



# INCOME AND EXPENDITURE PATTERN OF FARM HOUSEHOLDS: A CASE STUDY IN KOTPAD BLOCK, KORAPUT, ODISHA

  
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## ABSTRACT

**T**he study is based on the income and expenditure pattern of farm house holds of Kotpad block, Koraput district. 60 farm households are randomly sampled using purposive sampling technique and data are collected using semi-structured questionnaire schedule. The study suggest a multi sectoral integrated strategy of promoting agricultural- non agricultural activity in the rural areas with the local condition, resources and institutions to meet the challenges of sustainable development of the district. And the study examines the total expenditure on all goods like food, health, education, agriculture, clothing etc. this study mentions the source of income and the pattern of expenditure of the study area and income from various sources.

**KEY WORDS:** Income, Expenditure, Farm, Household, Agriculture, Sustainable Growth, Land

## 1. INTRODUCTION

Agriculture is the backbone of the Indian economy and it plays a vital role in the Indian GDP. In India around 70% of the population earns its lively hood from agriculture. It still provides livelihood to the people in our country. It is an important source of raw material for many agro based industries. India's geographical condition is unique for agriculture because it provides many favourable conditions. There are plain areas, fertile soil, long growing season and wide variation in climatic condition etc. A part from unique geographical condition, India has been consistently making innovative efforts by using science and technology to increase production.

India is a country of about one billion plus people. Indian agriculture is characterized by small farm holdings. The average farm size is only 1.57 hectares. Around 93 per cent of farmers have land holdings smaller than 4 ha and

they cultivate nearly 55 percent of the arable land. Agriculture is one of the strongholds of the Indian economy and accounts for 18.5 per cent of the country's gross domestic product (GDP). India has become the world's largest producer across a range of commodities due to its favourable agro-climatic conditions and rich natural resource base. India is the largest producer of coconuts, mangoes, bananas, milk and dairy products, cashew nuts, pulses, ginger, turmeric and black pepper. It is also the second largest producer of rice, wheat, sugar, cotton, fruits, vegetables. Cropping pattern is intended to give a wider choice in the production of a variety of crops in a given area so as to.

## 1.2 Agriculture in Odisha:-

Though Odisha's economy has been diversifying at a relatively faster pace than in the past and the share of this sector in the State's Gross Domestic Product (GSDP)

has been declining over the years, this sector continues to be vital for the economy. About sixty percent population of the State draws its sustenance fully or partly from the agriculture sector.

The share of this sector in the GSDP, which has more than 70 percent in the early 1950s, has come down to 15.58 percent, as per the advance estimates for the year 2013-14. Increasing agriculture production and productivity is necessary for ensuring food security, livelihood security and nutritional security. There is need to improve agricultural production and productivity with better technology, higher public and private investments and effective implementation of ongoing programmes in agriculture and allied sectors. The emphasis is on increasing productivity per unit land area and increasing cropping intensity. It has been emphasized to achieve 4 percent sustainable growth in agriculture production through management of natural resources and scientific management of crops. The shares and growth of the sector show variations from year to year.

The climate of the State is tropical, characterized by high temperature, high humidity, medium to high rainfall and mild winters. The normal annual rainfall is 1,451.2 mm of which the South-West monsoon contributes about 80 percent. From the physiographic point of view, the State has been divided into four zones viz (i) the Northern Plateau, (ii) the Eastern Ghat Zone, (iii) the Central Table Land, and (iv) the Coastal Zone. On the basis of climate, soil, rainfall and topography, the State has been delineated into ten Agro Climatic Zones. The State's Agriculture Sector frequently suffers from natural shocks like cyclones, droughts and flash floods which substantially affects production and productivity of agriculture.

The State has about 64.09 lakh hectares of cultivable area out of total geographical area of 155.711 lakh hectares, accounting for 41.16 percent. Total cultivated area is about 61.50 lakh hectares. About 40.17 lakh hectares of cultivable area has acidic soil and approx. 4.00 lakh hectares of area suffers from salinity. That apart, nearly 3.00 lakh hectares of cultivable area suffers from water logging. Agriculture sector contributes about 16% of the Gross State Domestic Product (GSDP). About 65% of the workforce depends on agriculture for employment / livelihood. The average size of land holding in the State is 1.25 ha. Small and marginal farmers constitute about 83% of the farming community.

