re)	0.57		
For every Rupee of net return earned from off farm, by ground water farmer the net return earned by RFA farmer is (Re)	0.33		

Note: Efficiency is calculated for farmers who had income and livestock.

Considering the eligibility of applicants with access to irrigation, the BPL status cannot be assigned to farmers with irrigation. However almost all the BPL cards as also other benefits this shows lack of effective governance. BPL cards were last renewed in 2003. over the time income levels of the farmers improved.

Average net returns from livestock and off farm employment of only sample farmers who are having livestock and income from off farm employment is indicated in table 4.25. There was a considerable increase in the net returns from those sources compared to corresponding values in table 4.24.

4.6 Economic dimensions influencing the distribution of benefits from Governmental programmes

The table 4.26 indicates the number of components condensed to be retained for the analysis as six. The information regarding the six possible factors and their relative explanatory power was expressed by their Eigen values. After applying latent root criterion, as the component with Eigen value (column 2, table 4.26) less than one precludes its inclusion, two components are retained. Accordingly, components with Eigen values above one are retained and they explain 65 per cent of the variation. The total variance explained by the components can be compared to the total variation in the set of variables represented by the trace of the matrix. The percentage of trace explained by the first component is 37 per cent and second component is 27 per cent as shown in the last columns of values of table 4.26. The two components retained represents 64 per cent of variance of the six variables. Economic dimensions influencing the distribution of benefits from Governmental programmes are indicated in table 4.27. The two components extracted from PCA (principle component analysis). First component includes the variables such as subsidies from Agriculture Department, land holding

Table 4.26: Economic dimensions influencing the distribution of benefits from Governmental programmes (components)

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	Per cent of Variance	Cumulative per cent	Total	Per cent of Variance	Cumulative per cent	Total	Per cent of Variance	Cumulative per cent
1	2.23	37.29	37.29	2.23	37.29	37.29	2.23	37.22	37.22
2	1.61	26.95	64.25	1.61	26.95	64.25	1.62	27.02	64.25
3	0.70	11.76	76.01						
4	0.60	10.08	86.09						
5	0.47	7.88	93.98						
6	0.36	6.01	100.00						

Extraction Method: Principal Component Analysis.

Note: variables of components which are explaining grater variance are given in table 4.27.

per family and income from agriculture. Second component includes (dummy for) type of farmer, total number of programmes and employment subsidy. Variables which are not extracted in two components are not influencing the variance in data (refer 3.3.3) In the first component all variables are having positive association among themselves. In the second component, the dummy variable for type of farmer is negatively associated with the number of programmes and employment subsidy. Land holding per farm family is having the highest factor loading of 0.84 in the first component followed by employment subsidy with 0.79 in the second component and total number of programmes in the second component with 0.78 and subsidies from agriculture department 0.75. Whereas in the case of dummy for type of farmer (0 = RFA farmer, 1 = CIA farmer, 2 = GIA farmer) the factor loading is negative 0.586 which indicated that, as accessibility to irrigation increases, the total benefit received by farmers from Governmental programmes will reduce.

4.7 Factors influencing differential distribution of benefit among different groups of farmers

This study estimates the relationship between the total benefits received by participating in Governmental programmes with the net returns realized by farmers, the transaction cost incurred during the process of receiving benefits, the number of programmes where farmers sought the benefits, the access to canal / groundwater irrigation. The study also estimates the impact of surface water irrigation and groundwater irrigation on the total benefits received by farmers. The results are as under:

The linear model in table 4.28 explaining the relationship between the benefits received from Governmental programmes and explanatory

Table 4.27: Economic dimensions influencing the distribution of benefits from Governmental programmes (variables)

Variables	Component	
	1	2
Subsidies from agriculture department (x_2)	0.748	
Dummy for type of farmer (x_{13})		-0.586
Land holding per family (x_{14})	0.843	
Income from agriculture (x_{16})	0.787	
Total number of programmes (x_9)		0.779
Employment subsidy (x_5)		0.791

Table 4.28: Linear estimates of benefits received from various Governmental programmes

Explanatory variables	Regression Coefficients	t Stat	Average value of explanatory variables
Intercept	1260	1.24	NA
Transaction cost incurred per farm family to receive benefit	0.20	1.54	1383
Number of programmes participated per farm family	1558**	9.48	6
Net returns per farm ($\bar{y}$)	0.014**	6.9	88263
D1 = Dummy variable for access to canal irrigation (1,0)	-4864**	-7.91	NA
D2 = Dummy variable for access to groundwater irrigation (0,1) (bore well) (the category 0,0, represents RFA farmers)	-3744**	-6.11	NA
R Square, n = 105 farmers	0.69**		NA
Adjusted R Square	0.67		NA
F	43.70		NA

**Significant at 1 per cent

Table 4.29: Estimation of benefits received from various Governmental programmes by using Multiplicative model

Explanatory variables	Regression Coefficients	t statistic
Intercept	7.30**	35.38
Ln X1 = Natural Log of Transaction cost	-0.02	-1.05
Ln X2 = Natural Log of Number of programmes	1.18**	11.08
Ln X3 = Natural log of net returns per farm	-0.001	-0.18
D1 = Dummy variable for access to canal irrigation (1,0)	-0.29**	-4.22
D2 = Dummy variable for access to groundwater irrigation (0,1) (bore well) (the category 0,0, represents RFA farmers)	-0.26**	-3.72
R Square	0.66**	
Adjusted R Square	0.64	
<i>F</i>	37.91	

**Significant at 1 per cent

variables indicated that the transaction cost incurred by farmers in the process of receiving benefits from Governmental programmes, the number of programmes where farmers participated in receiving benefits and the access to ground water irrigation were the key determinants of the total benefits received by farmers from Governmental programmes.

The model in table 4.28 had significant R^2 of 0.69, with F value of 43.7. The linear model relating benefits with explanatory variables indicating that the RFA farmers gets at least ` 1260 as the benefit. The CIA farmer loses ` 3604 of benefit and ground water farmer loses ` 2484, if he or she does not participate in Governmental programmes. The explanatory variables such as net returns, total number of programmes participated, access to irrigation are significant and influencing benefit received. For every one rupee of transaction cost incurred the benefit increases by ` 0.2. For every increase in Governmental programme in which the farmers participate the benefit received increases by ` 1558. For every one rupee increase in net returns the benefit from Governmental programme increase by ` 0.01. This coefficients though statistically significant but not economically significant as their influence on benefit received is very low. The multiplicative model employed to find the cause and effect relationship between the benefits from Governmental programme and explanatory variables indicated that the minimum benefit received by RFA farmer is ` 1139. The minimum benefit received by canal farmers is ` 1102. And that by the ground water farmer is ` 1141. For one per cent increase of number of programmes participated benefit increases by 1.18 per cent and if he is accessible to canal irrigation and groundwater irrigation increases by one per cent benefit decreases by 0.29 per cent and 0.26 per cent. Since the multiplicative model does not allow for negative coefficients of logarithmic variables and as the coefficient of transaction cost, net returns per farm and dummy variables for access to irrigation are with negative coefficients. These variables are not interpreted.

4.8 Relative share of Governmental programmes

The most popular developmental programmes are (1) drinking water supply to farmers and ration card (PDS). However most of the farmers wish to have ration card also as a form of Identity. The benefit per farm family from ration card is around ` 3505 per year worth of food grains which amounts to ` 292 per month and around ` 58 per capita per day for a family size of five persons. Thus, ration card and drinking water supply are the most popular of all the developmental programmes in Krishna district. Ration card benefits are derived by 99 per cent of the sample farmers while drinking water supply benefit is derived by 100 per cent of sample farmers. In case of Crop Loss Relief Fund and interest subsidy under SHG benefit is derived by 87 per cent and 75 per cent of sample farmers.

However, for other programmes the proportion of beneficiaries falls drastically. For instance, subsidies for seeds is availed by 46 per cent of the sample farmers, followed by Taiwan sprayer subsidy (33%), MGNAREGA (32%), Deepam (27%), old age pension (23%), Indiramma housing scheme (17%), Rajiv Arogya shree (16%), subsidy for oil engine (13%), NTR colony houses (8%) cattle feed distribution from cooperatives (7%), pashu kranthi padhakam (4%), subsidies for micro irrigation (2%), disability pension (1%), mid day meal scheme, fee reimbursement. Thus, the Government still needs to herald crucial programmes such as subsidy for micro irrigation, pashu kranthi padhakam, cattle feed distribution, disability pension and Indiramma housing scheme. Though these programmes have found a great deal of media attention, in reality according to this study, there have been few takers. This clearly shows that the RDPR and other development departments have still a long way to go in serving the rural areas with their mandate as the reach is far from satisfactory.

DISCUSSION



CHAPTER V

DISCUSSION

5.1 Socio-Economic characteristics of the sample respondents

This study deals with the comparative analysis of the utilization of benefits of Governmental programmes/Schemes by farmers in Andhra Pradesh in canal irrigated area (CIA), groundwater irrigated area (GIA) with those in rainfed area (RFA) using the field data from a representative sample of 35 farmers each from the three areas.

In the case of CIA, GIA and RFA around 85 per cent of the farmers belongs to 'general category' of caste. The market value of land ranged between 8 and 10 lakhs in GIA and in RFA ranges between 3 and 5 lakhs. The average size of holding lies between 4.26 and 9.02 acres. The proportion of joint family is around 40 per cent among CIA farmers, 23 per cent among GIA farmers and 34 per cent among RFA farmers. In CIA and RFA almost 30 per cent of the house-holds have land in the name of female member of the household, in GIA it is around 23 per cent.

About 83 per cent and 63 per cent of the households in CIA and GIA are having she buffaloes respectively where as in RFA 37 per cent of the households are having she buffaloes which indicate that areas with access to irrigation and dairy development go hand in hand which lead to integrated farming systems in irrigated areas.

5.2 Farmers benefiting from local organizations

In CIA, the proportion of farmers benefitting from local organizations (Self help group) is 80 per cent and the loan obtained is ` 23464. In RFA 94 per cent of farm families are benefited in taking loan from SHG and the loan obtained is around ` 20212 per member. In GIA 66 per cent of the families are members in self help groups and obtained

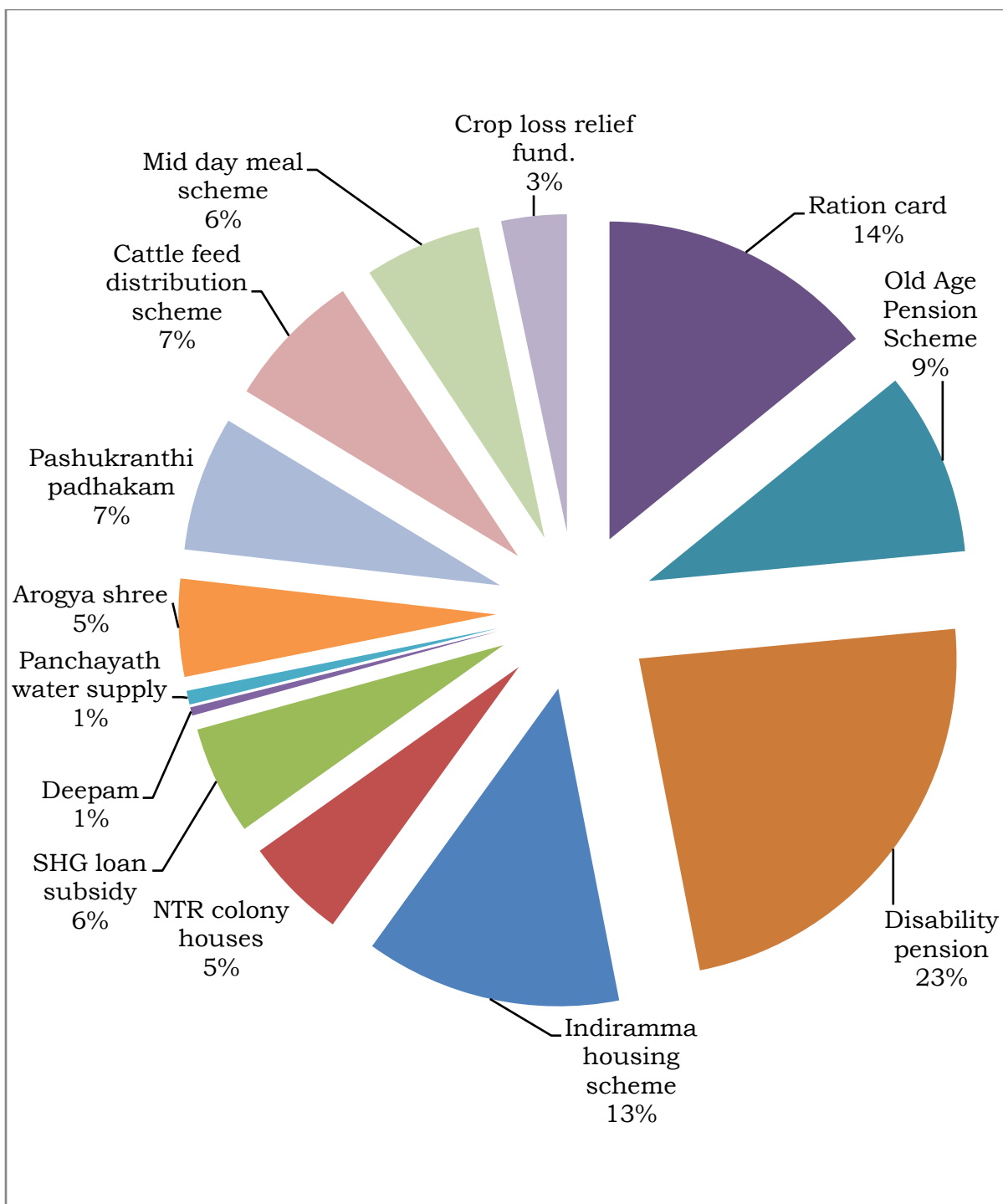


Fig. 5.1 Benefits to farmers from Governmental programmes in canal irrigated areas of Krishna District, 2011

