

**INCOME AND EXPENDITURE PATTERN OF AGRICULTURAL AND
NON-AGRICULTURAL LABOURERS**

**BY
JAYALAKSEMI.N.**

**A Thesis Submitted To The University Of Madras
In Partial Fulfilment of the Requirements
of The Master Of Arts,
May.1980.**

A C K N O W L E D G E M E N T

The investigator expresses her sincere thanks and appreciation for the esteemed encouragements and advice which received in abundant measure from her advisor. Miss.V.Rajam,M.A, Assistant Professor in Economics, Sri Avinashilingam Home Science College for women, Coimbatore.

The investigator is highly indebted to Dr (Mrs) Rajammal P.Devadas, M.A., M.Sc., PH.D., (Ohio State) Principal, Sri Avinashilingam Home Science College for women, Coimbatore for her valuable guidance and suggestions. She extends her heartfelt thanks to Miss. Saraswathi Bhatiji M.A., Professor in Economics, Sri Avinashilingam Home Science College for Women for her encouragements and guidance.

The author expresses her deep felt gratitude to the Agricultural and Non-agricultural labour of Kethanur village for their excellent co-operation to make this study a success.

LIST OF CONTENTS

CHAPTER	PAGE
	LIST OF TABLES
	LIST OF FIGURES
	LIST OF APPENDICES
I	INTRODUCTION 1
II	REVIEW OF LITERATURE 4
	a. Importance of Agricultural and Non-Agricultural labourers 4
	b. Agricultural and Non-Agricultural labourers in India and Tamil Nadu 8
	c. The Income and expenditure of agricultural and Non-Agricultural labourers. 9
	d. Saving and debt of agricultural and Non-Agricultural labourers 12
	e. Method of studying income and expenditure pattern 15
III	EXPERIMENTAL PROCEDURE 18
	a. Selection of the Area 18
	b. Selection of method 18
	c. Selection of Samples 19
	d. Conducting Interview 19
	e. Working definition of the concept 19
IV.	RESULTS AND DISCUSSION 22
V.	SUMMARY AND CONCLUSION 55
	BIBLIOGRAPHY 69
	APPENDICES 70

LIST OF TABLES

S.NO.		PAGE NO
I	SOURCES OF INCOME	24
II	RANGE OF INCOME	25
III	OCCUPATION AND INCOME	26
IV	RANGE OF INCOME FROM SUBSIDIARY OCCUPATION	27
V	INCOME AND EDUCATIONAL LEVEL	
	A. AGRICULTURAL LABOUR	28
	B. NON-AGRICULTURAL LABOUR	29
VI	TOTAL DOMESTIC EXPENDITURE	
	A. AGRICULTURAL LABOUR	30
	B. NON-AGRICULTURAL LABOURERS	31
VII	RANGE OF TOTAL EXPENDITURE AND OCCUPATION	33
VIII	RANGE OF EXPENDITURE	34
	A. AGRICULTURAL LABOURERS	
	B. NON-AGRICULTURAL LABOURERS	35
IX	EXTENT OF SAVING	
	A. AGRICULTURAL LABOURERS	40
	B. NON-AGRICULTURAL LABOURERS	41
X	PURPOSE OF SAVING	
	A. AGRICULTURAL LABOURERS	41(a)
	B. NON-AGRICULTURAL LABOURERS	43

S.NO.		PAGE NO
XI	FORMS OF INVESTMENT IN CONSUMER DURABLES	44
	A. AGRICULTURAL LABOURERS	
	B. NON_AGRICULTURAL LABOURERS	45
XII	DEBT AMONG DIFFERENT OCCUPATIONAL GROUPS	47
XIII	EXTENT OF DEBT ON VARIOUS AGENCIES	
	A. AGRICULTURAL LABOURERS	49
	B. NON-AGRICULTURAL ALBOURERS	50
XIV	EXTENT OF DEBT ACCORDING TO PURPOSE AND AGENCY	
	A. AGRICULTURAL LABOURERS	51
	B. NON^AGRICULTURAL LABOURERS	51
XV	DEBT ACCORDING TO RATE OF INTEREST	53

LIST OF FIGURS

S.NO.		PAGE NO
1.	SOURCES OF INCOME	24
2.	TOTAL EXPENDITURE ON VARIOUS ITEMS	31
3.	EXTENT OF DEBT ON VARIOUS AGENCIES	49

LIST OF APPENDICES

APPENDIX	PAGE NO.
1. INTERVIEW SCHEDULE TO THE AGRICULTURAL AND NON-AGRICULTURAL LABOURERS	70
2. MULTI CORRELATION TEST ANALYSIS	83

INTRODUCTION

The importance of enquiry into the condition of Agricultural labourers is of great significance in our country as the number of such labourers is large and their problems are complex. The Agricultural labourers have formed an important section of rural community, having a distinctive character and individuality of their own. The amelioration of the conditions of such workers constitute a crucial part of our strategy for economic development in general and agricultural development in particular-R.C.Saxena.

India is essentially a rural economy. A high proportion of population engaged in agriculture, the farmer has to face a large number of uncertainties and risks like those of droughts, floods, accidental break down of farm machinery, unsuspected defects in seeds and manures, infections plant diseased and destructive pests. These things may cause unexpected but considerable damage to farmers who are suffering from inadequate and meagre income from agriculture. Similarly due to irregular employment, very low wages and non-availability of raw materials, the agricultural labourer and the rural artisans are earning low income. The income is not at all sufficient to meet both farm and domestic expenditure. Therefore most of the rural people have to borrow from outside.

For sound planning, it is essential that the family outlines, all the specific items of income and expenditure in order to work out an integrated spending plan (normally called as budget) or Income and Expenditure pattern. The income and expenditure pattern of agricultural and non-agricultural labourers help to express their socio-economic status in the society and it exhibits their economic habits and consumption trends.

The analysis of income and expenditure pattern of agricultural and non agricultural labourers will enable us to find out the factors which are affecting income and expenditure pattern of these groups (agricultural and Non-agricultural labourers).

After analysing the income and expenditure pattern of agricultural and non-agricultural labourers, we could find solutions to economic problems more realistically.

The study of income and expenditure pattern of agricultural and non-agricultural labourers will help to shape the national economy to a great extent. The study will help both the producers and consumers, in determining the level of output and the demand for goods and services particularly can forecast the demand for their products in the market and there by they will be in a position to avoid waste,

which inturn will help the consumers to get commodities at low level of price. Sussex study, therefore, conclude, "Development strategies which succeeds in raising the percapita income may not have much impact on poverty problem if any they are accompanied by a deterioration in relative income shares".

The major sources of income of sample, rural households were Agricultural wages, wages from weaving, salaries and income from small business. Their expenditure mostly included farm and domestic expenditure which include food, clothing, light and heat, education, medical, rivals and recreation. Besides they spent on consumble items. In this chapter, the sources of income, expenditure pattern and their relationship with selected socio economic factors are analysed.