### 1.3 Significant Of This Study:-

Agriculture is still the major sector of employment and a major source of livelihood for rural farm households and improving this sector is of the utmost importance for

the development of rural areas with little to no non-agricultural income-earning opportunities. The study area is a fully tribal district but the agricultural production is spectacular as compared with other fully developed district of Odisha. The agricultural sector supplies about 75 percent of the total workforce of the Koraput District. As the 90% of the district's land area is covered with hills and mountain ranges people are still producing the crops twice in a year with the available of irrigation facilities. When we are taking into account the coastal districts of odisha they are producing crops only once in a year with the available of much amount of plane area. So the more studies in the district in the fields of agriculture is required to increase the production, also to improve the life and living condition of the people.

### 1.4. Objective of The Study:-

- ✧ To know the income pattern of the farm households.
- ✧ To examine the expenditure pattern of farm households.

### 1.5. Hypothesis of The Study:-

Agriculture is the main source of income of the households in the study area . The agriculture is the primary sources and other occupations are the secondary sources of the farm households. The major expenditure of the farm household is in the food and agriculture expenditure.

### 1.6. Data Sources and Methodology:-

This study based on both primary and secondary data. The study has been conducted in Kotpad block of Koraput District, where paddy is the major crop rotation. This area is purposively chosen because this area is the best area of paddy production in the whole district. The study is based on the income and expenditure pattern of farm house holds of Kotpad block, Koraput district. 60 farm households are randomly sampled using purposive sampling technique and data are collected using semi-structured questionnaire schedule from seven villages. Simple statistical tools like averages, percentages, etc has been used in the study. This study has also inducted secondary data collected from various published sources.

## 2. REVIEW OF LITERATURE

The review of literature available on the subject helps to understand the existing in the study area. It is not only provides the requisite background for the research but also makes the researcher awer of the status of the issue. Hence, it helps to identify the gap that exist in the area of research. This chapter is an attempt to provide an over view of existing literature. Some of the relavent studies

undertaken for the review have been detailed and discussed as follows.

Odemenem, et al (2013), study on Saving and Investment Pattern of Small-Scale Farmers of Benue State, Nigeria have found that, the propensity to save and investment in Benue State, Nigeria, in spite of low income. There are factors that have positive influence on saving and investment behaviour of households surveyed such as level of income and sex. Given the significance of the income factor in terms of both saving and investment incentives such as improved technology, appropriate farm support services, medium and long term loans should be provided by the government and other actors to farmers in order to boost their income level.

Pradhan et al (1998) investigate that, the rural share of income seems to have gone down during the last two decades (as evident from the similar survey of "Household Income and Its Disposition" conducted by NCAER in 1975-76) which was 66.8% resulting in wider disparities in income distributions between rural and urban India. They compare two things like budget and level of income in the rural India.

Farooq, et al (1999), in their study they had studied that, Both paddy and wheat were confirmed as an essential part of the household diet as well as being complementary to one another. On the other hand, meat and pulses were found to be gross substitutes. An increase in the household income will induce substantial expansion in household demand for meat and dairy products but consumption of these foods will decline if household size grew *ceteris paribus*. These results accord with common sense.

Shing & Vatta (2013), have foundout that, the landless and marginal households, constituting the poorest strata of the rural population, resorted to more pickle consumption with a corresponding decline in vegetables consumption. The expenditure on food items increased between 27% and 129%. Relatively poor rural households were more severely affected by rising food prices in the form of declining consumption and comparatively higher increase in the consumption expenditure. The expenditure on education, clothing and electricity increased much less for the landless and marginal farming households than for the small and other farming households.

Gian & Sahota (1968) observes that average and marginal productivity differences are derived for a number of inputs in the production of different crops, across different regions, and over various farm sizes. The objective of the study is to evaluate the efficiency of Indian farmers in allocating resources available to them among different

production alternatives. In this study the author use the method of cobb-Douglas and cross section data method.

As a result of the market forces of supply and demand there are linkages between the agricultural sector and the non-agricultural sector. The expansion of the agricultural sector can enhance growth in the local economy and has a poverty reducing effect through increased employment opportunities (Hazell & Röell, 1983; Hazell & Haggblade, 1993). Whether accelerated agricultural growth can decrease absolute poverty more rapidly than other growth strategies depends on the extent of the relationship between agriculture and non-agriculture (Mellor, 1995).