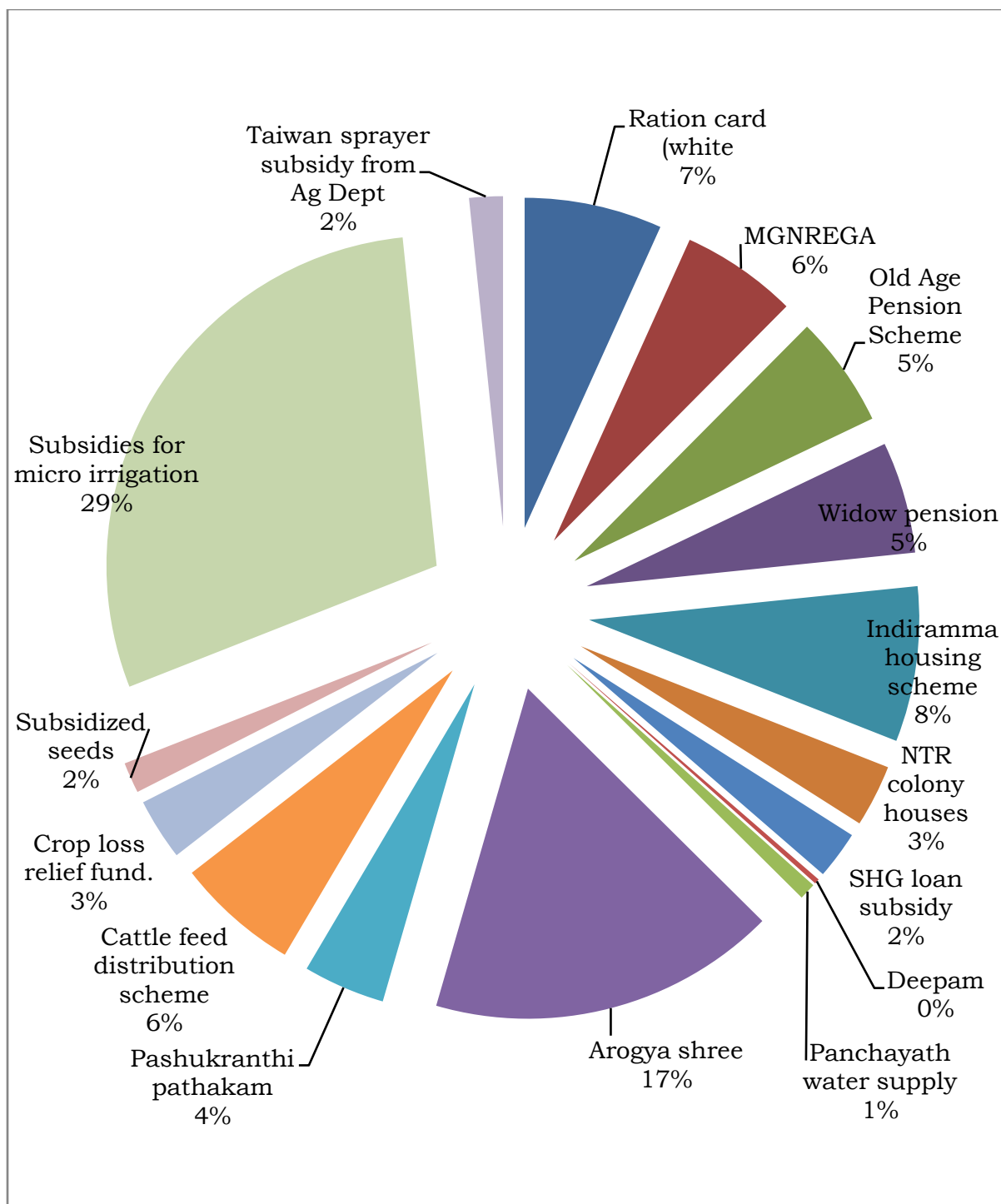


Fig. 5.2 Benefits to farmers from Governmental programmes in GIA of Krishna district, 2011

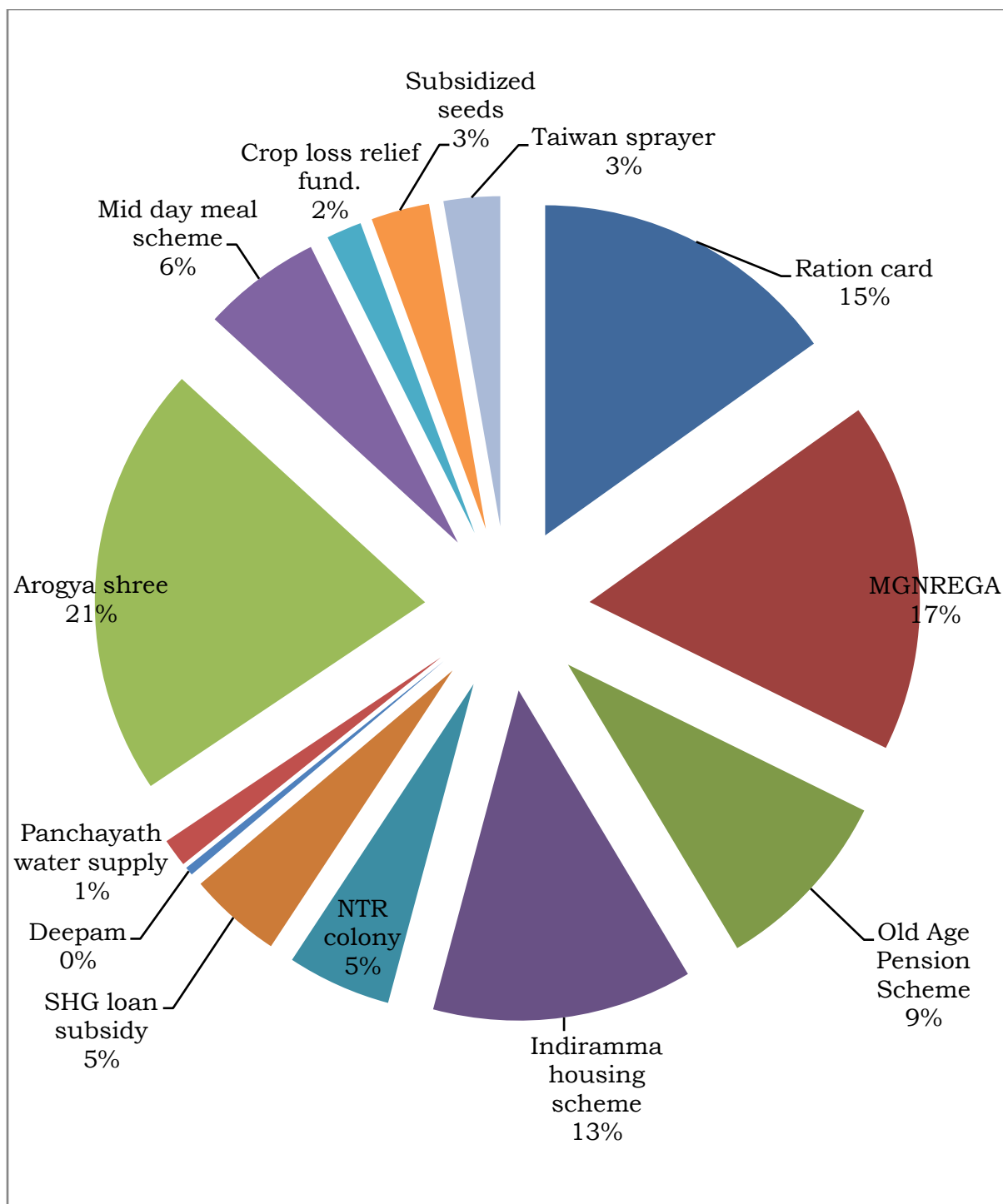


Fig. 5.3 Benefits to farmers from Governmental programmes in RFA of Krishna district, 2011.

loan to the tune of ` 18087 and their savings is almost equivalent to 50 per cent of the loan. Due to availability of Loans at low interest rate, in all the three regions, most of the farm women are participating in SHG activities.

5.3 Farmers deriving benefit from Governmental programmes

It is hypothesized that rainfed farmers are benefiting more from Governmental 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 the 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' cooperative 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 benefitting from

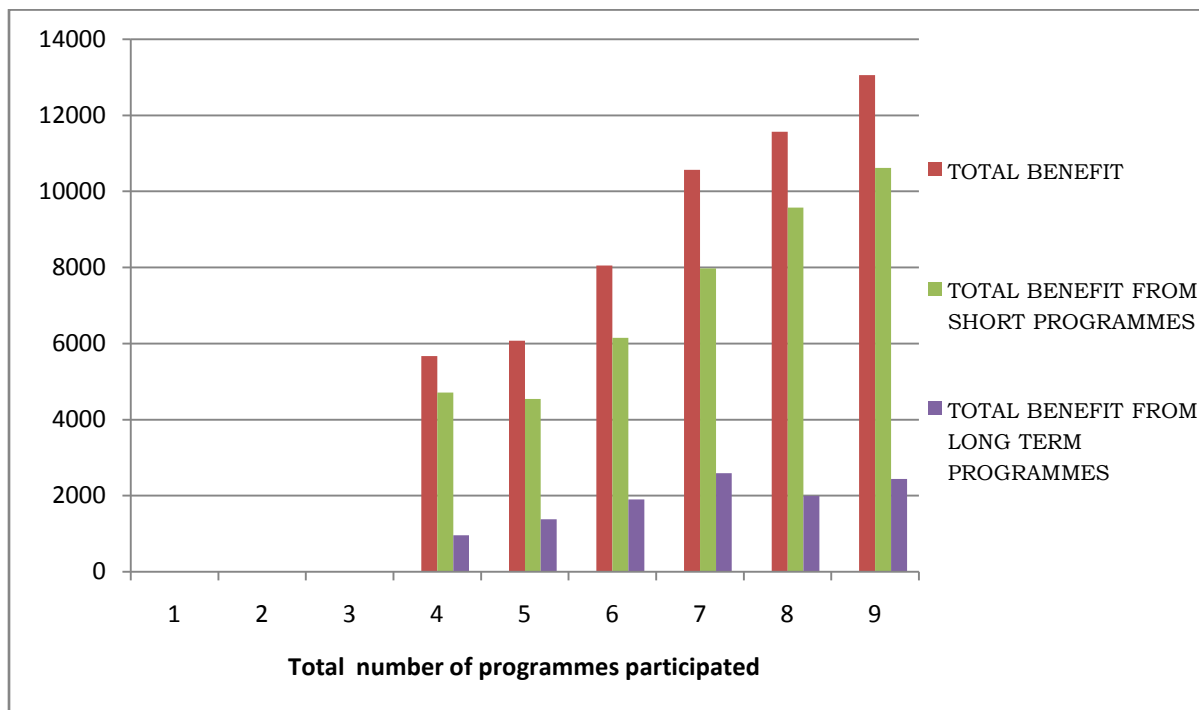


Fig. 5.4: Benefits received by farmers in CIA of Krishna District, 2011

In CIA, short term benefits are contributing more to the total benefits compared to the long term benefits. Number of programmes participated by CIA farmers ranges from 4 to 9.