The rural household income is very slignificant in the economic development. Two studies of the Reserve Bank of India and National Council of Applied Economic Research indicated that during the period 1953-54 and 1967-68 inequality of income had increased in India, because the share of bottom 20% had divindles and that of the top 20% has increased substantially. The standard of living of vast majority of the people in India is very low. Most of the people do not get even the basic requirements like food, clothing, housing and not to speak of comfort and luxuries. The percapita income in India is one of

lowest in the world. The level of living household is indicated by its level of percapita expenditure.

This study has been made to analyse the income and expenditure pattern of rural agricultural and non-agricultural household and the extent of their indebtedness and ^a savings.

The study of rural problems and potentials is a sine-quo-non for finding solutions to solve the rural problems and pave the ways for mobilising, channelising and deploying the potentials for the development of rural economy with the fact of confronting. This study has been made to analyse the income and Expenditure pattern of agricultural and non-agricultural labourers which unfavourably affected the rural indebtedness inturn the saving potentials and productive investment.

It is the purpose of this study to the various socio-economic factors which are related to rural indebtedness, the reasons for the predominance of non-institutional agencies, the reasons for increasing rural indebtedness and conditions of rural household. It also examines the income and expenditure pattern of rural households which have direct bearing of indebtedness, saving and investment.

This study also extends its scope to analyse the magnitude of saving composition and distribution, marginal and average propensities and pattern of Investments. This survey is designed to provide estimates of income, Expenditure, savings and investments of both households which constitutes by far the largest sector in the Indian economy. The factor that influences the level of income, expenditure, savings and investment are revealed in this study. It is hoped that the findings of the study will stimulate further a research in the field and be of some help to economists, planners and homeakers.

Objectives of the study:

1. To find out the income of the selected agricultural and non-agricultural labourers.
2. To find out the expenditure pattern of selected agricultural and non-agricultural labourers.
3. Savings and debt of the selected agricultural and non-agricultural labourers.

II. REVIEW OF LITERATURE

Rural labour may be agricultural and non-agricultural. But the farmer has a preponderance in our economy as several categories of non-agricultural labour are available for agricultural operations, when needed, because of the mixed character of rural occupations. The rapid increase in population of the country since the middle of the century resulted in increasing pressure of land forcing many persons to find alternative occupations.

IMPORTANCE OF AGRICULTURAL AND NON-AGRICULTURAL LABOUR:

DEFINATION:

According to the First and the Second Agricultural labour Enquiry Report defines "Agricultural labour as one who denotes a major portion of income in the form of wages in the agriculture".

Non-agricultural labourers form the bulk of organised labour according to C.T.Kurian and Josef James, "Non-agricultural labourers are labourers who are engaged in household industry construction, trade and commerce".

According to the Second Agricultural Enquiry there has been an increase in the proportion of agricultural labour households without land from 50.07% in 1950-51 to 57.13% in 1956-57. Casual male workers employed in an average wage for 200 days in 1950-51 and 197 days during 1956-57. They were self employed for 75 days in 1950-51 and for 40 days in 1956-57. Casual adult female workers were employed for wages full 134 days during 1950-51 and for 141 days during 1956-57. As regards children their wage, employment has increased from 165 days in 1950-51 to 204 days in 1956-57. They were self employed for 44 days on an average in 1956-57 against 31 days in 1951-52. It was also observed that the average daily wages of male casual labourers was Rs.1.09 and of a female casual labourers was Rs.0.68 paise in the year 1950-51 as against Rs.0.96 paise and Rs.0.59 paise in 1956-57 respectively. Therefore it can be concluded that the condition of male casual workers have shown a decline over the period under review against that the casual female workers and child labourers where a positive improvement in the conditions was revealed. In both the First and Second Agricultural Labour Enquires, the stratified sample, random sampling method were used to collect the required data.

The Second All India Agricultural Labour Enquiry conducted in 1956-57, women workers numbered about 12 million that is about 36.5% of the total number of workers employed in agriculture.

Agricultural and Non-agricultural labourers in India and Tamil Nadu:

According to 1971 census, agricultural labourers in India numbered 4.75 crores representing 26.33% of the total work force in the country. The corresponding figure in 1961 was 3.15 crores and 16.7%. This increase in the number of agricultural labour has been accompanied by the decrease in the number of cultivators from 9.95 crores in 1961 to 7.32 crores in 1971.

IN TAMIL NADU TOTAL POPULATION ENGAGED IN LAND ARE(1971) CENSUS.

Total Workers		Cultivators		Agricultural labourers	
Male	Female	Male	Female	Male	Female
11,667,065	3,074,902	4,026,573	581,209	2,817,580	1,672,485

A number of studies on this subject have been undertaken recently. Hence some of important studies connected with the problems are reviewed.

The Income and Expenditure of Agricultural and Non-Agricultural Labourers.

The average annual income of agricultural labour household in India during 1950-51 was Rs.437.00 during 1956-57 it fell to Rs.437.47 but increased to Rs.660.19 during 1963-64.

The All India Rural Household survey income saving and consumer Expenditure conducted by the NCAER revealed that the propensity to save among rural households during 1967-68 was 3.5% as against 39% as against 39% of the urban households.

Second Agricultural labour Enquiry showed a visible deterioration in the conditions of agricultural labourers even during a short period of five years (1951-52 to 1956-57).

The factors affecting to conditions of agricultural labourers in Coimbatore District of Tamil Nadu also brings out the fact that the agricultural labour class is greatly predominated by persons belonging to lower castes (67.5%) in striking contrast to that of the farming community which is strongly represented by higher castmen. The daily wage rate of an average male worker and female worker are Rs.3.40 and Rs.2.05 respectively. This study has proved in

confirmity with the other previous studies that the conditions of agricultural labour are very poor and miserable.

According to the recent survey conducted by the NCAER household income, saving and consumer expenditure revealed the fact that the average income per household in the country worked out to Rs.2,748 for 1967-63. It was Rs.2,560 for the rural household and Rs.3,467 for the urban. Between 1962 and 1967-68 the inequalities in income seems to have increased in the rural areas.

The average expenditure per household on cereal was Rs.59 per months for the country as a whole Rs.54 in the Non-agricultural sector and Rs.61 in the agricultural sector. Nearly 31% of the income of all household was spent on cereals and pulses. For the country as whole, expenditure on consumer durables accounted for 1.5% of the disposal income. The agricultural households spend around 1.25% of the disposal income on consumer durables. Where as, this portion was 2.5% for the Non-agricultural sector.

The National council of applied economic Research from almost its inception had initiated a long term programme of research in the field of income, expenditure, saving and investment.

- a) Delhi Saving Survey - A pilot study
NCAER-1959.
- b) Urban income and Survey-NCAER-1960.
- c) All India Rural Household Survey-NCAER-1962-63.
- d) Household Income, saving Survey-NCAER-1962-63.