Browne, et al (2007) have foundout that, the potential for demand led growth can be ascertained by analysing the expenditure elasticity estimated for the tradable/non-tradable categories of goods and services. Both the categories of tradable non-farm goods and non-tradable non-farm goods are highly expenditure elastic indicating that an increase in household income will result in a proportionally greater increase in expenditure on non-farm goods both locally and outside the study region. Increased expenditure on non-tradable goods and services may stimulate local production thus creating new employment and enterprise opportunities.

Research and analysis working group of MKUTUTA (2009) Findings from this analysis of household income and expenditure have strong implications for the development of the next phase of MKUKUTA. Tanzania faces a huge challenge to achieve MDG1 by 2015 but, encouragingly, from a policy perspective, a significant proportion of households have consumption levels not far below the poverty line.

Adekoya et al (2014) foundout that, the Majority (70.9%) of the farm households sampled do not have access to potable water, they live in mud and poorly ventilated buildings while the common toilet facility was the bush. Most of them are poor with not less that 78% having their consumption expenditure below the poverty line. The logit regression analysis indicated that credit use ( $p < 0.05$ ) and level of education of household.

Aparajita Bakshi(2008),in her survey found out that, Most of the literature on rural incomes and income diversification is based on micro-level village studies. There are no serial large-scale household surveys on incomes in India. Some by government and non-government agencies to collect large-scale data on incomes through household surveys have failed to generate consistent and reliable estimates of household income.

Brajesh Jha(2011),studied that, Manufacturing has traditionally been the most important industry in the non-farm sector, productivity of manufacturing in rural sector is significantly lower than the urban sector. Women account for around 30 per cent of the rural workforce, a bulk of them (85 per cent) are in agriculture. Interestingly, around one-third of rural females employed on the basis of usual status of employment are actually unemployed on the basis of current daily statues of employment.

George S. Sapounas,(2001) found out that in their study, The estimated expenditure elasticity's are defined from Engel relationships hat are reduced algebraic forms of a general equation of Box - Cox type. The technique of transformation of the variables has been used as a basic tool of analysis for the selection of the «best» equation of the per capita Engel curve in each of the eight categories considered. Per capita Engel curves have been generated in the present exercise by a rather strict assumption imposed in model of household demand.

Tassew Woldehanna,(2008) this study aim to provide a complete package of financial, technical and management assistance are generally less effective than programmes that identify and provide a single missing ingredient such as a small credit programme .

Talukder, et al(2011) studied that some farmers may shift from rice to other agricultural or non-farm activities, thus jeopardising the country's food security and self-sufficiency efforts in food-grain production. It is crucial to formulate government policies to support farm households in the form of income transfer such as tax reduction and production subsidy in order to avoid food security and macroeconomic instability as a result of high food prices due to a shortage of rice production. The government should avoid a high food price shock that could adversely affect the performance of economic growth, price stability and unemployment – the three main objectives of government policies.

Dufflo, et al(1999) found out that expenditure patterns in households in Cote d'Ivoire are not consistent with a Pareto efficient allocation of household resources. Moreover, the deviations from Pareto efficiency that we document correspond closely to the descriptions of provisioning norms available in the literature. In particular, we find that rainfall shocks that increase the output of the “appreciated” crop, yam, are associated with strong shifts in the composition of expenditures towards education, staples, and overall food consumption and away from adult

goods and “prestige” goods such as jewelry. the conventional unitary household model employed, for example, in the permanent income hypothesis is insufficiently rich to capture important aspects of demand behavior. Nor does the more general collective model provide an adequate framework for the interpretation of these results. Finally, because the variation in this paper comes from observable rainfall shocks, these results are not easy to reconcile with simple models of imperfect information.

### 3. INCOME SOURCES OF THE FARM HOUSEHOLDS

For household income and expenditure plays an important role. Household income is the sum of money income and income in kind and consists of receipts which, as a rule, are of recurring nature and accrue to the household or to individual members of the household regularly at annual or at more frequent intervals. Household income is derived from the following main sources: employees' salaries, wages and other related receipts from employers, net income from self-employment, business profits, income from personal investments (rent, interest, dividends), royalties and commissions.

Household income in kind includes wage payments in kind, goods and services transferred free of charge by an enterprise (including farm) to an employee or to the household of the owner or part owner of the enterprise; it includes also the value of home produce consumed within the same household (e.g. agricultural products, livestock products). income even though the proceeds may sometimes be spent on consumption; receipts from sale of possessions, withdrawals from savings, lottery prizes, loans obtained, loan repayments (principal) received, windfall gains, lump-sum inheritances, maturity payments received on life insurance policies, lump-sum compensation for injury and legal damages received. The general features distinguishing these particular receipts and other items excluded from income are the following: they are as a rule non-recurring (i.e. not occurring year after year) and are not regarded as income by the recipient household.