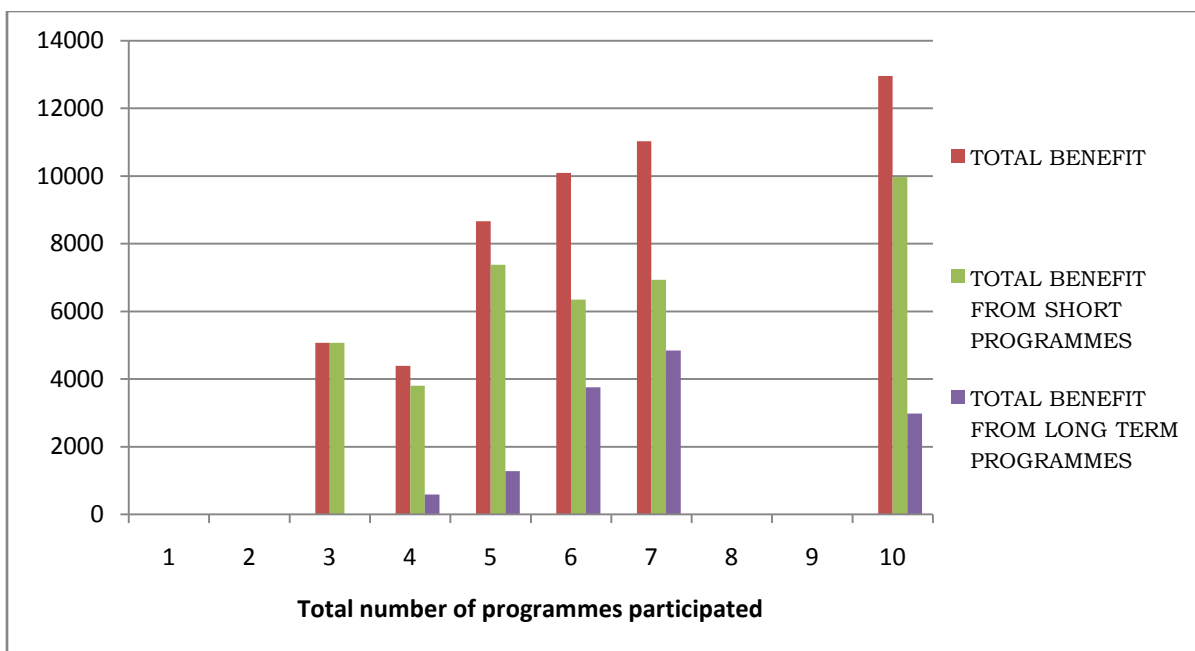


Fig. 5.5: Benefits received by farmers in GIA of Krishna District, 2011

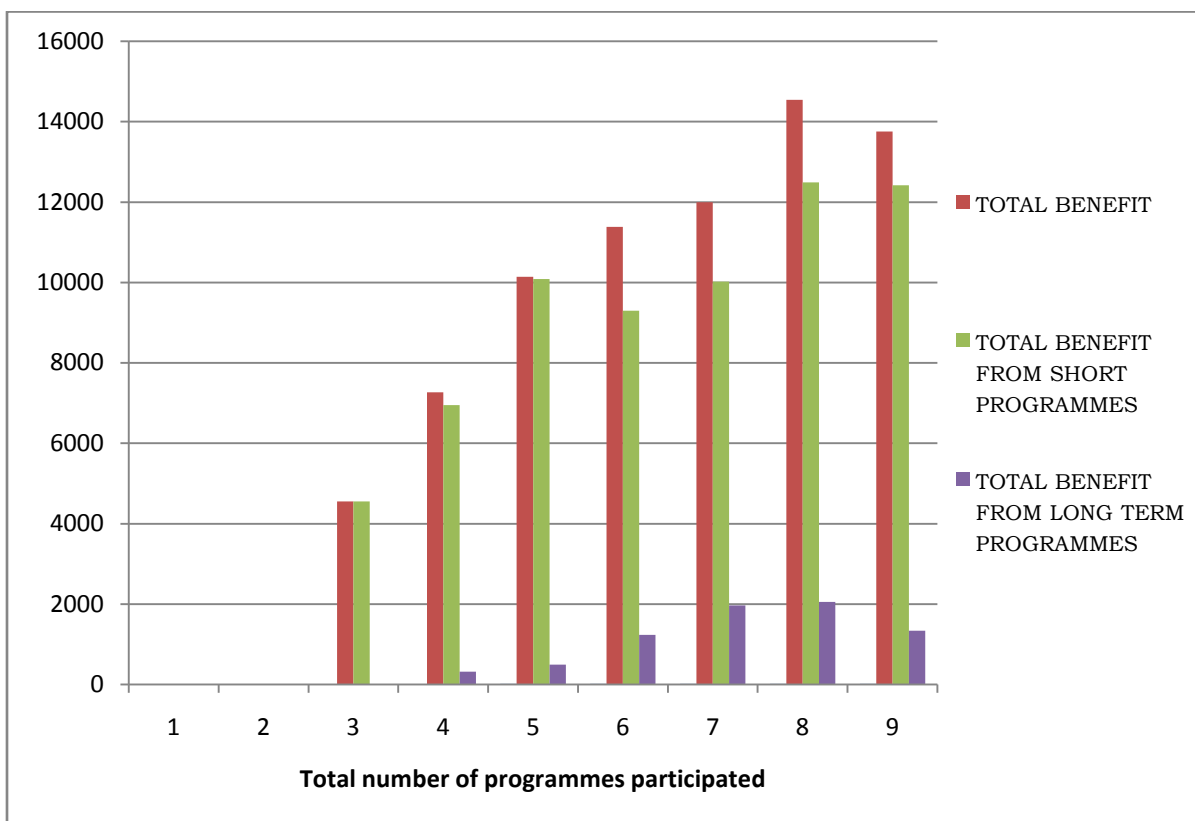


Fig. 5.6: Benefits received by farmers in rainfed areas of Krishna District, 2011.

MGNAREGA due to disinterest towards the programme. A larger number of RFA farmers are participating in MGNREGA 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.

There is a less gap between the beneficiaries and the eligible farmers for most of the programmes like mid day meals, Crop Loss Relief Fund and post metric scholarships. This high reach of the programmes is due to low transaction cost and proper governance in implementation. In the linear model (Chapter IV, Table 4.27), the transaction cost (as an explanatory variable) is economically insignificant in influencing the size of the total benefit. But in the case of subsidized seeds and pasukranthi padhakam, there was huge gap between the beneficiaries and eligible farmers. The reasons for poor reach of subsidized seeds among the farmers are the high transaction cost involved in waiting to receive the benefit. This shows that subsidized seeds should be available at the right time in the right quantity. The gap in extending the benefit of seed subsidy is 89 per cent in RFA and. In the case of pasukranthi padhakam it is 89 due to high transaction costs and lack of awareness about the programmes.

In GIA, short term benefits are contributing more to the total benefits compared to the long term benefits. Number of programmes participated by GIA farmers ranges from 3 to 7 and upto 10.

In RFA, short term benefits are contributing more to the total benefits compared to the long term benefits. Number of programmes participated by RFA farmers ranges from 3 to 9.

5.4 Transaction cost involved in availing the benefit from Governmental programmes

It is hypothesized Transaction costs of receiving the benefit deter the spread of benefits of Governmental programmes. The transaction cost ranged from one per cent of the benefit (micro irrigation subsidies) to 53 per cent of the benefit (subsidized seeds). Most other programmes had transaction costs which formed around 10 per cent of the total benefit. The transaction cost seems to be modest around 10 per cent, incurred after the farm family is identified as beneficiary.

However, in order to get identified as beneficiary of any developmental programme, there is a substantial transaction cost to be incurred. This transaction cost of getting identified as beneficiary family has not been estimated in this study, as that aspect forms another major study and hence is a limitation. The transaction costs arise also because the resources for each programme are scarce and all the beneficiaries in a given area cannot be covered in any reasonable time frame. Hence those farmers who are in constant touch with the Panchayath members, MLAs, local politicians will have a great probability of being chosen as a beneficiary. This is a major element of transaction cost, which is difficult to measure, but it exists, since farmers without 'contacts' with local leaders, politicians are the most likely the ones to be excluded from receiving the developmental grants, especially those which are of long

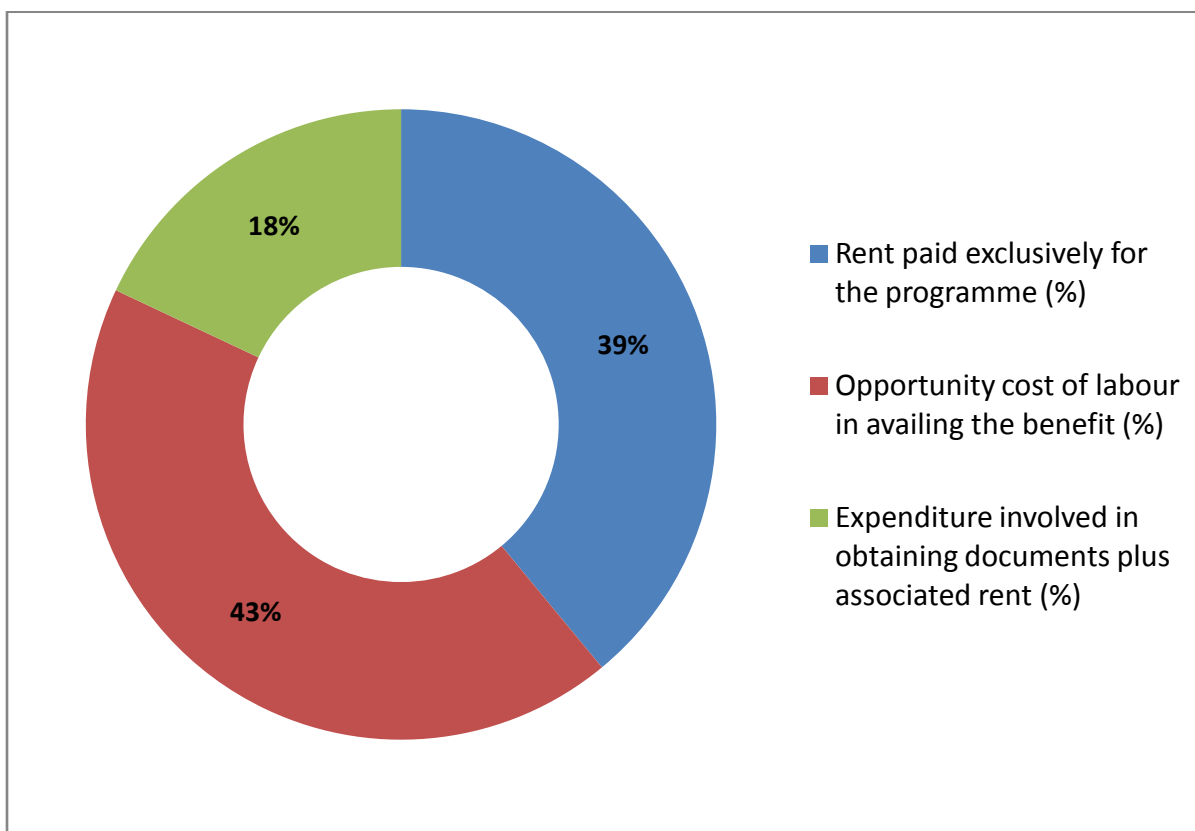


Fig. 5.7: Transaction cost incurred by CIA in Krishna District to derive benefit from Governmental programmes

The rent paid by farmers forms a substantial proportion of the transaction cost in CIA and the next highest is the opportunity cost of labor spent in availing the credit. This shows that ‘follow up’ costs are becoming expensive even in distribution of benefits from developmental programmes.

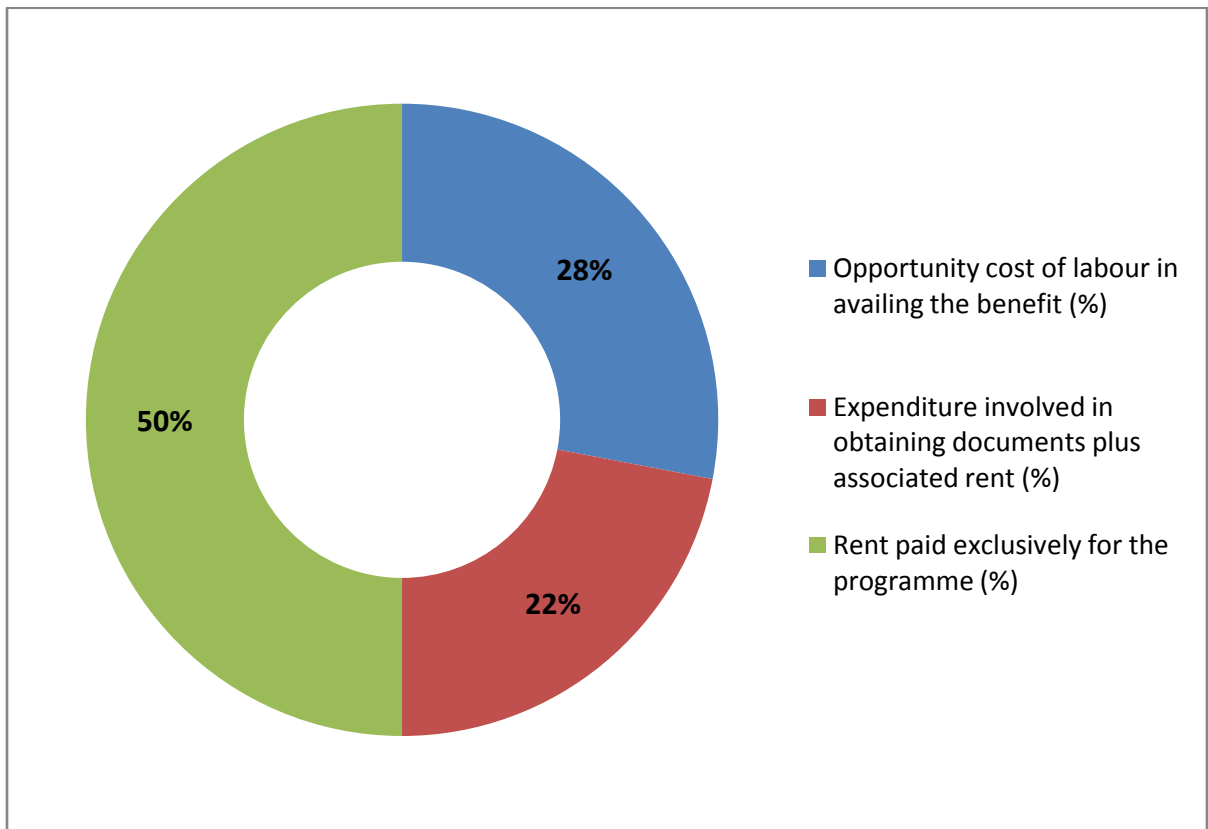


Fig. 5.8: Transaction cost s incurred by GIA in Krishna district, to derive benefit from Governmental programmes

In GIA, the rents paid form a mammoth 50 percent of the transaction cost and is higher than the rents paid in CIA.