Second Agricultural labour Enquiry showed a visible deterioration in the condition of agricultural labourers even during a short period of five years (1951-52 to 1956-57) in terms of average daily wage rate, indebtedness, extent of employment the average annual income and so forth, notable among them are the following:

- 1. First Agricultural Labour Enquiry by the Ministry of labour-1950-51.
- 2. Secondary Agricultural labour Enquiry by the Ministry of labour - 1956-57.
- 3. A study of factors affecting economic conditions of agricultural labourers in Coimbatore District (Tamil Nadu) in the context of Agrarian changes [CSSR Project.

Some other important studies on the problems are listed as follows:

- a) Agricultural labourers in four Indian Villages- by Agricultural Research Centre Vallab Vidhyanagar-1964.
- b) Agricultural labour in Eastern District of Uttar Pradesh by Srivastava R.S.in 1966.
- c) Problem of Marginal farmers and landless Agricultural Labourers. A study in Hissan District of Haryana State by Agricultural Economic Research Centre, Delhi in 1970-71.

All the above studies have come to a bitter conclusion that the condition of agricultural labourers conditions critically and have suggested valuable solutions.

Saving and Debt of Agricultural and Non-Agricultural Labourers:

The pilot saving survey of Delhi Households conducted by the National Council of Applied Economic Research in 1959, was the first of its kind undertaken by the research institution in India. The important findings of the survey were that the savings income ratio showed marked variation between different income classes. The variation rose consistently with the income indicating a higher marginal propensity to save with increasing income.

The All India Rural Credit Survey conducted by Research Bank of India in 1951 revealed that 63% of the rural families were in debt and the average amount of outstanding debt per family varied from Rs.29 to Rs.1200.

The first Agricultural Labour Enquiry Commission in 1950-51 and the Second Agricultural Labour Enquiry Commission in 1956-57 categorically stated that the average debt per indebted household was Rs.138 in 1956-57 against Rs.105 in 1950-51.

The All India Rural Household saving survey conducted by the NCAER in 1962 revealed that the average propensity to save varies between 3.5% and 5.5% and the corresponding marginal propensity to save ranges between 14.5% to 16.87%.

The All India Debt and Investment Survey conducted by the Reserve Bank of India 1971-72 estimated that the total amount of debt for cultivator was Rs.612 and non-cultivator Rs.210. The average debt per all rural households taken together was Rs.503. It was also estimated that 65% to 70% of the small farmers and artisans in rural areas were in debt.

The Expert committee on consumption credit set up in March 1976 by the Government of India under the Chairmanship of Sri.B.Srinivasan, estimated Rs.170 crores that would be required for meeting the consumption credit needs of the people having land holdings 'nil' and from 0.01 to 0.50 acres.

A major part of the gross saving of the household was in financial form whereas a major part of the saving in the rural household represented investment for improving or purchasing of assets in agriculture.

According to All India Rural Credit Society Report about 63% of the rural families were in debt and the average amount of debt per family was Rs.283 and the survey estimated the value of debt at Rs.750 crores in 1951-52.

The Reserve Bank of India initiated a survey called 'All India Debt and Investment Survey in 1961-62 According to the Survey the average debt per household comes to Rs.654 and the outstanding debt of cultivators stood at Rs.2,380 crores at the end of 1962.

The all India Debt and Investment Survey 1971-72 was the country wide investigation on household indebtedness and investment undertaken by the Reserve Bank of India. It has been estimated that the total amount of debt among the poor sections of the rural household in 1971-72 was Rs.3,920 crores. The average debt per cultivator household was Rs.612 and non-cultivator household was Rs.210. It was also estimated that 65% to 70% of the small farmers and artisans in rural areas were in debt. The recent RBI reports on All India Debt and Investment Survey 1971-72 pointed out that about 43% of the rural household, were in debt, the proportion substantially lower than that observed in 1960-61 when nearly 73% were in debt in some form or other.

Investigator has shown that standard of living of a time and place tend to move the spending habits of a given social group. The studies of the Income and Expenditure pattern of a representative sample of such a social group will help to reveal the present consumption practices, to bring out the good points in their practices and to work out a suitable plan for

their use, with minor alterations can be used by them to raise their standards. Thus the Income and Expenditure studies have a vast hold of application; all the which are directed towards the welfare of the family.

Methods of studying Income and expenditure Pattern:

The income and expenditure data are personal matters of the people and the data for the study has to be obtained from the families themselves.

Schluter (1929) and Moser (1958) point out that the methods of obtaining data from primary sources as:

- 1) Personal observation
- 2) Personal correspondence as questionnaire letters.
- 3) Assistance employed and using previously collected data.
- 4) Personal interview.

I Personal Observation:

Good and Scates state, observation seeks to ascertain the over behaviour of persons by attaching them as they express themselves in variety of situations, selected or its represent some special set of factors. This is the most direct means of studying subject when interviewee is interested in their over behaviour.

It is specific, systematic, quantitative, expert and can be checked and certified by comparing the results of different observers. An observer lives with a family and studies its expenditure pattern, but if this is possible at all it can only be done on a very small scale. Record keeping or interviewing are more appropriate methods in such cases.

2. Personal Correspondence:

The Questionnaire has certain drawbacks such as unless it is very simple, it cannot be understood by the people or used effectively, no checking is possible; it is inappropriate where spontaneous answers are handed; the respondent is also able to refer to later questions so each answer cannot be treated as independent and it does not provide the essential background materials provided by observations.

3. Assistance Employed:

Doing the survey by employed investigators or using previously or currently collected data produces many difficulties. The assistant may not understand or interpret the questionnaire as they should be.

4. Interview Investigations:

It may be regarded as a systematic method by which a person enters more or less insignificantly, imaginatively into the inner life of a comparative stranger, young (1956) of all the methods mentioned by Schluter (1929) personal interview is the most suited for the study of income and Expenditure of families, since it involves personal data.

Burchinal and Hawkes (1957) point out that "Wherever the local data of the investigators are the attitudes, perceptions or interests of persons, the most fruitful approach to obtaining the pertinent data, is to ask the individual themselves".

The interview is a face^{to face} method of obtaining their implementation by means of conversation carried on by the interview of the respondents.

It is necessary therefore that an interview Schedule is prepared and used as the basis for the interview to be conducted in an ordinary manner.

EXPERIMENTAL PROCEDURE

Selection of the Area

As the topic is income and expenditure pattern of agricultural and non-agricultural labourers, the selection of the village for the study will be agricultural and non-agricultural oriented. In this the investigator has selected the village Kethanur (a Village in Coimbatore District).