As the study area is primarily depend upon the agriculture, the people of study area has the choice of secondary occupation. And the income pattern is increasing by these secondary income sources. Which is explain below in the table and diagram.

**Table; 1. Income Sources Of study Area**

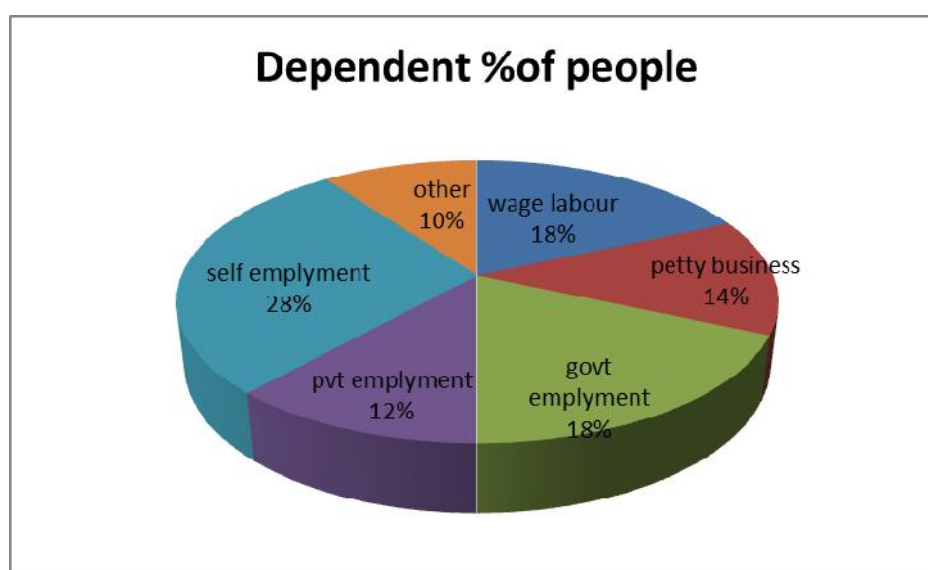
Secondary Income Sources	Dependent no. of household
Wage labour	11
Petty Business	8
Govt Employment.	11
Pvt Employment	7
Self-Employment	17
Other	6

Sources: Primary Data

From the above table we know to that out of sixty samples 11 families are depend upon wage labour as their secondary source of income, similarly 8 families are depends upon petty business, 11 households are depend

on the Govt. Jobs. And the 17 household owners are self employed. And very less families are depends upon the other sources of the secondary income.

**Figure;1.**



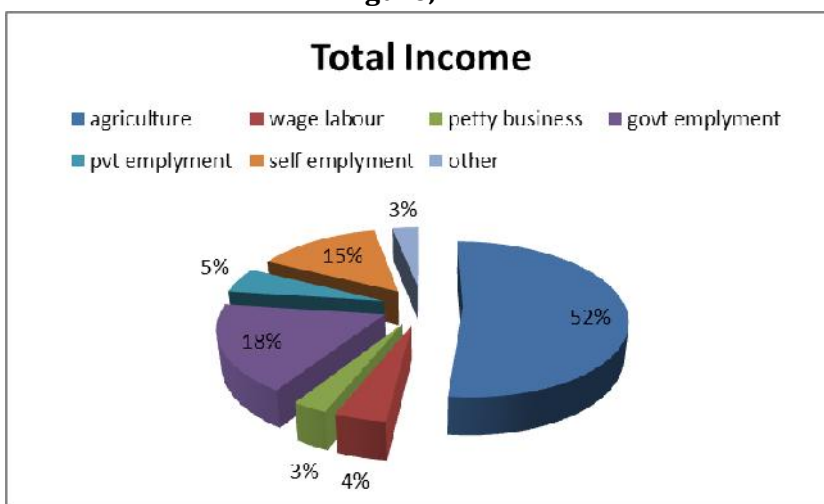
Sources : Primary Data

From the above diagram we see that 28% people are self employed. Then 14% of people are depend upon the petty business where the mostly women are also engaged with their husband. As this area having school and other govt office there have also 18% govt servant. And as same the wage labourer. And 12% has been doing the private jobs like NGO, insurance companies etc. And 10% people are depend upon the other income sources.