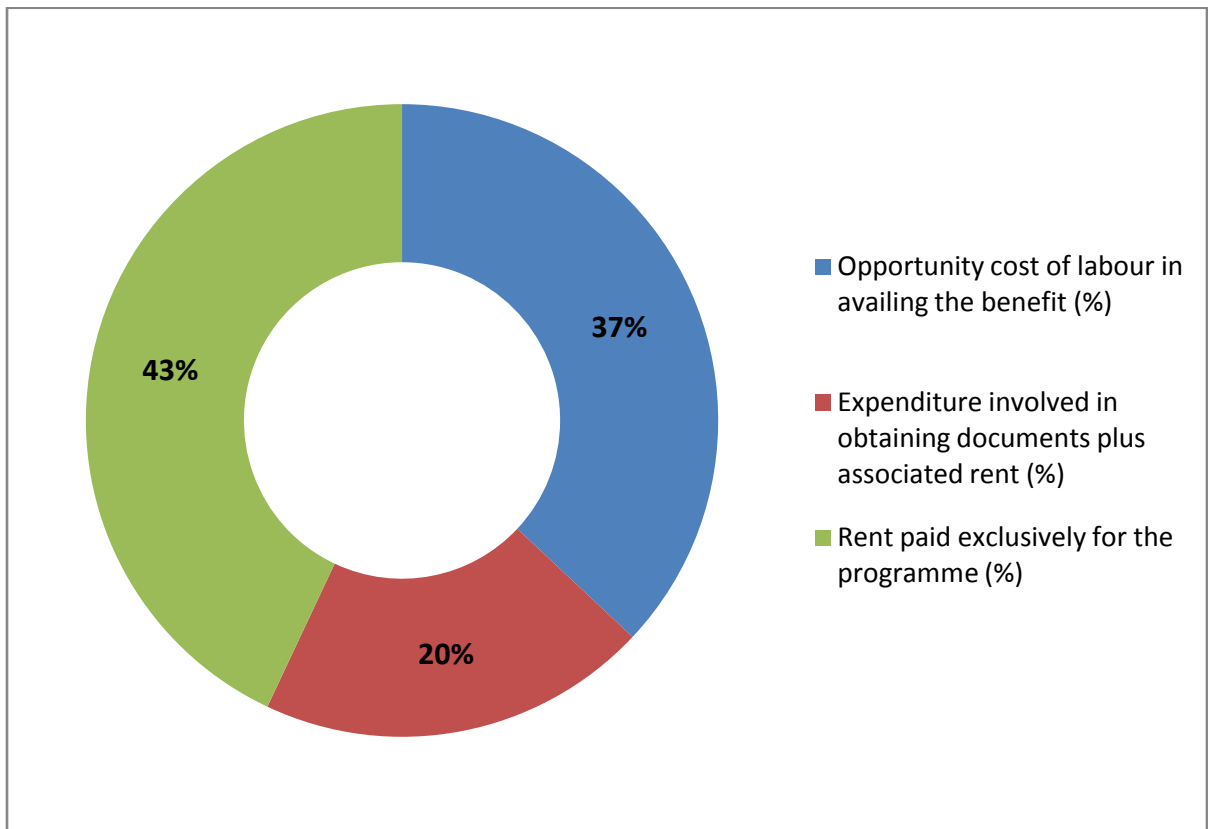


Fig. 5.9: Transaction costs incurred by rainfed farmers in Krishna district to derive benefit from Governmental programmes

The rents paid form around 43 percent of the transaction cost, the largest proportion of transaction cost incurred by rainfed farmers. The next lower item is the opportunity cost of labor or the follow up costs.

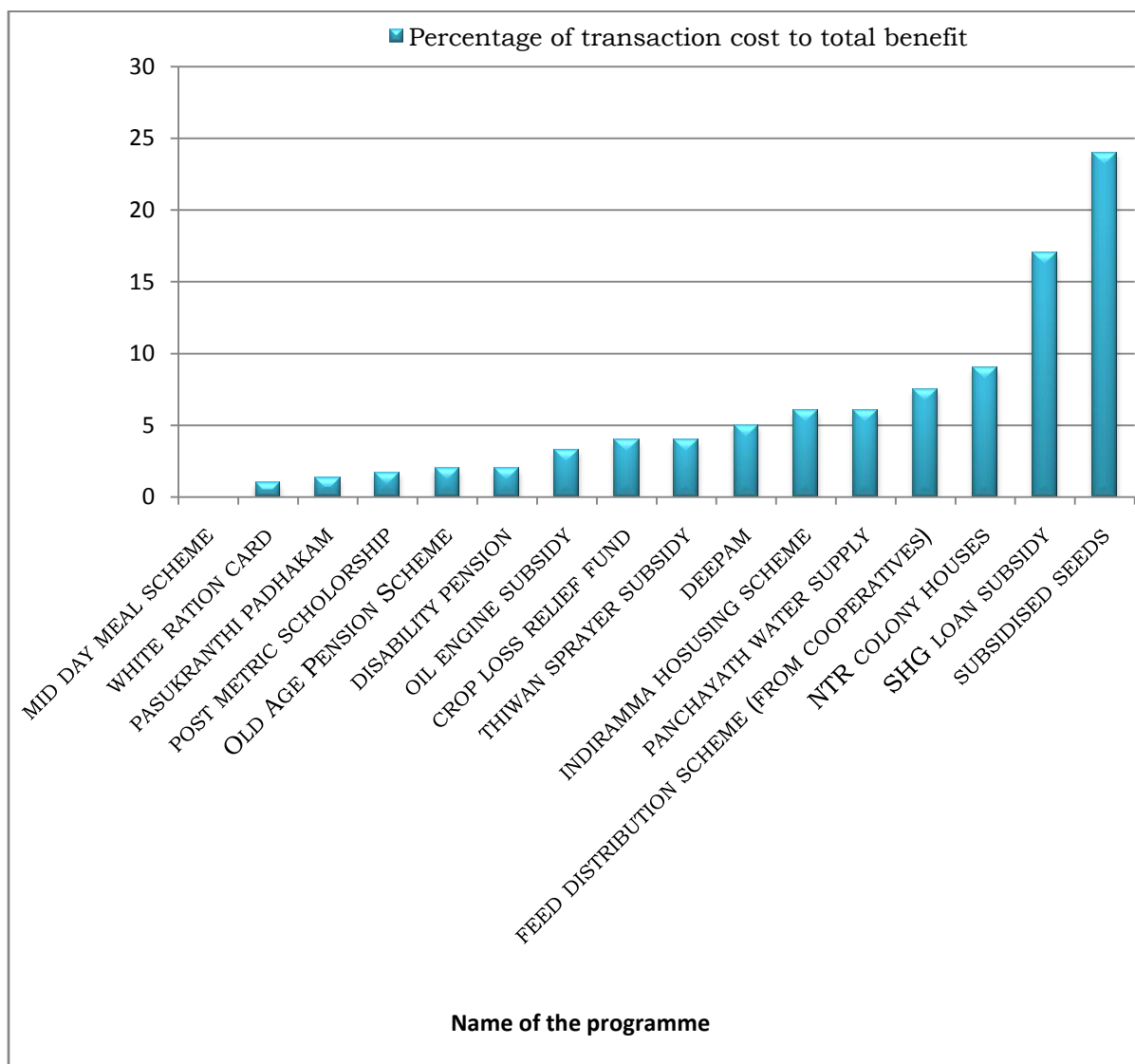


Fig 5.10: Transaction cost as a percentage of total benefit from Governmental programmes in CIA of Krishna

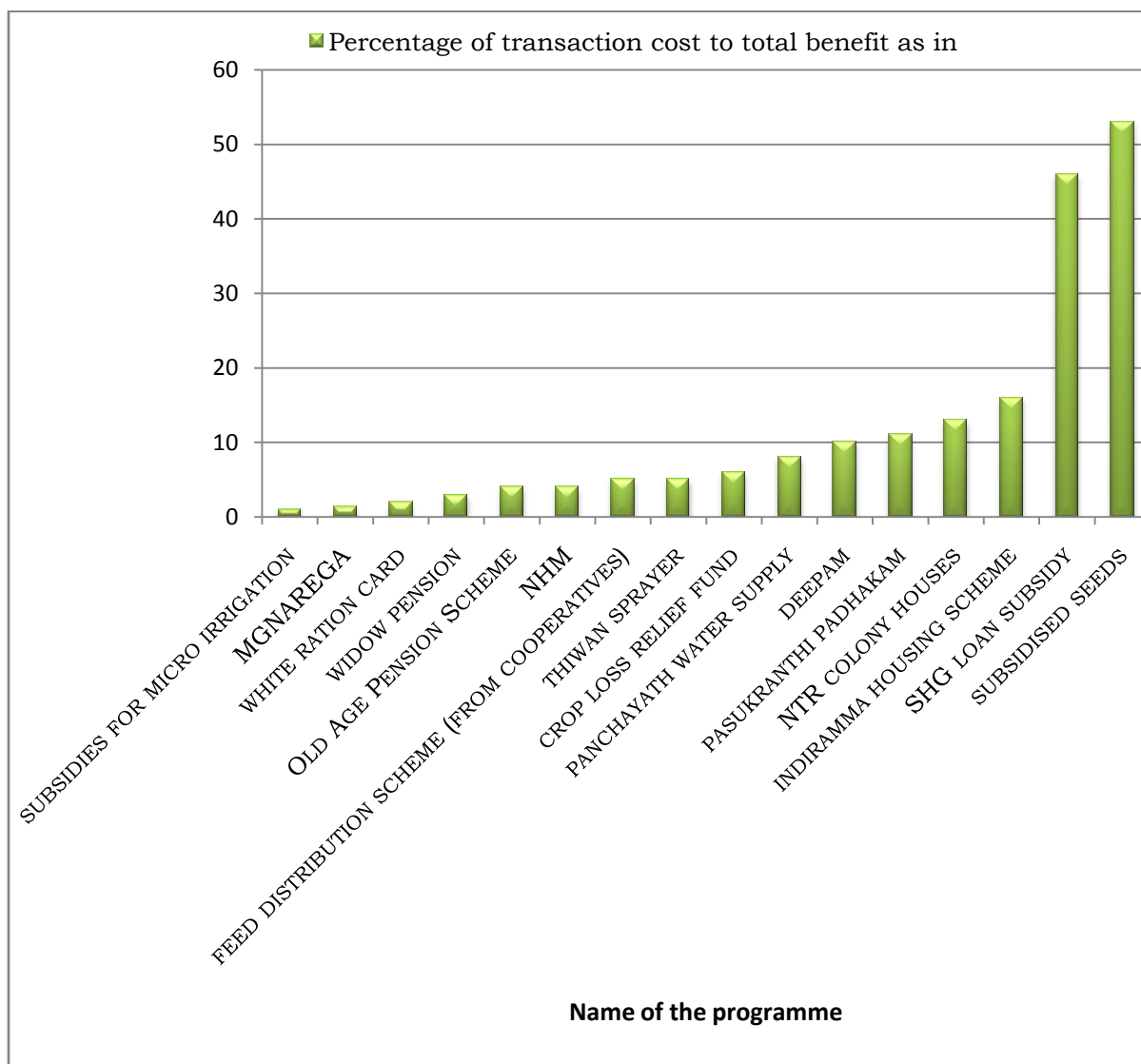


Fig 5.11: Transaction cost as a percentage of total benefit from Governmental programmes in GIA of Krishna district, 2011

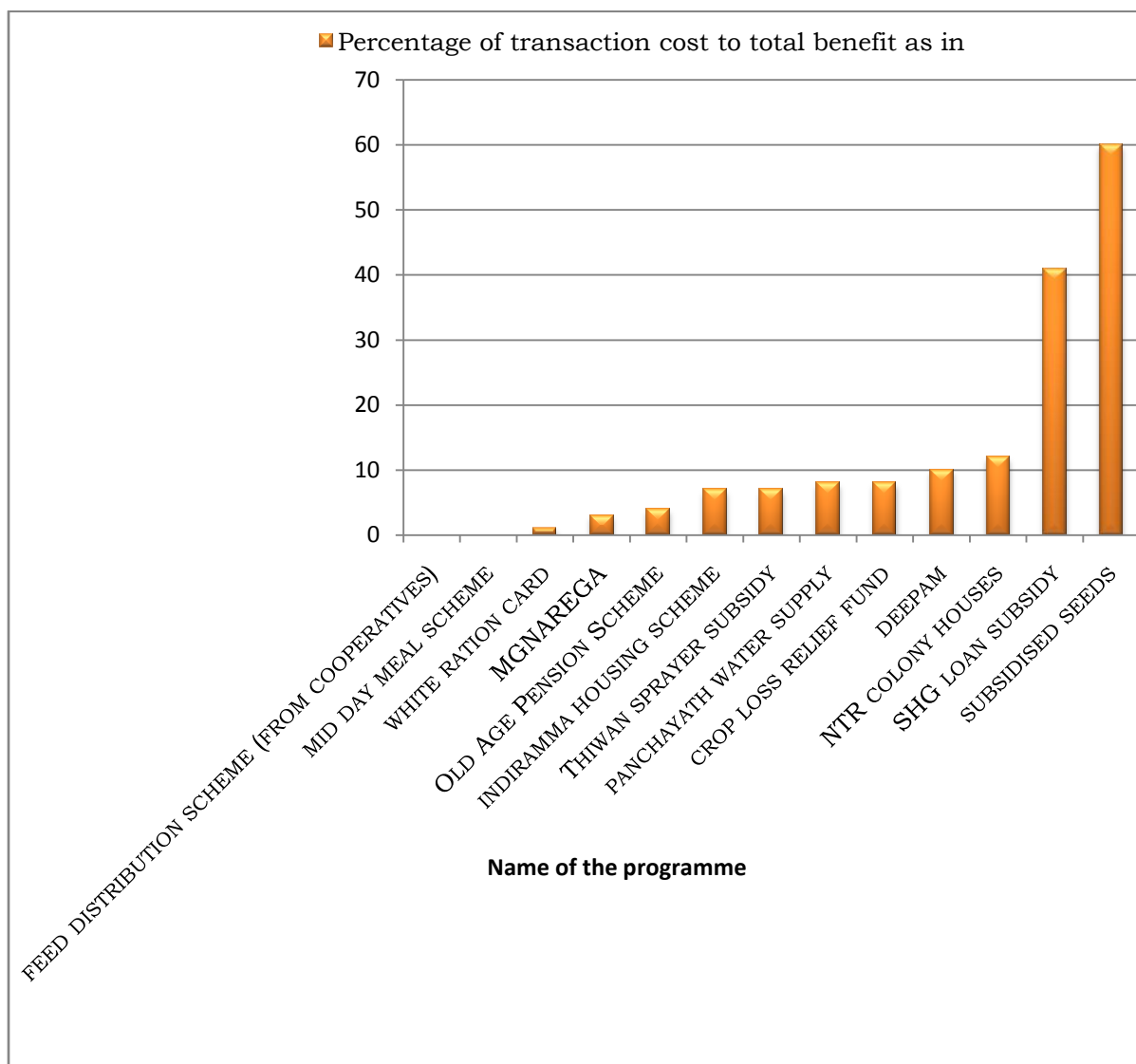


Fig 5.12: Transaction cost as a percentage of total benefit from Governmental programmes in rainfed areas of Krishna district, 2011

term nature such as housing grants (Indiramma housing scheme, NTR colony houses, farm implements subsidy and so on). Hence even though the transaction cost as a proportion of benefits appears to be a miniscule in this study, the TC considered is only the tip of the iceberg of the total transaction cost, which also should include the weightage for the time and efforts involved in knowing the local leaders, politicians and panchayath members and in convincing them regarding the allotment of benefits.