Selection of Method

Survey method is adopted because the samples are to be interview by the investigator to get first hand information. It is essentially a method of collecting data. To aid in this study, interview schedule method is prepared. We have selected interview schedule method, because of certain advantage "As Young points out that interviews are useful in the collection of personal data for quantitative purposes. They allow the interviewer to go behind mere outstanding behaviour, aid him in checking the external observation and enable him to study more variations, emotional responses and social processes as they are refelected in human experences and social situations".

3. Selection of Samples

The investigator selected 200 families in Kethanur. In this 100 from agricultural labourers and 100 from non-agricultural labourers.

Conducting the interview

The interview with the selected 200 families were conducted by first establishing rapport and then asking questions based on the schedule.

Starting with enquiries about the size and composition of families, a gradual approach was made with regard to the housing conditions and later about income.

The information given in some cases were inferential, as the families had not kept accurate record of income and expenditure because of changes in the families life cycle and seasonal variations.

Working definition of the concept

Income

Income of both agricultural and non-agricultural labourers is defined as the sum of the earnings of all the members in a household during the reference period.

Expenditure

Consumption expenditure relating only to domestic consumption of the household like cereals, milk and milk products, other food items Fuel and Light, Clothing and other goods.

Agricultural Labourers

Agricultural labourers are the workers who work as wage earners on the farms of others.

Village Artisans

Village Artisans are persons who have skills in some trade or craft. For example a carpenter, mechanic or mason.

Women and Child Labour

A distinct feature of agricultural employ^{ment} is the preponderance of women and children as wage earners while such employment is often resorted to supplement family income. Employment of women is generally confined to particular agricultural operations such as transplanting, weeding and harvesting. Children are employed for cattle tending, weeding etc.,

Debt

It means any sum of money which a person is liable to pay under a contract for consideration received and includes rent in cash or kind which a person is liable to pay in respect of the lawful use and occupation of agricultural and non-agricultural.

Savings

The word saving here refers the surplus amount of income over the expenditure.

Investment

Money invested in shares, bonds, deposits and in other assets in business and in consumer durables during the reference period.

IV RESULTS AND DISCUSSIONS

Background information of the village

The village Kethanur was surveyed during the year 1979-80. We selected this village because it is a typical village in the district of Coimbatore.

Type of the family

In agricultural families 87 percent of the the families are nuclear families. The remaining 13 per cent of the agricultural labourers come under joint type. Taking the type of family under non-agricultural labourers, our survey shows 84 per cent of the families come under nuclear and 16 per cent of the families are under joint type.

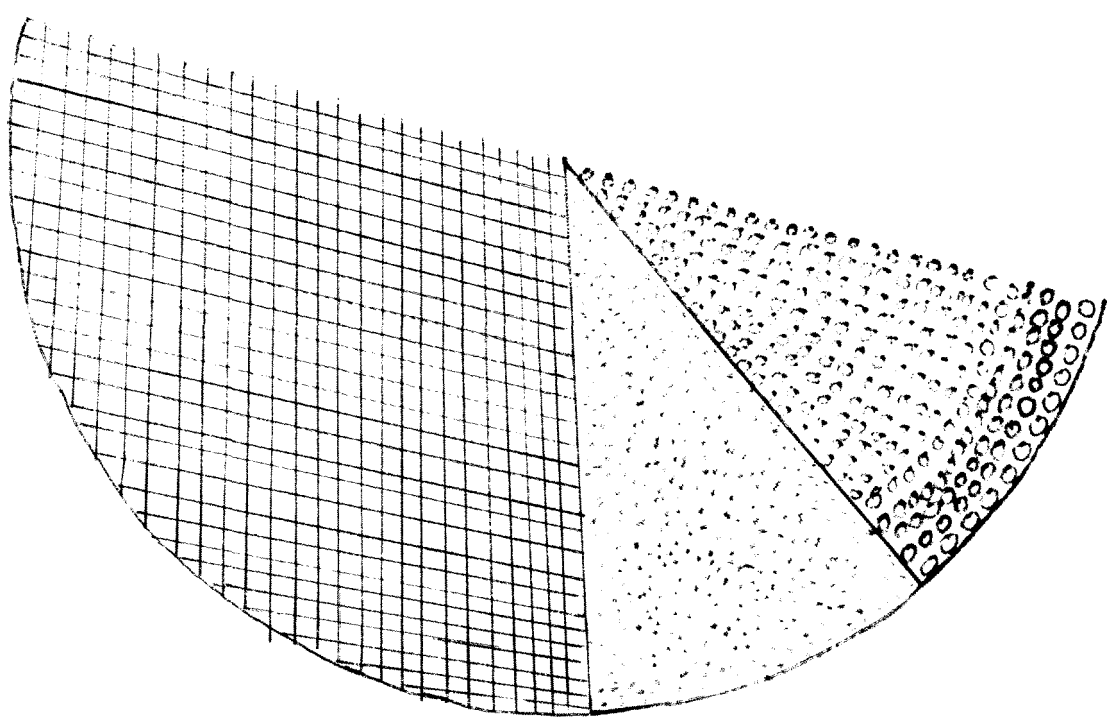
An attempt was made in this chapter to study the income and expenditure pattern of agricultural and non-agricultural labourers in the selected village.





The income and expenditure pattern include sources of income, range of income, range of Income from subsidiary occupations, total domestic expenditure and range of expenditure.

TABLE I
SOURCES OF INCOME

S.No.	Sources	Number of respondent	Percentage
1.	Agriculture	100	100
2.	Weaving	59	59
3.	Mill	21	21
4.	Other sources	20	20

SOURCES OF INCOME



-  AGRICULTURAL LABOURERS
-  WEAVING
-  MILL WORKERS
-  OTHER SOURCES

The above table indicates that 190 families in the village get their income by way of agricultural wages: 59% by way of weaving: 21 per cent get income from salaries and the remaining 20 per cent of the families get income from other sources . Sources of income of the sample is also shown in figure II.

Range of income

TABLE II

Agricultural Labourers

Income range	Number of respondent	Percentage
Below 250	62	62
Middle 251-750	38	38
Above 751	-	-

NON-AGRICULTURAL LABOURERS

Income range	Number of respondent	Percentage
Below 250	2	2
Middle 251 to 750	97	97
Above 751	1	1

From the above table we, understand that out of 100 household, 62 households of the Agricultural labourers get income below 250 where as in the case of non-agricultural labourers only 2 families get income below 250. This survey shows that 62 families get Rs.250 per month and 38 families of agricultural labourers get income of Rs.251-750 as their income per month. This survey tells us to vast disparity in the level of income distribution in the village Kethanur.

Occupation and Income

The survey tells us the relationship between the level of income and occupation.