**3.1. Total Income Pattern of the Farm Household in The Study Area:-**

Household income refers to income received either in cash or (Monetary income) or in kind by all the residents in a household. This includes not only wages and salaries but also all the income generated by other sources such as agricultural and non-agricultural activities, other monetary receipts such as pen-sion, disability and relief payments, regular rental and remittance receipts and returns from businesses or investments and any other irregular gains such as compensations, lotteries etc.

Figure;2.



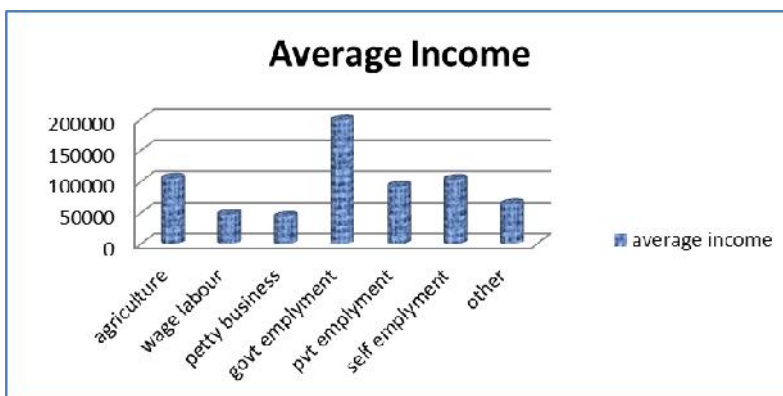
Sources : Primary Data

In the study area the agriculture is the primary occupation. And the people are very interest in the agriculture. But there has many other secondary occupation in where the farm households are depending. The income pattern shows in the above pie chart in percentage of the farm household in the study area. 52% income of their total income is from agriculture, and 18%

income from the govt employment which is very positive thing for the households income. 15% farm households income is from self employment and 5% income from private sector which add to the total income. 3% income from petty business and 4% income from wage labour included in the total income if the study area.

### 3.2. Average Income Pattern of The Farm Household In The Study Area:-

Figure; 3. AVERAGE INCOME



In the above diagram there have shows the average annual income of the farm household of the study area. Averagely the farm households are getting 105000/- rupees from agriculture, which income is second highest from the agriculture in the study area. The major portion of the average income is that from govt employment. And the self employment is 103441/- per year averagely. Wage labour and petty business are very low in contributing to the total income.

### 3.3. Average Monthly Income Of Households:-

The average income is very important potion for this study. By the average income we know about their income sources of the family and we know how much they get as income from the income sources and the farm household how much of money get averagely per month. These explain below in the table and diagram.

**Table; 2. Monthly Average Income of the Study Area**

Income Sources	Average Monthly Income
Agriculture	8750
Wage Labor	4314.049587
Petty Business	5515.625
Govt Employment	18049.58678
Pvt Employment	13224.4898
Self-Employment	6083.044983
Other	10600

Sources: Primary Sources

On the above table shows that the average monthly income of the farm households of the study area. The people are earned 8750 rupees from the agriculture, about 18000 rupees they get from the government sector. The average income of the farm house hold is normally good but their average income from private sector is 13000 rupees and 6000 per household from the self employed which is adjustable in the rural area. The average income from petty business, wage labour and others are 5500, 4300 and 10000 respectively. Here we shows that, the income of people of that area is normal. There is no problem in earning money.