In CIA, the least transaction cost is in the case of mid day meal, ration card, pashukranthi padhakam, while the highest transaction costs are incurred in obtaining benefits from STR colony houses, SHG loan subsidy and subsidized seeds.

In GIA, the transaction costs are the least in receiving benefits for micro irrigation, participation in MGNREGA and the highest TCs are while availing SHG loan subsidy and in obtaining subsidized seeds.

In the Case of RFAs, similarly the lowest TCs are in feed distribution scheme for cattle from cooperatives, while the highest TC is in the case of distribution of subsidized seeds. The subsidized seeds impose the largest TCs across all the classes of farmers. This demonstrates that the Department of Agriculture should equip with personnel as well as seed material for major crops for subsidy purposes.

5.5 Efficiency in availing benefit of Governmental programmes in CIA, GIA and RFA

The net returns from agriculture and livestock form 72 per cent in CIA and 78 per cent in GIA whereas off farm income contributes 28 per cent and 22 per cent of the total net returns in case of CIA and GIA respectively. In RFA net returns from agriculture and livestock form 18 per cent and off farm income contributes around 82 per cent. This

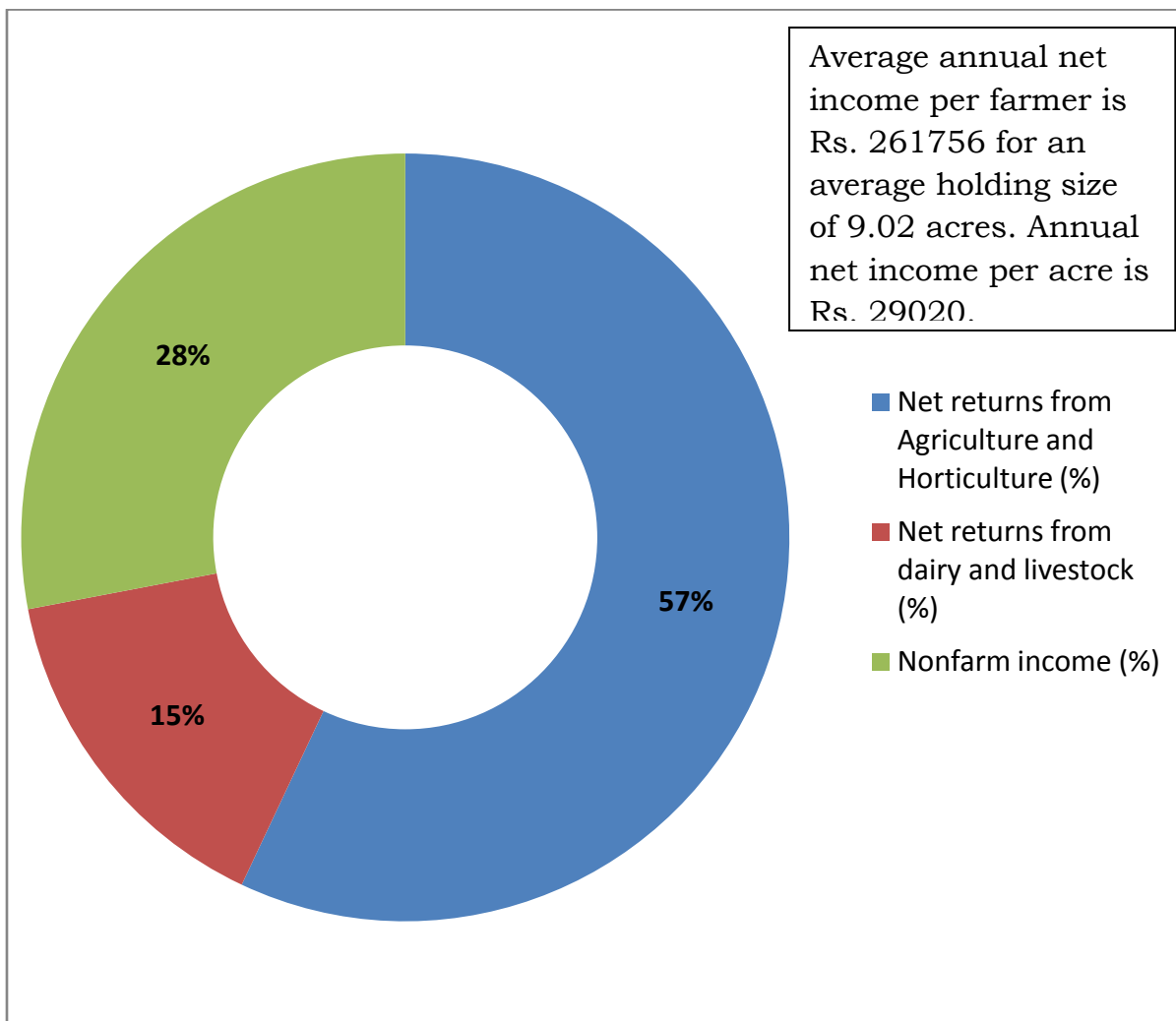


Fig. 5.13: Net income per family from all sources in CIA of Krishna district, 2011

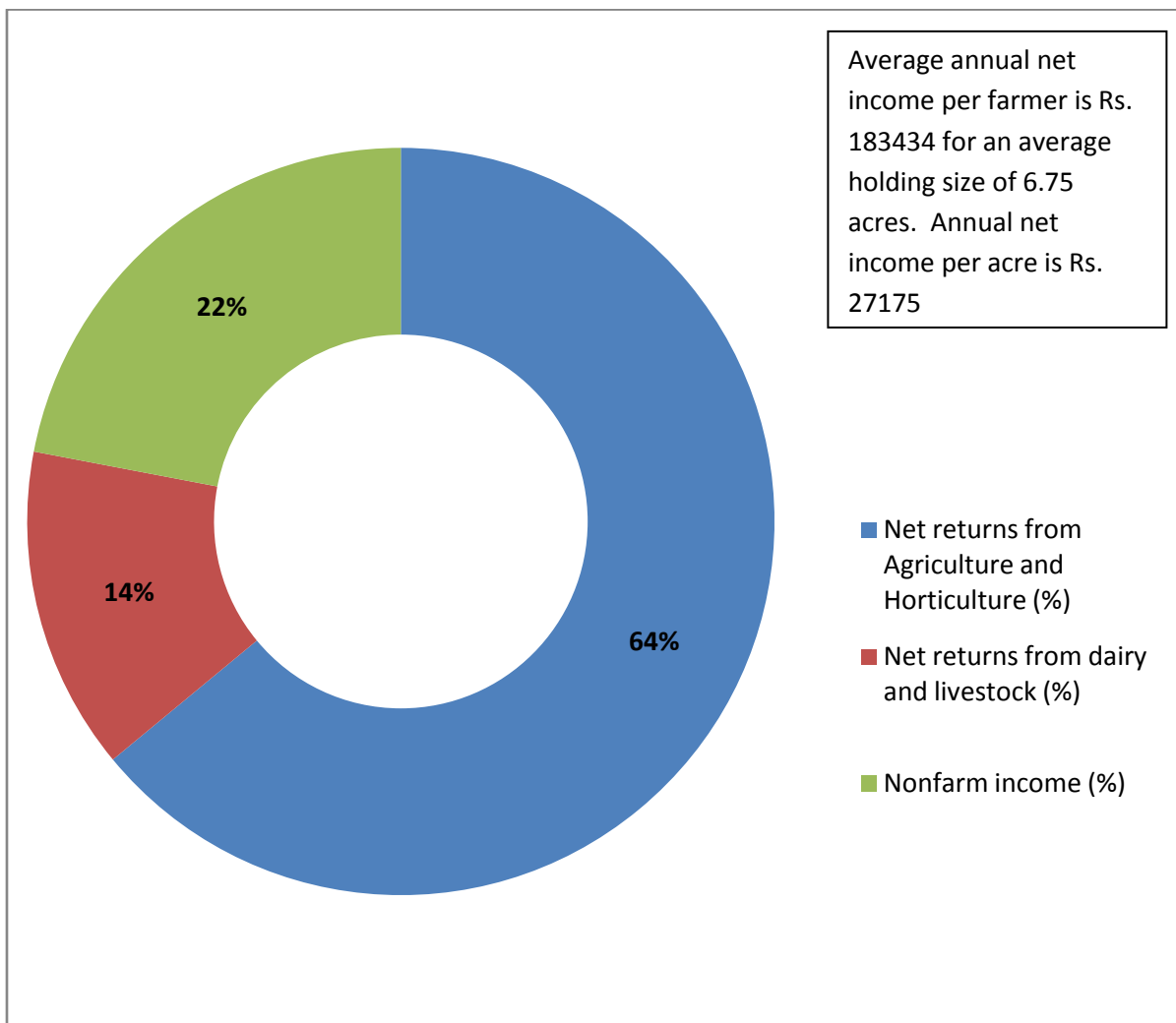


Fig. 5.14: Net income per farm from all sources in GIA of Krishna district, 2011

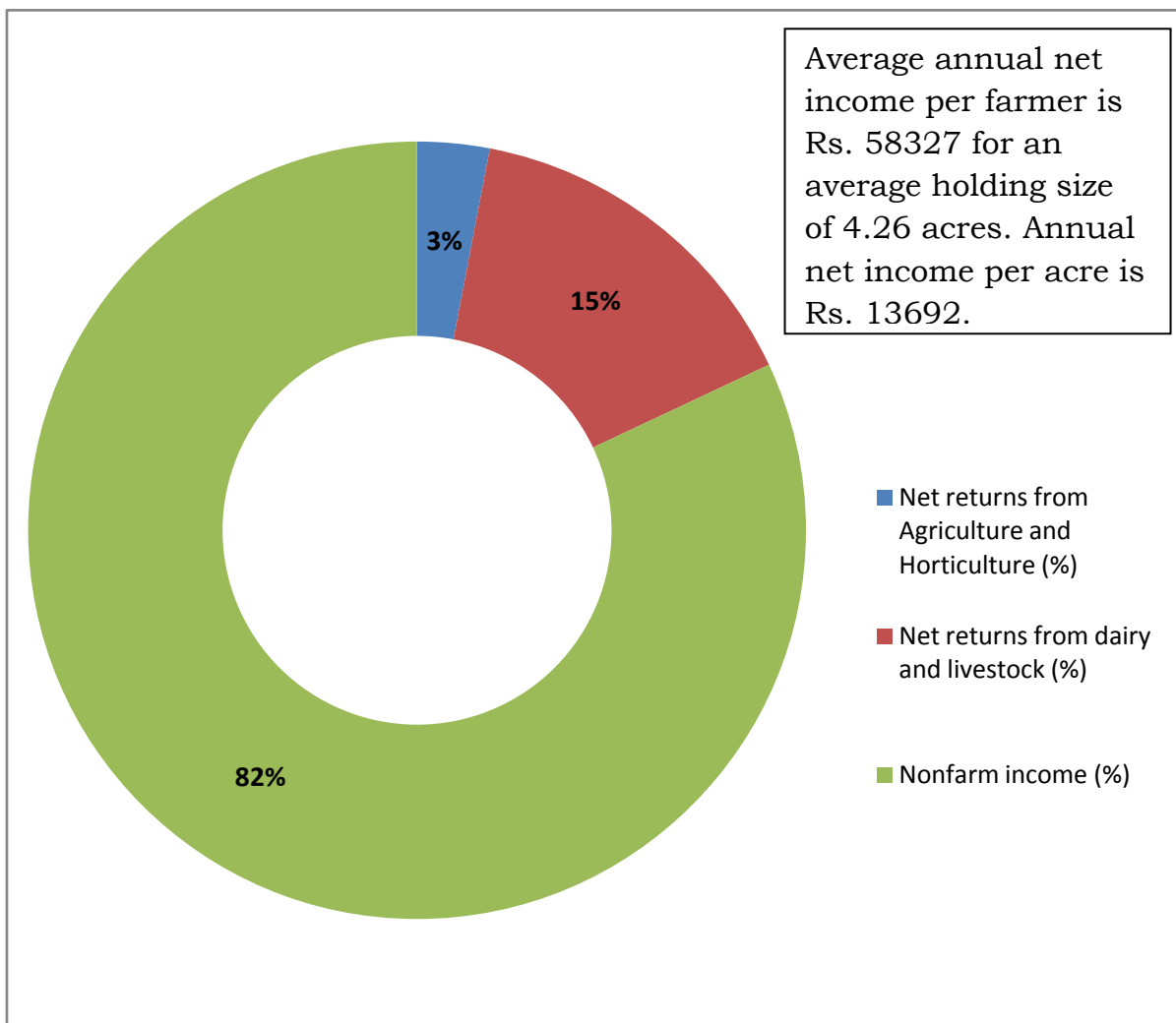


Fig. 5.15: Net income per farm from all sources in RFA of Krishna district, 2011

difference of income proportion from various sources among irrigated and rainfed farmers is due to vulnerability of RFA farmers to vagaries of weather as they are highly depend on rainfall. Hence RFA farmers obtain highest proportion of income off farm such as wage income so on.