TABLE III

Occupation /Income	Below 250	Middle 251-750	Above 751
Agricultural labourers	62	38	-
Weaving	2	57	-
Mill workers	-	20	1
Other sources	-	20	-

The above table expresses that people who have chosen their main occupation as non-agriculture get more than Rs.251-750 per month. To be precise, 57% of weavers get Rs.251-750 per month and only 2 per cent of the weavers earn below Rs.250 as their income per month. The survey tells us that 20 per cent of Mill workers are getting Rs. 251-750 as income per month and one families get more than Rs,75 per month. Taking the other workers, all the 20 families earn Rs.251-750 per month.

TABLE V

Range of income from subsidiary occupation

Income	Number of families
Below 250	25
Middle 251 to 750	16
Above 751	20

From the above table we understand that out of 100 families of agricultural labourers surveyed, 61 families are getting income from cattle as their subsidiary occupation. This kind of income help the agricultural labourers to meet their daily expenses.

Income and educational level

TABLE VI

Agricultural labour

<u>Educational level of the respondent</u>	<u>Number of respondent</u>	<u>Percentage</u>	<u>Total income Rs.</u>	<u>Average income per households Rs.</u>
Illiterate	73	73	18,980	260
Primary	19	19	5,890	310
Secondary	8	8	2,320	290

In the above table, among 100 agricultural labour families 73% are illiterates and they get below Rs.250 as per average income, where as 19 families are educated up to primary school they get Rs.310 as per average income and the remaining 8% received education upto secondary level and they get income of Rs.290 as per average income.

TABLE VII

Non-agricultural labourers

Educational level of the respondant	Number of respondant	Percentage	Total income	Average income per household
Illiterate	7	7	2450	350
Primary	85	85	26250	450
Secondary	8	8	4160	520

From the above table, among 100 families of non-agricultural labourers, only a small numbers of people are illiterates. Out of this seven families earn Rs.350 as income per month. Workers who have received education upto primary level get Rs.450 as average income per household and only 8 families are at the secondary level they get Rs.520 as average income per household.

Total Domestic Expenditure

The way in which and the amount spent on various forms of expenditure certainly have an impact on indebtendness, savings and investment pattern of the rural households. The rural household who were indulged in extravagant or unwise expenditure might have limited means to save or might borrow to bridge the expenditure gap resulting out of their fixed income. In the same way those who had prudent spending might

have had adequate surplus at their disposal to invest in a profitable way. The total expenditure on food, clothing, housing, light and heat, education, medicine, rituals and recreation.

TABLE VIII

Total expenditure on various items

S.No.	Expenditure	Amount (Rs per month)	Average per families	Percentage
1.	Food	15500	155	75.1
2.	Clothing	3000	30	14.5
3.	Education	37	37	.17
4.	Medical	350	3.5	1.2
5.	Recreation	1200	12	5.8
6.	Transport	535	5.35	2.6

In the above table, total expenditure of Agricultural labourers spend more on food, clothing and recreation and spend less on education and health. Agricultural labourers spend Rs.155 on food as average per families, clothing Rs.30, .37 on education, Rs.3.5 on medical, Rs.12 on recreation and Rs.5.35 on transport as average per families

TABLE IX

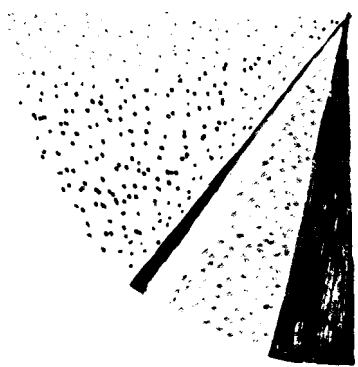
Non-Agricultural labourers:-

S.No.	Expenditure	Amount	Average per families	Percentage
1.	Food	24548	245.48	70.9
2.	Clothing	4860	48.6	14.5
3.	Education	420	4.2	1.2
4.	Light	985	9.85	2.8
5.	Medical	850	8.50	2.4
6.	Recreation	1225	12.25	3.5
7.	Transport	1700	17.00	4.9

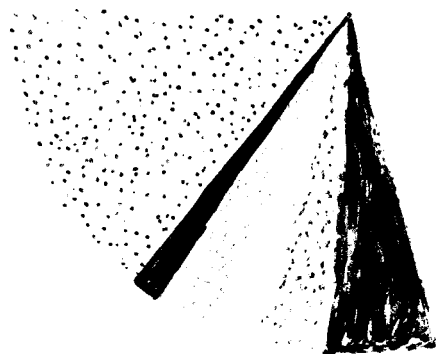
The above table explains that the non-agricultural labourers spend less on food compared to agricultural labourers. For clothing all the 100 non-agricultural labourers spend 50 as an average compared to agricultural labourers. Total expenditure on various items of Agricultural and non-agricultural labourers is shown in the Figure II.

TOTAL EXPENDITURE ON VARIOUS ITEMS

AGRICULTURAL LABOURERS.



NON-AGRICULTURAL LABOURERS.



- FOOD
- CLOTHING
- EDUCATION
- LIGHT
- HEALTH
- RECREATION
- TRANSPORT

TABLE X

Range of total Expenditure and occupation

S.No.	Occupation/ Expenditure	Below 250	Middle 251-750	Above 751
1.	Agricultural labourers	85	15	-
2.	Mill workers	-	21	-
3.	Weavers	5	54	-
4.	Other sources	4	16	-

The above table indicates that 85% of agricultural labourers spend below 250 and 15% of the agricultural labourers are in a position to spend 251 to 750. This shows 85% of the agricultural labourers are poor, getting low level of income of Rs.250, 21% of mill workers, 54% of the weavers and 16% of other workers are in a position to spend Rs.251 to 750 it shows that 91% of the non agricultural labourers are getting better income of Rs.251-750 per month. Only 9% of the non agricultural labourers are poor and getting below Rs.250 as income per month.

Range of Expenditure

TABLE XI

Agricultural labourers

Amount	Food	Clothing	Education	Light	Medical	Recreation
Below 250	85	100	3	-	37	75
Middle 151-750	15	-	-	-	-	-
Above 751	-	-	-	-	-	-

Out of 100 families 85 per cent of the families spend below Rs.250 per month on food and 15 per cent of the families are able to spend Rs.251-750 per month on food. Where as, all the 100 families of agricultural labourers spend below Rs.250 on clothing and only 3 families spend below Rs.250 on clothing and only 3 families spend below Rs.250 on medical and the other 63 families get the medical help from government hospital and 75 per cent of the agricultural labourers spend below 250 on recreation and remaining 25 per cent did not mention expenditure on recreation. From the above table we conclude that the agricultural labourers spend more on food and they are not interested to spend on education which is the main reason for the high level illiteracy in this village Kethanur.

TABLE XII

NON AGRICULTURAL LABOURERS

Amount	Food	Clothing	Education	Light	Medical	Recreation
Below 150	60	100	20	100	95	97
Middle 251-750	40	-	-	-	-	-
Above 751	-	-	-	-	-	-

Out of 100 families of non agricultural labourers, 60% of the families spend below Rs.250 per month on food and the remaining 40% of the families spend income range of Rs.251-750 per month on food. Where as on clothing all the 100 families spend below Rs.250 per month, 20% of the families spend below Rs.250 on education and all the 100 families spend below Rs.250 on light, 95% of the people spend below Rs.250 on medical and 97% of the families spend below Rs.250 on recreation.