#### **4. EXPENDITURE PATTERN OF THE FARM HOUSEHOLD**

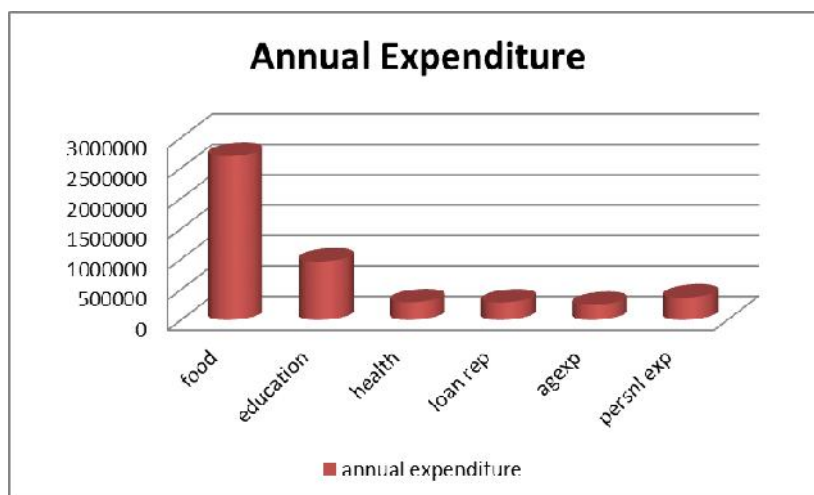
Expenditure is plays a vital role on the day to day life of the farm households. The people are expenditure on the food, education. Agriculture, health and other status. If the income level is high then the expenditure will be increasing but if the income will increasing at a higher rate than the expenditure level also increasing but at a time the expenditure will be remain constant ratio. "Total expenditures, including 'unusual' outlays for medical care, or the purchase of automobiles and durable goods, would seem to defeat the purpose of the entire procedure, for infrequent large expenditures may press the total far above the amount characteristic of the 'usual' level of living. That level is probably better described by the total outlay for the goods and services that appear year after year in the family budget - food, housing, clothes, films, gasoline, and so on. When some such total has been determined, the merits of various income concepts can be explored statistically.

Even if there is a central core of family expenditures that fluctuate much less from year to year than such income measures as are feasible, expenditures may still be unsatisfactory as a means of ranking families in order to study expenditures in relation to income. At a given level of income families in a single community that are similar in age and number, home ownership status, and extent of home production may differ a good deal in their spending merely because some people are naturally 'spenders' and some are 'savers'. Open handed spenders would get a high economic rank and close fistted spenders would get a low rank. Thus classification by even the 'stable core' of expenditures would tend to yield relatively high savings at low income levels and low savings at high income levels.

#### **4.1. Total Average Expenditure of Farm Household Of The Study Area**

The below figure 4.1 represent that the annual average expenditure pattern of the farm households' in the study area. Averagely the people are spent about 45000 rupees per year in the food. They spent 20000 averagely in education and about 5000 rupees in the health consumption yearly. Health is wealth but the people of rural area does not concern tent in their health condition and the service of hospitality. Many households are taken loan so they also pay it, so they spent 22000 per year in loan repayment. And the individual farm household spent 41000 rupees in agriculture sector in a year, it is a risk for the farmer.

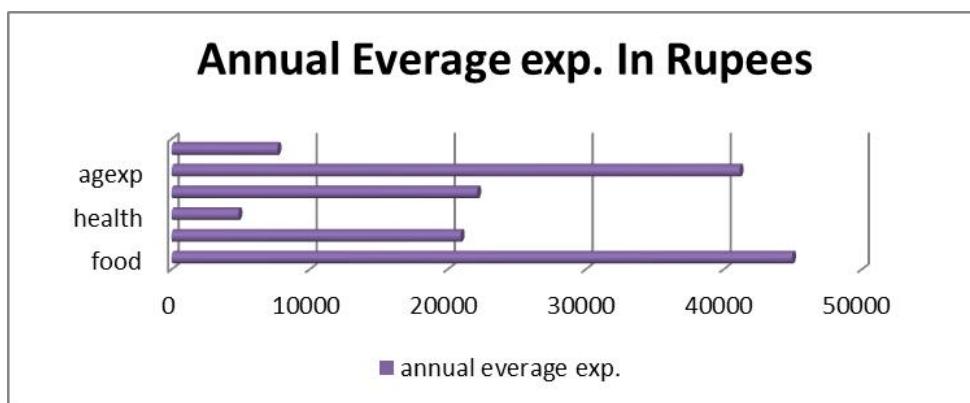
Figure;4..



Sources: Primary Data

From this diagram, we found out that the people of study area more amount of their income spending in the food, and secondly they spend in education and then they give priorities to others. In the total expenditure the food expenditure is high but the agriculture expenditure is less.

Figure;5..



Sources: Primary Data

In the average expenditure per farm household have spending their money highly in food then agriculture and thirdly importance giving to the loan repayment. After that the people are giving importance to the education. At last the people are admiring to the health and other expenditure. So moreover the total expenditure is higher than the average income. Ant the people are less spend on the education, health etc.