The efficiency ratios (Table 4.23) are indicative of the degree of vulnerability of RFA farmers in relation to CIA and GIA farmers. The RFA farmer gets a modest one paisa net return from agriculture per every rupee of the net income earned by CIA and GIA farmer. The RFA farmer earns a modest net return of Re. 0.22 per rupee of net return earned by CIA farmer, and Re. 0.31 per rupee of net return earned by GIA farmer. This shows the high degree of vulnerability of RFA farmer in relation to CIA and GIA farmer. The RFA farmer is receiving a raw deal in terms of benefits received from Governmental programmes. The total benefit received by RFA farmers is higher than the CIA and GIA farmers from similar programmes. In (chapter IV, Table 4.19) represents that total benefit received by rainfed farmers is more compared to the CIA and GIA farmers from same number of programmes.

On an average CIA farmer receives benefit of ` 8732 from six Governmental programmes out of 39 listed Governmental programmes. A GIA farmer receives an average benefit of ` 7518 from five Governmental programmes. A RFA farmer receives an average benefit of ` 11202 from six developmental programmes. According to study conducted by Channaveer (2011) BPL farm family with irrigation source receives benefit of ` 15504 and BPL farm family without irrigation source will receive a benefit of ` 16137.

5.6 Economic dimensions influencing the distribution of benefits from Governmental programmes

The important variables which are explaining the variance in total benefit are land holdings per family, employment subsidy, total number

of programmes and subsidies from agriculture, dummy for type of farmer (0 = RFA farmer, 1 = CIA farmer, 2 = GIA farmer) . All these variables are having positive association with total benefit received except the type of farmer dummy as the accessibility to irrigation increases total benefit from Governmental programmes decreases.

5.7 Factors influencing differential distribution of benefit among different sample of farmers

To know the relationship between total benefit by farmers from governmental programmes and explanatory variables in sample area the linear and multiplicative models were used.

1. Linear model is: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 D_1 + \beta_5 D_2$
2. Multiplicative model is $\ln Y = \ln \gamma + \delta_1 \ln X_1 + \delta_2 \ln X_2 + \delta_3 \ln X_3 + \delta_4 D_1 + \delta_5 D_2$

The lessons from both linear and multiplicative models explaining the relationship between the benefits derived from governmental programmes by farmers and the explanatory variables considered are as under:

1. Rainfed farmer will get at least a total benefit of ` 1260 per year, if the farmer does not participate in developmental programs and if he/she does not incur transaction cost (which includes cost of obtaining information, cost of providing documents and rents)
2. Bore well farmer would lose a total benefit of ` 2484 per farm if the farmer does not participate in developmental programmes and if he/she does not incur transaction cost (which includes cost of obtaining information, cost of providing documents and rents)

3. Access to canal irrigation does not significantly influence the benefit received per farmer
4. Elasticity of benefits received with respect to the number of programmes participated is 1.18 per cent. Thus for one percent increase in number of programmes, the benefits from governmental programmes increase by 1.18 per cent.

It could be revealed from results presented in table 5.30 the estimated benefits received from governmental programmes that in the linear model the estimated benefits were almost same as the actual benefits obtained from the governmental programmes. Negative intercept implied that if CIA and GIA farmer had participated in the governmental programmes s/he would have not lost a benefit of ` 2484 and ` 3604 respectively.

5.8 Relative share of Governmental programmes for farmers

Among different Governmental programmes by Government of Andhra Pradesh most popular programmes are white ration card (BPL card) as it was possessed by 99 per cent of the sample farmers and Panchayath Water Supply by 100 per cent of sample farmers; Crop Loss Relief Fund received by 87 per cent followed by SHG loan subsidy received by 75 per cent; subsidy for seeds was received by 46 per cent. The least popular programmes are subsidy for micro irrigation and Pavala vaddi padhakam (interest subsidy scheme) received by 2 per cent of sample population followed by pashukranthi padhakam 4 per cent; NTR colony houses (8%); the programme providing LPG connections to farm women (Deepam) was received only by 26 per cent because the eligibility requirement is that the farm women should be a member of DWACRA and most of BPL farmers in GIA and CIA already have LPG connections.

Table 5.30: Estimated benefits received by farmers using linear model.

Type of farmer	Minimum benefit obtained (Intercept value of benefit function) (₹)	Mean transaction cost (₹)	Mean No. of programmes participated	Mean Net returns from farm (₹)	Estimated Total benefit from developmental programmes (₹)	Actual benefit received (₹)	Error or gap in estimation (%)
RFA	1260	1261	6	1683	10889	11202	2.8
GIA	-2484	1450	5	114358	7197	7518	4.3
CIA	-3604	1438	6	149509	8125	8732	7.0

Note: RFA = Rainfed area farmer GIA = Groundwater irrigated farmer CIA = Canal irrigated area farmer.
Negative benefit indicates that if he/she does not participate in Governmental programmes CIA farmer loses ₹. 3604 and ground water farmer loses ₹. 2484.

Benefit from MGNAREGA was received by 31 per cent of the farmers it shows the gap of 69 per cent. This proportion is low because in CIA and GIA farmers do not prefer to utilize MGNAREGA, since their marginal productivity is high in their farms. Regarding subsidies for seeds 46 per cent farmers' availed benefit and the reason was that the transaction cost for obtaining benefit was around ` 450. About 75 per cent of farmers availed SHG loans which indicate their collective bargaining power and their reduction in dependence on the Government.

Considering the spread of Governmental programmes 87 per cent farmers received Crop Loss Relief Fund of ` 776 among them 66 (73% of the) farmers received a benefit of ` 1279 from interest subsidy on SHG loan and (47% of the) farmers received an average benefit of `1052 from subsidized seeds; 29 per cent of the farmers who received Crop Loss Relief Fund are receiving an average benefit of ` 4462 from MGNAREGA followed by Indiramma housing scheme by 16 per cent of farmers with an average benefit of ` 1976. In the case of interest subsidy on SHG loan around 75 per cent of the farmers received an average benefit of ` 1259 among them 85 per cent of the farmers received benefit of ` 833 from Crop Loss Relief Fund followed by benefit from subsidized seeds (38%, ` 2080); MGNAREGA (37%, ` 4466); Indiramma housing scheme (19%, ` 1978). In the case of programme

The low proportion of farmers benefited clearly indicates that the Government needs to focus its attention on inclusive growth involving the poor and down trodden.

Relative share of governmental programmes for farmers are indicated in Table 5.31. Among those who received crop loss relief fund 100 per cent of them received benefit of white ration card and panchayath water supply, 73 per cent of interest subsidy on SHG loans, 47 per cent received subsidy on seeds and 73 per cent received thaiwn

Table 5.32: farm incomes and benefits in relation to per capita income.

Farm located in(holding size in acre)	Family size	Net income from all sources	Per capita income (A)	Benefit received from Governmental programmes	per capita benefit (B)	C=(A+B)	Per Capita Income of Andhra Pradesh. (D)	Deficit = (C-D) (%)
CIA (9.02)	5	261756	55863	8732	1984	57847	71540	-13693 (19)
GIA (6.75)	4	183434	49894	7518	2362	52256	71540	-19284 (27)
RFA (4.26)	5	58327	13171	11202	2101	15272	71540	-56268 (79)

sprayer subsidy, (29 %, NAREGA), (26 % Deepam), (26 % Old Age Pension Scheme), (16 % Indiramma Housing Scheme), (13 % Rajiv Arogya Sree), (14 % Oil engine scheme), (9 % NTR colony houses), (8 % Feed Distribution Scheme), (7 % Mid Day Meal Scheme), (4 % Pre Metric Scholarship).

Farm incomes and benefits in relation to per capita income

The net income per annum from all sources ranged from ` 58327 for rainfed farmers to ` 261756 for canal irrigated farmers. The per capita (net) income ranged from ` 13171 for rainfed farmers to ` 55863 for canal irrigated farms. The benefit received was higher for rainfed farmers over irrigated farmers. The benefit derived from plan programmes was the least for ground water irrigated farms. The per capita net income plus the per capita benefit from governmental programs are compared with the per capita income of Andhra Pradesh state (` 71540) for 2011. The last column in the Table 5.32 which indicates deficit, across all the three sample areas the per capita income falls short. In RFA 79 per cent deficit compared with State's per capita income, while for CIA and GIA deficit is 19 per cent and 27 percent respectively. Hence the state has to focus more on rainfed farmers who are short of State's per capita income by at least 79 percent. Accordingly rainfed farmers deserve higher economic and social attention, as also capacity building programs including security programs such as life and general insurance options.

Others corrections included:

1. What exactly the institutional approach was followed in this study to test verify the hypotheses outlined?

The institutional economic analysis in this study is undertaken through estimation of transaction cost of governmental programmes

TABLE 5.31: Relative share of Governmental programmes for farmers.

Programmes	Benefited farmers (%) (n=105)	WRC	PWS	CLRF	SHG	Se S	Sp S	NREGA	Deepam	OAP	HIS	RAS	OES	NCH	FDS	MDMS	PMS
WRC	99	3505 (100)	299 (100)	776 (87)	1259 (76)	1573 (47)	1259 (76)	4469 (31)	310 (26)	2400 (22)	1980 (17)	6800 (16)	1000 (13)	800 (8)	2400 (7)	1311 (7)	2500 (5)
count		103	103	90	78	48	78	32	27	23	17	16	13	8	7	7	5
PWS	100	3505 (99)	299 (100)	776 (87)	1259 (75)	1573 (46)	1259 (75)	4469 (31)	310 (26)	2400 (22)	1980 (16)	6800 (15)	1000 (13)	800 (8)	2400 (7)	1311 (7)	2500 (5)
count		103	104	90	78	48	78	32	27	23	17	16	13	8	7	7	5
CLRF	87	3538 (100)	292 (100)	776 (100)	1279 (73)	1052 (47)	1280 (73)	4462 (29)	310 (26)	2400 (26)	1976 (16)	7483 (13)	1000 (14)	800 (9)	2400 (8)	1275 (7)	2500 (4)
count		90	90	90	66	42	66	26	23	23	14	12	13	8	7	6	4
SHG	75	3576 (100)	295 (100)	833 (85)	1259 (100)	2080 (38)	651 (38)	4466 (37)	310 (35)	2400 (23)	1978 (19)	6111 (12)	1000 (15)	800 (6)	2400 (9)	1275 (8)	2500 (6)
count		78	78	66	78	30	30	29	27	18	15	9	12	5	7	6	5
Se S	46	3309 (100)	307 (100)	981 (88)	1358 (63)	1573 (100)	650 (33)	4000 (8)	310 (13)	2400 (23)	1952 (15)	6567 (25)	1000 (13)	800 (4)	2000 (13)		2500 (2)
count		48	48	42	30	48	16	4	6	11	7	12	6	2	6		1
Sp S	32	3740 (100)	256 (100)	836 (94)	1490 (91)	3306 (48)	650 (100)	4556 (27)	310 (33)	2400 (27)	2000 (6)	6167 (9)	1000 (30)	800 (6)	1400 (9)	1530 (3)	2500 (6)
count		33	33	31	30	16	33	9	11	9	2	3	10	2	3	1	2
NAREGA	31	3960 (100)	354 (100)	450 (81)	1183 (91)	575 (13)	650 (28)	4469 (100)	310 (47)	2400 (22)	2000 (25)	7000 (9)	1000 (3)	800 (13)		1275 (19)	
count		32	32	26	29	4	9	32	15	7	8	3	1	4		6	
Deepam	26	3779 (100)	307 (100)	525 (85)	1509 (100)	967 (22)	650 (41)	4533 (56)	310 (100)	2400 (26)	2000 (33)	7000 (11)	1000 (7)	800 (11)	1200 (4)	1147 (15)	2500 (7)
count		27	27	23	27	6	11	15	27	7	9	3	2	3	1	4	2
OAP	22	4114 (100)	258 (100)	678 (100)	1367 (78)	1000 (48)	650 (39)	4214 (30)	310 (30)	2400 (100)	2000 (4)	8500 (17)	1000 (22)	800 (22)	1800 (9)	1020 (13)	
count		23	23	23	18	11	9	7	7	23	1	4	5	5	2	3	
HIS	16	3727 (100)	318 (100)	561 (82)	1200 (88)	814 (41)	650 (12)	4500 (47)	310 (53)	2400 (6)	1980 (100)					1530 (12)	
count		17	17	14	15	7	2	8	9	1	17					2	
RAS	15	3291 (100)	304 (100)	702 (75)	1340 (56)	750 (75)	650 (19)	3833 (19)	310 (19)	2400 (25)		6800 (100)	1000 (13)				2500 (6)
count		16	16	12	9	12	3	3	3	4		16	2				1
OES	13	3734 (100)	180 (100)	905 (100)	1425 (92)	1967 (46)	653 (77)	4500 (8)	310 (15)	2400 (38)		7750 (15)	1000 (100)				
count		13	13	13	12	6	10	1	2	5		2	13				
NCH	8	3805 (100)	292 (100)	382 (100)	1080 (63)	250 (25)	650 (25)	4500 (50)	310 (38)	2400 (63)				800 (100)	1200 (13)	1147 (50)	
count		8	8	8	5	2	2	4	3	5				8	1	4	
FDS	7	3409 (100)	309 (100)	1435 (100)	1286 (100)	733 (86)	650 (43)		310 (14)	2400 (29)				800 (14)	2400 (100)		
count		7	7	7	7	6	3		1	2				1	7		
MDMS	7	4467 (100)	334 (100)	360 (86)	1350 (86)		650 (14)	4500 (86)	310 (57)	2400 (43)	2000 (29)			800 (57)		1311 (100)	
count		7	7	6	6		1	6	4	3	2			4		7	
PMS	5	3291 (100)	216 (100)	540 (80)	1044 (100)	100 (20)	650 (40)		310 (40)			9000 (20)					2500 (100)
count		5	5	4	5	1	2		2			1					5

Note 1) WHC = White ration card, PWS = Panchayath water supply, CLRF = Crop loss relief fund, SHG = SHG loans subsidy, Se S = Subsidies for seeds, Sp S = Sprayer subsidy, IHS = Indiramma housing scheme, RAS = Rajiv Arogya sree, OES = Oil engine subsidy, NCH = NTR colony houses, FDS = Feed distribution scheme, MDMS = Mid day meal schemes, PMS = pre metric scholarship

2) Figures in parentheses indicate porportion of farmers benefited from column wise programme to farmers benefited from corresponding row wise programme

incurred by the beneficiaries and governance of developmental programmes. The transaction cost is hypothesized to reflect governance of developmental programmes that is transaction cost and governance are inversely related.