The above table shows that 20% of the families are spending below Rs.250 on education which indicates that non-agricultural labourers are interested in getting education than the agricultural labourers. The table shows the attitude

and interest of non-agricultural labourers, towards education. Since the level of income of non agricultural labourers is better than the agricultural labourers, it determines the attitude and interest of the non-agricultural labourers towards education.

a. Correlation between total family income and expenditure on food

	r
Agricultural labourers	+ . 5998
Non-Agricultural labourers	+ . 8015

Since food is one of the basic necessities for human beings to live, agricultural and non-agricultural labourers spend more on food as their income increases. From the above table we understand there is a positive correlation between the total families income and expenditure incurred on food by agricultural and non-agricultural labourers which means higher the level of income higher is the proportion of expenditure on food.

Correlation between Income and Expenditure on Clothing

	r
Agricultural labourers	- . 3459
Non-Agricultural labourers	+ . 1096

The above table indicates that there is a correlation between the total family income and expenditure incurred on clothing by agricultural and non-agricultural labourers. There is a negative correlation between income and expenditure on clothing by the agricultural labourers which means as income increases the proportion of expenditure on clothing decreases. But in the non-agricultural sector, there is a positive correlation between income and expenditure on clothing which means as income increases, the proportion of expenditure on clothing also increases.

Since the expenditure incurred on clothing by the non-agricultural labourers is greater than the agricultural labourers, we understand that, the proportion of expenditure on clothing by agricultural labourers decreases as there is slow increase in income.

C. Correlation between income and expenditure on Transport

	r
Agricultural labourers	+ . 4864
Non-Agricultural labourers	+ . 6001

The above indicates that there is positive correlation on between the total family income and expenditure incurred on transport by the agricultural and non-agricultural labourers , which means higher the level of income higher is the proportion of expenditure on transport.

Development of transport is a sine-quo-non of economic development of a nation. Since agricultural and non-agricultural labourers spend more on transport as their income increases, it could be encouraged by the government which will promote primary, secondary and Territory sectors.

d. CORRELATION BETWEEN INCOME AND EXPENDITURE ON HEALTH

	r
Agricultural labourers	- . 3629
Non-Agricultural labourers	+ . 0150

The above table shows the negative correlation between the total family income and expenditure incurred on health by the agricultural labourers, which means higher the level of income, lower is the proportion of expenditure on health. The level of income may be one of the reasons for their poor health. In the non-agricultural^{sectors}, there is positive correlation between the total family income and expenditure incurred on health, which means higher the level of income higher is the proportion of expenditure on health.

e. TOTAL FAMILYS INCOME AND EXPENDUTURE ON RECREATION

	r
Agricultural labourers	+ . 9370
Non-agricultural labourers	+ .9381

There is positive correlation between the total family income and expenditure on recreation by agricultural and non-agricultural labourers which means higher the level of income higher is the proportion of expenditure on recreation. The above table shows the attitude of agricultural and non-agricultural labourers towards recreation.

TOTAL FAMILY INCOME AND EXPENDITURE ON EDUCATION

	r
Agricultural labourers	- . 4894
Non-agricultural	+ 0. 9112

The above table indicated the positive correlation between the total family income and expenditure incurred on education by the non agricultural labourers, which means higher the level of income higher is the proportion of expenditure on education and in the agricultural labourers shows the negative correlation between the total family income and expenditure incurred on education, which means higher the level of income lower is the proportion of expenditure on education.

The level of literacy is an indicator of economic development of a nation since industrialisation takes place with the help of technical know how, it is the duty of the government to provide free education to people who can't afford to spend more on education. Therefore expenditure on education could be encouraged by government so as to develop its economy with proper industrialisation.

Savings

Savings is the crucial factor for the success of planned economic development in India. Savings can boost up the economy through investments in productive spheres that inturn increases the production. But the saving habit depends upon many factors, of all these factors, the factor of low income, is the important determinant of the saving habit of the people. Saving habit and the extent of savings are very meagre due to low per capita income, poverty, indebtedness and unwise expenditure. Another factor for non ^{saving} ~~saving~~ habit in the rural areas is the non availability of banking business. In reality, the savings in the rural areas is very insignificant.

TABLE XIII

EXTENT OF SAVINGS.

Agricultural labourers

Amount	Number of respondant	Percentage
Below 250	2	2
Middle 251-750	4	4
Above 751	-	•

The above table shows that out of 100 families of agricultural labourers, only two agricultural families are in a position to save below Rs.250 which comes to the extent of 2% more over other four agricultural labourers in the village save Rs.251-750.

From the above table, we understand that, main reason for the low level of saving may be due to low level of income. And low level of saving may be due to lack of knowledge on the part of people to save and lack of thrift habit among the agricultural labourers.

TABLE XIV

NON-AGRICULTURAL LABOURERS.

Amount	Number of respondent	Percentage
Below 250	48	48
Middle 251-750	21	21
Above 751	-	-

Taking the non agricultural labourers 48% are in a position to save below Rs.250 and 21% of the non-agricultural labourers have cultivated habit of saving Rs.251 to 750 which shows their attitude towards thrift. Thus may be due to their better level of income of the non agricultural labourers than the agricultural labourers.

CORRELATION BETWEEN INCOME AND FAMILY SAVING

	r
Agricultural labourers	+ .9208
Non-agricultural labourers	+ .6048

The above table indicate that there is a positive correlation between income and family saving of the agricultural and agricultural labourers when the income of agricultural and non-agricultural labourers increases there is a corresponding increase in the level of savings.

TABLE XV

PURPOSE OF SAVINGAgricultural labourers

S.No.	Purpose	Number of respondent	Percentage
1.	For old age	2	2
2.	To meet domestic function	4	4

Out of 100 families surveyed 2 families save for the betterment of future and 4 families have the capacity to save to meet their domestic function. From this, we understand that among the very few persons who have the capacity to save are willing to spend more on functions and festivals rather than for the betterment of the future which shows the attitude of agricultural labourers towards transactive motive rather than precautionary motive.

TABLE XVI

Non-Agricultural labourers

S.No.	Purpose	Number of respondent	Percentage
1.	For old age	18	18
2.	To meet food expenses	5	5
3.	Domestic function	20	20
4.	Sickness	26	26

Among 100 families of the non-agricultural labourers 60% of the people have the capacity to save and out of this 18 families save income for the oldage, 5% of the families are saving to meet food exprensens, 20% of the families save for the demostic function and the remaining 26 families save their income to meet expenditure on sickness. The table shows that most of the non-agricultural labourers save money to meet the expenditure on sickness and function. This could be reduced by paying proper attention towards health.