**4.2. Monthly Average Expenditure in Rupees of Farm Households:- Table; 3. Monthly Expenditure**

Area Of Expenditure	Average Monthly Expenditure
Food	3746.666667
Education	1745.652174
Health	404.1666667
Loan Repayment	1846.153846
Agriculture expenditure	3430
Persnl Expenditure	639.5833333
Total	9830

Sources: Primary Data



From the above table and diagram we finding that in this study, the people of this area are spending about Rs 3700/- for food and about Rs 1700/- for education. In agriculture they are spending about Rs 3500/- per month averagely. Then they spent very less amount for their health i.e. about Rs 400/- per month averagely, their personal expenditure is very less as compared to the advance society i.e. Rs 600/- per month. The people are taken loan from bank and co-operative society and from

their friends and relatives. So they are repaying the money about Rs 1800/- avageragely to them. Here we found that their monthly expenditure is very high in food and the people are very conscious in agriculture and there after they are giving priority to education. Their personal expenditure and the expenditure pattern is very low as compare to other expenditure.

**4.3. Average Income, Expenditure of the Farm House Hold:-**  
**Table 4: Income and Expenditure Difference**

Average In Rupees		
Average Monthly Income	Average Monthly Expenditure	Difference
16870	9830	7040

Sources: Primary Data

The above table shows that the average income and expenditure difference of the farm household of the study area. The average income of the people Rs.16870/- per month and they expenditure per month Rs.9830/- individually. Here we clear that the average income of the people of study area is more than the average expenditure, the difference Rs. 7040/- of income and expenditure.

**5. MAJOR FINDINGS**

The study shows that farm features are relatively more important in determining farm income in rural households. The farm income equation model includes both household factors and farm features; however, only three farm features are found to significantly determine farm income. A farm household reporting having staple crops under cultivation has a relatively higher farm income than households not cultivating any staple crops. These finding suggests that in comparison to cash crops, staple crops are still a major crop type influential in increasing the farm income in the study area. In addition, households cultivating larger groundnut acreage report a higher annual farm income. Groundnut importance is expected since part of the groundnut crop is for self-consumption and the remaining is usually sold for cash. And there have many problems creates they accept that as a challenge.

On the basis of the analysis of the facts collected from 60 respondents we have arrived at the following findings.

- In this area 89% have the agricultural land area and only 11% have the non-agricultural land area.
- In this area the agriculture is the primary occupation, beside agriculture the people of farm households are depend upon many occupation. From the 60 samples 28% people are self

employed, 14% are engaged in petty business, 12% are private employed and 18% people are engaged in wage labor.

- 52% of their income is coming from the agriculture of the study area. And other 48% income is coming from other sources.
- In this study area the average monthly income of per household is 16879/-.
- In the study area the farm households are spending money in many ways. And the monthly average expenditure per household is 9830/- . In this study area the income is more than the expenditure.
- In this area the respondent people are having the knowledge of saving . From the 60 respondents 82% respondents have their saving and rest 18% respondents spending their money in the monthly.
- In the study area the farm households are cultivate both season i.e. Kharif and Rabi. they are mostly used the hybrid seeds, In this area only paddy is the major crops for the farm households.
- In this area government did not provide subsidy towards all farmers. 39% farmer haven't getting subsidy. About 70% farm house hold have no Kisan card.

**6. POLICY SUGGESTION**

- ☆ The govt. should providing Minimum Support Price of agricultural produce equal to 50% in addition to cost of production since low price of farm produces is a major reason for indebtedness and agrarian distress.

- ✧ Government should give priority to projects to support the peasantry to establish crop wise value addition and processing industries under peasant-worker cooperatives with the support of Financial Institutions.
- ✧ Transport, communication, storage, marketing facilities should be improved.

## 7. CONCLUSION

From this study we conclude that the primary source of income of the farm households is agriculture which supports to the total income by 52 percent and rest 48 percent income coming from the secondary sources like wage labour, petty business, private sector government sector etc. In the study area the farm households' secondary occupations are self employment. The average income of the farm household of the study area is about 16000 which is manageable for a normal family.

There are factors that have positive influence on saving and investment behavior of households surveyed such as level of income and sex. The number of dependents, age composition, and nature of work and education level of the small scale farmers in the study area did not have a significant effect on saving. The factors that drove household investment are occupation, expenditure, assets and saving. Given the significance of the income factor in terms of both saving and investment incentives such as improved technology, appropriate farm support services, medium and long term loans should be provided by the government and other actors to farmers in order to boost their income level. Only then can the savings being accumulated in the rural economy be transformed into productive investment that will enhance or uplift their present standard of living.

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