2. The procedure followed to quantify only planned benefits from the many development programmes?

The purpose of the study is to quantify the benefits received by the farmers. Since the governmental programmes are catering to the needs of all classes of people and since this study pertains to the farmers, the farmers were sampled. In addition as the different governmental programmes are implemented by different developmental departments. It is not possible to obtain the list of beneficiaries from each developmental department. In addition, even if this list were to be available it would not easily facilitate sampling of farmers who are the focus of the study.

3. The equal distribution of sample size across the environments?

The equal sample across ground water irrigated area, canal irrigation area and rainfed area is chosen with the hypothesis that farmers in each of the class are utilizing the benefits from governmental programmes. (As bona-fide beneficiaries). Considering the eligibility of applicants with access to irrigation, the BPL status cannot be assigned to farmers with irrigation. However, almost all the farmers in the study with access to irrigation have BPL cards as also other benefits. Thus this shows lack of effective governance.

4. This cause and effect economic relationship was specified as linear and log-linear. There is problem of endogeneity and *a priori expectations* are not appropriate?

There is no problem of endogeneity in cause and effect relationship because the benefits derived from governmental programmes is

hypothesized to be dependent upon transaction costs involved in obtaining benefits, the number of programmes participated, net returns, land holding and access to irrigation.

For example the transaction costs include 3 components: information cost, contractual cost and enforcement cost. Here the each of the cost is a function of efforts. So transaction cost is virtually the value of effort to be put forth by each farmer. Hence higher the efforts put forth in obtaining benefits higher the benefits. Theoretically higher efforts should fetch higher benefit. Similarly if the farmers derived benefit from many number of programmes, the cumulative benefits would be larger. It is hypothesis that higher the land holding lower the benefit it is a rational hypothesis. Similarly access to irrigation should negatively influence the benefit.

5. If there are only two attributes and two dummies are incorporated in the model then it leads to dummy trap?

There is no dummy variable trap because for three categories of farmers two dummy variables are used. Farmers with canal irrigation are assigned (1, 0), the farmers with ground water irrigation are assigned (0, 1) and rain fed farmers are assigned (0, 0).

6. The necessity of estimating two functional models is unclear because there is a larger difference between the estimated benefit derived from the two function models?

Both linear and log linear models were estimated for the following reasons. The linear model with intercept dummy was estimated to find the rate of response of benefits for a unit increase explanatory variable (marginal productivity). The log linear was used to estimate the elasticities. Since the estimated benefits from both the models differs substantially, as the linear model offered realistic marginal productivity

and estimated benefits. And as the log linear model offers realistic elasticities the two models were used.

7. Precision in ranking of the programmes based on the benefits realized is not very impressive as the sample size is 35 each and randomly chosen?

There is no precision ranking followed in this study. The governmental programmes are arranged according to descending order of magnitude of the number of beneficiaries under each programme. This does not mean precision ranking.

8. Based on the sample size and nature of selection it is very hard to make such conclusion?

Possession of BPL card is basic necessity for being eligible for any programme. So farmers irrespective of endowment they try hard to get the BPL card and use it as a “gate way” to derive benefit from any programme. The BPL cards were last renewed in 2003.

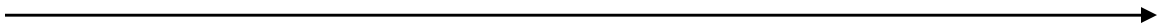
9. One of the objectives is to bring out the constraints; where are they?

The constraints of the study are analyzed and represented in table 4.11, 4.12 and 4.13.

10. Did sample households say that they want a guide book in Telugu, website and capacity building?

As there is no single place where all the details of governmental programmes, eligible criteria, dates of application, documents to be provided, awaiting time are available as the gap in implementation of Pashukranthi padhakam was varying around 89 per cent in CIA and 100 per cent in RFA and around 97 per cent gap in MGNREGA programme from in GIA. So it is crucial to have guide book in Telugu.

SUMMARY AND CONCLUSION



CHAPTER VI

SUMMARY AND CONCLUSION

In this study the benefits received by farmers from various developmental programmes of the State of Andhra Pradesh are analyzed in the backdrop of the transaction costs incurred to obtain the benefits. With the hypothesis that the access to water for irrigation shapes the access to benefits from developmental programmes, the spread of benefits from Governmental programmes is compared among canal irrigated area (CIA), ground water irrigated (GIA) and rainfed areas (RFA) in Krishna District of Andhra Pradesh. Accordingly this study was undertaken in areas with irrigation infrastructure. The Krishna agro climatic zone is one of the zones with high irrigation infrastructure with 66 per cent of cultivable area under irrigation. Krishna zone has Krishna, Guntur and Prakasam districts. Krishna district in Krishna zone has been selected for this study. In Krishna district 61 per cent of cultivating area is under irrigation.

Successive political parties when they form the governments chalk out unique programmes / policies devoting planned funds for the welfare of the people. Accordingly since independence there have been umpteen numbers of programmes. Currently there are about 154 Governmental programmes in India offered by 20 developmental departments, some with repeated goals, some under different nomenclature, but largely focusing on rural development (Channaveer, 2011). Many programmes are of similar in nature and most programmes are for the same target group, i.e. for people below poverty line.

This study is a modest attempt to analyze benefits received by farmers in rainfed area in comparison to farmers using ground water and farmers using canal irrigation and the transaction costs incurred by the

farmers in availing benefits of Governmental programmes. The study is carried out with the following objectives.

2. Objectives of the study

1. To estimate the utilization of benefits from Governmental programmes and to estimate the extent of reach of Governmental programmes for women.
2. To quantify the transaction costs of Governmental programmes for farmers.
3. To document and analyze the perceptions of farmers regarding reach of programmes.
4. To analyze the constraints in seeking the benefits from government programmes.

Choice of the study area

The larger purpose of this study is to compare the spread of benefits from Governmental programmes among canal irrigated area (CIA), ground water irrigated area (GIA) and rainfed areas (RFA) in Krishna district belonging to Krishna agro-climatic zone. Accordingly this study was undertaken in Gopinenipalem village of Vatsavai mandal representing the CIA receiving canal irrigation from Nagarjuna sagar left bank canal. Similarly, Anigandlapadu village of Penuganchiprolu mandal is selected as GIA where source of irrigation is groundwater through bore wells. Ramachandrunipeta village in Jaggayyapeta mandal is selected as RFA where most of the farmers are largely dependent on rainfall. The distance between RFA and GIA is 20 kilometers, that between GIA and CIA is 10 kilometers and that between CIA and RFA is 15 kilometers.

Sampling

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 Jaggaihpetta mandal respectively for the purpose of primary data collection.

Database

As mentioned above, field data for this study were collected from pretested structured schedule administered on 35 farmers each in CIA, GIA and RFA of Krishna district i.e. Gopinenipalem village of Vatsavai mandal, Anigandlapadu village of Penuganchiprolu mandal and Ramachandrunipeta village of Jaggaihpetta mandal. The data pertaining to family details, size of land holding, economics of crops grown, assets possession of the farmers and the Governmental programmes in which he participated were collected for the study.

Analytical tools used

Measures of central tendency are employed to quantify the magnitude of benefit from Governmental programmes/schemes. Percentages are used to find the share of each programme / benefit or transaction cost to the total. Average and percentage analysis were used to examine benefits availed by farmers in sample areas from Governmental programmes and Transaction costs involved in availing the benefit. The efficiency in the utilization of benefit from the Governmental programmes was calculated as the ratio of Net returns from all sources (in `) per farm family to the total benefit received from Governmental programmes (in `) per farm family. Net returns per family

from all the sources include, Net return per farm family from Agriculture, Net return per farm family from Livestock and non farm income.

In order to condense the information contained in the number of original variables which influence the receipt of benefits from different Governmental programmes such as, gross irrigated area and net returns so on into a smaller set of new, composite dimensions with minimum loss of information, principle component analysis (PCA) was estimated. linear and multiplicative regression analysis was performed to analyze the relationship between net returns (₹) per farm from all the sources and the number of programmes in which farmer Participated, dummy variable for access to irrigation and transaction cost incurred, Transaction cost framework is used to analyze the transaction cost incurred by the farmer to avail the benefit of developmental programmes.

A square matrix listing programmes in rows as well as in columns is developed in order to find the number of beneficiaries under each programme and the average benefit received under each programme. The programme wise beneficiaries in each programme are arranged in the descending order of magnitude. Later the proportion of beneficiaries out of the sample is computed and mentioned along with the number of beneficiaries under each programme.

Major findings

Land rights in the name of household woman

The average land holding per farm in CIA, GIA and RFA is 9.02, 6.75 and 4.26 acres respectively. In CIA and RFA almost 30 per cent of the house-holds have land in the name of farm woman while in GIA it was around 23 per cent. About 83 per cent and 63 per cent of the households in CIA and GIA respectively are having she-buffaloes where as in RFA, 37 per cent households are having she-buffaloes. This

indicates that in areas with access to irrigation, possessing dairy cattle is facilitated leading to integrated farming systems in irrigated areas. In CIA, 11 per cent of the households possess draught animals and in GIA 9 per cent and in RFA 23 per cent possess draught animals. In CIA and GIA, 11 per cent and nine per cent of farm households possess tractors where as in RFA no household possessed tractor. Thus, farm mechanization is in irrigated area compared to RFA, where draught animals are used mostly for farm operations.

In CIA the proportion of farmers benefitting from local organizations (Self help group) is 80 per cent and the loan obtained is ` 23464. In RFA 94 per cent of farm families are benefited and loan obtained is around ` 20212 per farm. In GIA 66 per cent of families are members in self-help groups and derived loan is ` 18087 and their savings is almost equivalent to 50 per cent of loan. Due to availability of loan at low interest rate, in all the three regions a majority of the farm women are participating in SHG and deriving benefit.

Efficiency in availing benefit of Governmental programmes in sample areas

The net return from all sources per farm family in CIA is ` 2, 61,756 in GIA `1,83,434 and in RFA ` 58,327. The CIA and GIA farmers are receiving 57 per cent and 64 per cent of income from Agriculture, 15 per cent and 14 per cent of income from live stock, 28 per cent and 22 per cent of income from off farm activities respectively. The RFA farmer 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.

Considering the benefits received from the Governmental programmes, the rainfed farmer received `11202 which is higher than

that of the canal irrigated farmer (₹ 8732) and ground water irrigated farmer (₹ 7518). Relative efficiency of rainfed farmers over canal irrigated and ground water farmers can be examined by considering the net returns realized from all sources per rupee of benefit received from Governmental programmes. Accordingly the canal irrigated farmer is realizing ₹ 29.97 of net return per rupee of benefit received; the ground water irrigated farmer is realizing ₹ 24.39 per rupee of benefit received, while rainfed farmer is realizing ₹ 5.20 per rupee of benefit received.

It is heartening to note in all the farmers in sample area, no single farmer was left out by any developmental programme. This implies that every farmer is covered under one or the other Governmental programmes. However, this should not lead to complacency since there are several programmes which are yet to reach the poor and marginal farmers especially in rainfed areas.

Factors influencing differential distribution of benefit among different groups of farmers

The linear model relating benefits with explanatory variables indicated that the rainfed farmers derive at least ₹ 1260 as the benefit (intercept value). On the other hand the canal irrigated farmer loses ₹ 3604 of benefit and ground water farmer loses ₹ 2484 (due to negative intercept value), if she/he does not participate in any of the Governmental programmes. The explanatory variables such as net returns, total number of programmes participated, access to irrigation are statistically significant and influencing the benefits received from developmental programmes. Thus, for every one rupee of transaction cost incurred the benefit received increases by Re. 0.2. For every increase in Governmental programme by one number from the average number of programmes participated, the benefit received increases by ₹ 1558. For every one rupee of increase in net return from the average net return, the

benefit from Governmental programme increases by ` 0.01. This coefficient though statistically significant, is not economically significant.

The multiplicative model employed to find the cause and effect relationship between the benefits from Governmental programme and explanatory variables indicated that the minimum benefit received by rainfed farmer is ` 1139. The minimum benefit received by canal farmers is ` 1102 and that by the ground water farmer is ` 1141. The explanatory variables such as net returns and access to irrigation are statistically significant and influencing the benefits received from developmental programmes. Thus, for every one rupee of increase in net return from the average net return, the benefit from Governmental programme increases by ` 3.27.

Gap in benefit reception

The number of families eligible to receive the Governmental benefits is compared with the number of families who did derive the benefit. This difference gives the gap in implementation of Governmental programmes. In CIA, this gap ranged from 0 per cent (in programmes such as white ration card (BPL card), Panchayath Water Supply) to 89 per cent (in programmes such as Pasukranthi padhakam). In the ground water irrigated areas, this gap between implementation of Governmental programme and actual implementation ranged from 0 per cent in white ration card (BPL card) and Panchayath Water Supply to 97 per cent in MGNREGA. In the RFAs this gap between implementation of Governmental programme and actual implementation ranged from 0 per cent in Panchayath Water Supply to 89 per cent in pashukranthi padhakam. This gap also reflects the need for an appropriate human resource in the village level to link the eligible farmers with the Governmental programmes, towards which a fee could be charged or subsidized. The fee is the sum of opportunity cost of time and cost of

documentation. The rents invariably are paid to the officials for deriving the benefit from the Governmental programmes.

The Benefits from Governmental programmes accrued over time period such of those programmes, which yield immediately are considered as short term programmes and those programmes which benefit over a period of years are classified as long term programmes. Thus, among 39 Governmental programmes listed, 33 per cent of them are considered to yield short term benefit and 67 per cent to yield long term benefits. It is distorting to note that in CIA and RFA, only 6 (15 per cent of the) Governmental programmes are availed by farm family and in GIA only 5 (12 per cent of the) Governmental programmes were availed by farm family.