INVESTMENT

Investment can be divided into two types which are investment in institution and investment in non-institution. Institutional investment includes shares in co-operatives, deposits in co-operative and commerical banks, savings account in post office and provident fund. Non-institutional investment includes investment in petty business like teastull, petty shops, hire cycle, shops and consumer durables etc.

TABLE XVII

FORMS OF INVESTMENT IN CONSUMER DURABLES

Agricultural labourers

Amount/Items	Radio	Cycle	Cart	Jewels	Others
Below 250	-	-	-	-	-
Middle 251 to 750	2	-	-	25	-
Above 751	-	-	-	-	-

Out of 100 families surveyed 2 families have invested Rs.251 to 750 ^{on radio} and 25 families have invested Rs.251 to 750 on Jewels. In that we understand that low level of investment may be due to low level of saving. Above all, low level of income is mainly responsible for low level of investment. If proper income generating activities have been provided ability to save and invest could be increased considerably.

TABLE XVIII

NON-AGRICULTURAL LABOURERS

Amount/items	Radio	Cycle	Cart	Jewels	Others
Below 250	-	-	-	-	-
Middle 251 to 750	8	21	5	-	-
Above 751	-	-	-	62	62

Investment made by non-agricultural sector is greater than the agricultural labour. Out of 96 families 8 families have invested Rs.251 to 750 on radio and 21 families on cycle, 5 families have invested Rs. 251 to 750 on cart and 62% of the families have invested on above Rs. 751 on Jewels and remaining four families have not invest any item.

Ability of the non-agricultural labourers to invest is comparatively better than the agricultural labourers. This may be due to betterment and regular level of income of the non agricultural labourers. People (both agricultural and non-agricultural labourers) who have the capacity to invest have invested more on Jewels which shows their attitude towards unproductive investment rather than productive investment.

INDEBTEDNESS

For a long time the credit requirement of the rural people has been met by the non-institutional agencies. They have been exploiting the rural people, by charging exorbitant rate of interest and usurious money lending. These exorbitant rate of interest tend to perpetuate the indebtedness of rural people. Rural indebtedness is of the burning and pressing problems of Indian society. The higher order of rural indebtedness is only a reflection of the more serious maladies of rural poverty and unemployment. Finding an effective solution to the problem of rural indebtedness is the first step for our economic progress .

In this, an attempt has been made to assess the nature and extent of rural indebtedness among various occupational groups and their socio-economic factors that influenced the rural indebtedness.

TABLE XIX

47

DEBT AMONG DIFFERENT OCCUPATIONAL
GROUPS.

Occupation	Total number of indebted household	Total debt of house- hold	Average debt of the household
Agricultural labourers	52	5575	145.6
<u>Non-Agricultural Labourers</u>			
Weavers	20	3545	177.1
Mill workers	2	1000	500
Other sources	3	700	233.3

Out of 100 agricultural labourers, 52% of the families have incurred debt to the tune of Rs.5575 where as out of 100 non-agriculatural labourers 25 families have debt to the extent of Rs.5245. From this we understand that more than half of the agricultural labourers are suffering from debt. This may be due to their inadequate and irregular level of income to meet their grousing expënditure. Where as only 25% of non-agricultural families have debt because of their regular income.

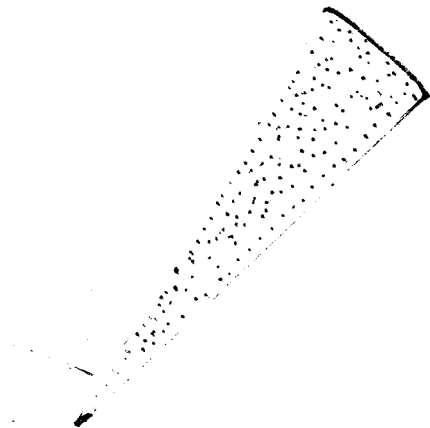
TABLE XX


EXTENT OF DEBT ON VARIOUS AGENCIES AGRICULTURAL LABOURERS

Agencies/Amount	Below 250	Middle 251-750	Above 251	Total
<u>Non-Institutional</u>				
Money lenders	28	24	-	52

Money lenders play a dominantⁿ role in providing credit to the agricultural labourers, 52% of the agricultural labourers who are suffering from debt have received credit from the money lenders which shows their ignorance about the availability of other government financial institutions which are ready to help the agricultural labourers. In order to increase the level of income^o, output and employment of a nation the role of government, financial institutions and co-operative societies must be strengthened which will automatically pave way for better standard of living as a result maximisation^x of welfare which is one of the objectives of our plan could be achieved.

EXTENT OF DEBT ON VARIOUS AGENCIES



 MONEY LENDERS


 CO-OPERATIVES

TABLE XXI

NON-AGRICULTURAL LABOURERS

Agencies/Amount	Below	Middle 251-750	Above 751	Total
<u>Institutional</u>				
Co-operatives	-	16	-	16
<u>Non-Institutional</u>				
Money lenders	5	4	-	9

From the above table we understand 16% of the families are aware of co-operative societies which are providing easy and accessible credit at reasonable level of interest to the people and set of 25 families who have debt, 16 families have resorted the help of co-operative Banks and received money to the extent of Rs.251-750 and the remaining 9 families approach money lenders for their money. Extent of debt on various agencies of agricultural and non-agricultral labourers is shown in figure III

TABLE XXII

EXTENT OF DEBT ACCORDING TO PURPOSE AND AGENCY

Agricultural labourers

Agency/Purpose	Marriage	Function	To meet food expenses	Sickness
<u>Non-Institutional</u>				
Money lenders	-	15	37	-

From the above table among the 52 families 15% are in debt to meet domestic function and the remaining 37% of the families are in debt to meet food expenses. From this we understand that agricultural labourers incur debt mainly to meet expenditure on food. This may be due to their irregular nature of income and irregular level of output with which agricultural is subjected to

TABLE XXIII

NON-AGRICULTURAL LABOURERS

Agency/purpose	Marriage	To buy looms	Function	To meet food expenses	Sickness
<u>Institutional</u>					
Co-operative	-	16	-	-	-
<u>Non-Institutional</u>					
Money lenders	2	-	2	3	2

Out of 25 non-agricultural labourers 16 families have received money from co-operative Banks and they are in debt to buy looms and other families have received money from money lenders. Among the 9 families 2% are indebt to meet food, 2% are in debt to meet domestic function, 3% are indebt to meet food expenses and the remaining 2% have indebt due to sickness. The role of Co-operative societies must be strengthened so as provide credit to agricultural labourers. More over governmental agencies must come forward to help the agricultural labourers and relieve them from the clutches of money lenders.