A comparison of Transaction cost incurred for different programmes among canal irrigated, ground water irrigated and RFA indicate that on an average, the TC is around ` 310 per programme in CIAs ` 760 in Ground water irrigated areas and ` 456 in. However, the benefits ranged from `109 to ` 5566 in CIAs, ` 109 to ` 11566 in ground water irrigated areas and ` 109 to ` 4500 per family in RFAs.

Considering Transaction cost as percentage of total benefit, in CIA, this ranged from one per cent in white ration card (BPL card), to 24 per cent in subsidized seeds. In Ground water area, the transaction cost as a percentage of total benefit ranged from one per cent in micro irrigation subsidy programme to 53 per cent in subsidized seeds programme. In RFA the Transaction cost as a percentage of total benefit ranged from one per cent in white ration card (BPL card) to 60 per cent in subsidized seeds.

Policy implications

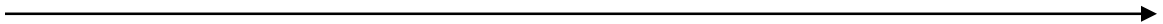
1. It is necessary for the developmental departments to bring out a guide book in Telugu highlighting all the governmental programmes, details of documents to be submitted, last date, eligibility to avail benefit, number of days of waiting period, to whom to submit and follow-up actions by the farmer. The guide book should be revised as and when changes occur.
2. In addition to the guide book, awareness programmes and capacity building programmes regarding procedure to be followed, along with follow-up action need to be provided to the citizen.
3. 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.
4. Farmers should get in touch with members of village panchayath for benefit utilization. This will empower the farmers to participate in the governmental programmes.
5. Panchayath Raj system should be governed in such way that errors of inclusion and exclusion should be minimum. This reduces the gap between actual beneficiaries and eligible farmers.
6. The websites should be produced in Telugu and the above information should be updated.
7. There are no grass root workers similar to Gram sevak prior to green revolution period, to promote governmental programmes. Since agriculture is the main source of income for more than 60 % of the farmers, it is crucial to have a gross root developmental worker similar to gram sevak for smooth functioning of village panchayath.

Table 6.1: Objectives, hypothesis, methodology, analytical tools, findings and conclusions

Objectives	Hypothesis	Analytical Tools	Findings and conclusions
a. To estimate the utilization of benefits from Governmental programmes and to estimate the extent of reach of Governmental programmes for women.	1. Utilization of benefits from Governmental programmes is higher by rainfed farmers compared to the irrigated farmers.	1. Tabular analysis.	Hypothesis accepted: Rainfed farmers received an annual benefit of ` 11202 where as canal irrigated and ground water irrigated farmers received an annual benefit of ` 8732, ` 7518 respectively.
	2. There is a thin reach of Governmental programmes for the women.	Tabular analysis.	Hypothesis accepted: very few programmes are oriented towards women. Beneficiaries are unaware of programmes such as Santhwana, Swadhar, Janai suraksha yogana and Kishori shakti yojana.
b. To quantify the transaction costs of Governmental programmes for farmers.	1. Transaction costs of receiving the benefit deter the spread of benefits of Governmental programs.	Principle component analysis,	Hypothesis rejected: transaction cost is statistically not significant in determining the benefits of Governmental programmes.
	2. Benefits received are directly proportional to transaction costs, number of programs, net returns, and access to irrigation.	Regression using intercepts dummy variables.	In case of number of programmes Hypothesis accepted: For every increase in Governmental programme in which the farmers participate the benefit received increases by ` 1558.
			In case of net returns Hypothesis accepted: For every one rupee increase in net returns the benefit from Governmental programme increase by Re. 0.01.

			In case of access to irrigation hypothesis rejected: The CIA farmer loses ` 3604 of benefit and ground water farmer loses ` 2484, if he or she does not participate in Governmental programmes.
c. To document and analyze the perceptions of farmers regarding reach of programmes.	There is a gap between actual number of beneficiaries and eligible farmers.	Tabular analysis.	Hypothesis accepted: there is a huge gap between actual number of beneficiaries and eligible farmers for programmes like "pashukranthi padhakam" (CIA 89%; RFA 100% and GIA 96%) and cattle feed distribution scheme (CIA 67%; RFA 94% and GIA 77%) and so on.

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CHAPTER VII

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APPENDICES



**UNIVERSITY OF AGRICULTURAL SCIENCES, GKVK, DEPARTMENT OF AGRICULTURAL ECONOMICS,
BANGALORE- 560065**

Information Sought for M.Sc (Agri) research in Agriculture Economics

Title: utilization of benefits from governmental programmes or schemes by farmers in Andhra Pradesh- an institutional economic analysis.

General information:

1. Name of the Head of the household: _____, Village/Ward: _____ Taluk _____

4. Title to land: name of the person/s: _____ 5. Caste: _____

6. Type of family (joint / nuclear): _____

7. Any land title in the name of female:_____ If so, Name _____ Area_____

I. Family details

[illegible]

II. Land holdings (Acres/Guntas)

Fragmentation (All fragments including owned, leased in, leased out)

Name of the fragment	Size	Irrigated or Dry land	Fallow if any (acres)	Reasons for fallow	Net income per year (₹)	Market value (₹)

III. Details of all types of benefits from Participation in Developmental programmes of the Government, panchayath, TMC, Agri Dept, Horti Dept, Health Dept, Food and Civil Supplies

Name of the developmental programme State / GOI / Panchayath / TMC programme	Kind of Benefit Received	Through Which Department or institution programme is implemented	Year of benefit availed	Total benefit or subsidy received (₹)	Transaction cost		
					Time spent for obtaining benefit (hours-days)	Expenditure in obtaining benefit	Rents paid (₹)
1.BPL Card							
2. Kissan credit card							
3.MG NREGA							
4.SHG Loans and Subsidies							
5. bus pass							
pension							

1. vrudhayapya pension							
2. vithanthu pension							
3. vikalangula pension							
Housing schemes							
1. Indira Awas yojana							
2. NTR colony houses							
3. Indiramma housing scheme							
Drinking water & sanitation							
1. Panchayath water supply							
2. Nirmal Bharath (toilet construction)							
health							
1. Arogyasree							
2.							
Animal husbandry							
1. Deworming of sheep and goat							
2. Sheep insurance							
3. Fodder seed minikits							
4. Supply of breeding ram							
5. Feed and fodder development scheme (Forage crop seeds)							
6. Fodder seed distribution and							

production							
8. Dairy entrepreneurship dev. scheme							
Minority welfare							
9. DOMWUA for minority women (DWACRA)							
14. pre metric scholarship							
Post metric scholarship							
Navodaya schools							
Women and child development							
1. Midday meals schemes							
2. Asha (under ICDS, for pregnant women)							
3. Deepam (gas connection)							
4. Kishori shakti yojana (nutritious food for adolescent girls)							
5. Stree shakti							
6. santhwana							
7. swadhar							
8. Janai suraksha yojana (sukhibhava)							

9. abhaya hastham (indira kranthi pathakam and insurance scheme for SHG)								
10. indira jeevitha bima pathakam								
Crop Insurance Schemes								
1. Comprehensive crop insurance scheme								
Watershed dept – Benefits like Farm pond, SEBs, Gully checks, vegetative gully checks, nala bunds, check dam								
10. Agri Dept								
	Subsidies forseeds							
	farm machinery							
	Irrigation Kits							
11. Horticulture Dept	..Mini kits							
	..NHM							

IV. Quantity of Fertilizers :

Sl. No	Nutrient	Name of The fertilizer	Quantity Used	Price per Kg (₹)	Total value (₹)
1	Nitrogen(N)				
2	P ₂ O				
3	K ₂ O				
4	Complex Fertilizers				
5					
6					

V. Off farm Employment particulars

[illegible]

VI. Membership in organizations

Organization (eg SHG, cluster group, yuvaka sanga, mahila sanga...	Since when member	Your designation in the Organization	Activities of the organization	Purpose of yourself becoming member	How frequently you participate	Savings till now	Loan availed if any	Any other benefit/s availed till now

VII. Livestock

Sl. No	Particulars	No.	Name of the programme where you purchased	Your contribution (₹)	Subsidy	Transaction cost		Income from livestock (₹)
						Time spent in getting the benefit /subsidy	Expenditure in obtaining benefit (including rent)	
1.	Draught animals							
2	a. Local Cow							
	b. Buffaloes							
	c. Cross-bred cow							
3.	Calves and Heifers (Below 1 year)							
4.	Sheep							
5.	Goat							
6.	Poultry							

VIII. Farm Machinery, Implements and buildings

Name of Machinery	No.	programme or scheme under which you purchased	Your investment (equity)	Subsidy received	Transaction cost		Rents paid	Annual income earned from the equipment including hiring activity
					Time spent to get the benefit under this programme	Expenditure in obtaining benefit (for documents etc)		
Tractor (.....hp)								
Power tiller (...hp)								
Tractor accessories								
Sprayer:								
Implements -Bullock cart -Country plough -Other small implements								
Others								
2								

IX. Crop pattern

Sl. No.	Crops	Rainfed area (acres)	Well irrigated area (acres)	Surface irrigated (acres)	Yield (Kgs or Qtl)
i.	Kharif				
	1				
	2				
	3				
	4				
	5				
ii.	Rabi				
	1				
	2				
	3				
iii.	Summer				
	1				
	2				
	3				

	Perennials			
	1			
	2			
	3			

X. Source of irrigation

Source	Year of drilling / construction	Investment on well including pump set,	Maintenance cost per year	Yield of well (inches)	Pump on days in a year	Pump on hrs per day	HP of the pump	Area irrigated
Open well / dug well								
Bore well 1								
Bore well 2								
Bore well 3								
Canal								
Irrigation tank								

XI. Perceptions of farmers regarding Benefits of Developmental programmes participated / received

Programme/scheme which you benefited from	Up to what level you attempted	Why you receive the benefit	What are your suggestions to improve the reach
1			
2			
3			
4			
5			
6			

1. Lack of awareness, 2. No one helped me to get the benefit ; 3. Procedural complexity
 4. cannot afford to pay huge rents ; 5. Inability to move and get work done; 6. Documents problem 7. Ineligible to receive the benefit 8. Disinterest, 9. Any other: hesitant to try

XII. Perceptions of farmers regarding Benefits from programmes not participated / received:

Programme/scheme which you did not benefit from	Up to what level you attempted	Why you did not receive the benefit	What are your suggestions to improve the reach
1			
2			
3			
4			
5			
6			

1. Lack of awareness, ;2. No one helped me to get the benefit ; 3. Procedural complexity
 4. cannot afford to pay huge rents ; 5. Inability to move and get work done; 6. Documents problem 7. Ineligible to receive the benefit 8. 9. Disinterested 10. Any other: hesitant to try and why

2. Rajiv yuva kiranalalu:

It is recent programme implemented by Government of Andhra Pradesh to build job specific skills among the unemployed and place them in appropriate private jobs. Vision of RYK is to Convert large no. of non-literate, school dropout, unskilled and unemployed youth into productive workforce by building their skills thereby promoting inclusive growth. The mission proposes to employ 15 lakh youth in jobs in the private industry by 2014.

3. Programmes implemented by government of Karnataka state.

a. Yashaswini Health Insurance Scheme:

“Yashaswini” is the health insurance scheme of the Government of Karnataka. Individuals, who are members of any cooperative society for at least six months prior to July 1st of any year, are eligible for health insurance covering from the new born to 75 years of age in their family. The plan is open to all family members upon primary membership in a cooperative on a voluntary basis. Here the insured beneficiary has to pay a premium of ` 150 per year per person. The maximum benefit available per insured person is ` 100, 000 per procedure or ` 2, 00,000 annually with annual renewal of the policy.

b. Ashraya Housing Scheme

It is a state Government sponsored housing programme for the poor in rural area. The SC/ST families and the families with an annual income below ` 11, 800 are eligible to get the benefit under this scheme. The maximum benefit per beneficiary is ` 20, 000. For SC/ST beneficiaries the entire assistance is provided as grant and for others ` 10, 000 is given as grant and for remaining amount interest rate of 10 per cent will be charged.

c. Bhagyalakshmi Scheme for Girl Child

This programme is implemented by the Department of Women and Child Welfare, Government of Karnataka. The main objective of this scheme is to sustain the birth of girl children and to raise the status of the girl child in the family and in society. The BPL families and the families with annual income below ` 12, 000 are eligible to get the benefit. Under the scheme, the Government provides insurance cover to the first two girl children soon after the birth. The Government pays a premium amount of ` 19, 350 for the first child and ` 18, 350 for the second child. The first child will get a bond with a maturity amount of ` 1, 00,097 lakh and a bond with a maturity amount of ` 1, 00,052 lakh after attaining 18 years of age. These children can also get educational loan and medical facilities using these bonds. The only condition is that the girl has to study in Government school at least up to the 8th standard.

d. Kaliyuva Makkalige Bicycle (Bicycle for school going children)

This is one of the programmes implemented by the Karnataka state Government mainly to attract the students to Government schools and to avoid the drop outs. The bicycle programme was implemented to increase school enrolment at the high school level. In this scheme, every student of VIII standard in Government and Government aided school will get a bicycle worth ` 2400. There is no distinction between BPL or APL families here.

e. Suvarna Bhoomi Yojana

It is one of the Government of Karnataka implemented project where there is direct payment of ` 10, 000 to each of the selected farm families in two installments of ` 5000 each to improve the livelihoods of small and marginal farmers through enabling farmers to shift from low-

value subsistence crops to high-value fruit and vegetable crops with sustainable management practices. In this scheme farmers are getting benefits like the financial assistance, scientific/technical inputs, training, material inputs and forward market linkages etc.

4. AVERAGE FERTILISER AND IRRIGATION SUBSIDY TO SAMPLE FARMERS.

Category	Fertilizer Subsidy	Irrigation Subsidy
GIA	26032	7239
RFA	8778	0
CIA	28714	2906