Debt According to rate of interest:-

The role of interest charged by different agencies varied significantly. The variations in the interests among the institutional agencies were due to the terms of loan where as in case of non-institutional agencies factors such an amount of credit, purpose of credit security, kinship and the past behaviour of individual were also taken into consideration while fixing the rate of interest. The following table will reveal the classification of debt according to the rate of interest.

TABLE XXIV

DEBT ACCORDING TO RATE OF INTEREST

Rate of interest	Institution	Non-Institution	Total
Below 5%	-	22	22
5% to 10%	-	30	30

Since the agricultural labourers do not know much about the financial institutions they still approach the money lenders who charge high rate of interest, 22% of the families have received loans at the rate of below 5% and the remaining 30 families have received loans of the rate of 5 to 10%.

From the above the table understand money lenders charge high rate of interest for their loans. Despite of the fact that agricultural labourers still approach the money lenders who are charging exhoribitant rate of interest. This may be due to money lenders give loans and without getting any security from them. Role of Government and financial agencies is essential to give timely, adequately loans and advances at reasonable rate is the agricultural labourers which will help the agricultural labourers from the clutches of money lenders.

TABLE XXV

Rate of interest	Institution cooperative	Non-Institution Money lenders	Total
1.5%	16	-	
5%	-	9	

From the above table we can clude that most of the non-agricultural labourers get loans from co-operatives at the rate of 1.5% and 9% of the non-agricultural labourers get money from money lenders at the rate of 5%.

V. SUMMARY AND CONCLUSION

Our study made an attempt to findout the income of the selected agricultural and non-agricultural labourers, the expenditure pattern of selected agricultural and non-agricultural labourers and the savings and debt of the selected agricultural and non agricultural labourers.

Findings of the study:

1. In our study for the 100 agricultural families 87 families are nuclear and the remaining 13 families are joint. Where as, out of the 100 non-agricultural families 84 families are nuclear and 16 families are joint families.
2. Out of 200 families surveyed 100 families get income from agricultural wages, 59 families from weavings; 21 families from mill; 20 from other sources.
3. Income range of agricultural labourers is low compared to non-agricultural labourers; 62 families of agricultural families get income below 250; 38 families of agricultural labourers get income of Rs.251-750 where as in the case of non-agricultural families, 2 families get income below

- 250, 97 families get income range of Rs.251 to 750 and only one family get income above Rs.751.
4. Out of 100 families, 62 families of agricultural labourers are getting income from subsidiary accuption.
 5. Out of 100 agricultural labourers, 73% are illetrates where as, in the case of non-agricultural families 19 families are educated upto primary school and the remaining 8 families have received education up to secondary level. In the non-agricultural sector, 85family have received education upto primary level and only 8 families are at the secondary level.
 6. Taking the total expenditure on various items of the agricultural labourers, it is clear that 75% of the total expenditure goes to food and in non-agricultural labourers only 70% of the total expenditure goes to food. There is no vast difference between the expenditure incurred on food by the agricultural and non-agricultural labourers.
 7. 85 families of agricultural labourers spend below Rs 250 as their total expenditure and 15 families of the agricultural labourers are in a position to spend Rs.251-750.

8. Taking the non-agricultural labourers 21 families of mill workers, 54 families of the weavers and 16 families of other workers are in a position to spend Rs.251 to 750 only 9 families of the non-agricultural labourers are spending below Rs. 250/.
9. Out of 100 families of agricultural labourers, 85 families spend below Rs.250 per month on food and 15 families are able to spend Rs.251-750 per month on food. Where as all the 100 families of agricultural labourers spend below Rs.250 on clothing and only 3 families spend below Rs.250 on education, 37 families spend below Rs.250 on medical and other 63 families get the medical help from the Government Hospital and 75 families spend below Rs.250 on recreation and the remaining 25 families did not mention expenditure on recreation.
10. In the case of non-agricultural labourers 60 families spend below Rs.250 per month on food and the remaining 40% of the families spend income of Rs.251 to 750 per month on food.

Where as on clothing all the 100 families spend below Rs 250 per month, 20 families spend below Rs 250 on education and all the 100 families spend below Rs 250 per month electricity 95 families spend below Rs 250 on recreation.

11. Out of the 100 agricultural families only 6 families are in a position to save below 250 and the ability to save is greater in non-agricultural sector. 48 families save below 250 and 21 families save Rs.251-750.
12. Out of 100 families surveyed 2 families save for the betterment of future and 4 families save to meet their domestic function, in the agricultural labourers. But in the non-agricultural sectors 8 families save to meet food expenses, 20 families save for domestic function and the remaining 26 families save their income to meet expenditure on sickness.
13. For the 100 agricultural families 2 families have invested Rs. 251 to 750 on radio and 25 families have invested Rs.251-750 on Jewles.
14. Investment made by the non-agricultural sector is greater. Out of 96 families 8 families have invested Rs 251-750 on radio and 21 families

on cycle 15 families have invested Rs 251-750 on cart and 62 families have invested, ~~in~~ above Rs 751 on Jewels and the remaining 4 families have not invested on any item.

15. The level of expenditure of agricultural and non-agricultural labour is not only influenced by the size of Income but also the attitude and education of the family members also influence the level of expenditure to a certain extent.
16. Out of the 100 agricultural families 52 families incurred debt and 100 non-agricultural labourers only 25 families are in debt.
17. 52 agricultural families all the families received money from money lenders. Among 52, 28 families have received money below Rs 250 and 24 families have received money to the tune of Rs 251-750.
18. Out of the 25 non-agricultural labourers 16 families have resorted to help of Co-operative banks and received money to the extent of Rs 251-750 and the remaining 9 families get money to money lenders.
19. Among the 52 agricultural families, 15 are indebt to meet domestic function and the remaining 37 families are in debt to meet food expenses.

20. Out of 25 non-agricultural labourers 16 families are in debt to buy looms and among the 9 families, 2 are in debt for marriage, 3 are to meet food expenses and the remaining 2 are in debt for sickness.
21. In the case of agricultural labourers 22 families have received loans at the rate of below 5% and the remaining 30 families have received loans at the rate of 5 to 10%.
22. In the non-agricultural sectors, 16 families have received loans at the rate of 1.5% and the remaining 9 families at the rate of 5%.
23. The multi correlation test analysis shows that there is a ^{positive} ~~psotive~~ corelation btween the total family income and expenditure incurred on food by agricultural and non-agricultural labourers.
24. There is negative correlation between income and expenditure on clothing by the agricultural labourers which means as income increase the proportion of expenditure on clothing decreases. But in the non-agricultural labourers, there is a positive correlation between income and expenditure on clothing which means as income increases, the proportion of expenditure on clothing also increases.

25. There is positive correlation between total family income and expenditure incurred on transport.
26. Negative correlation between the total family income and expenditure incurred on health by the agricultural labourers. In the non-agricultural sector there is positive correlation between the total family income and expenditure incurred on health.
27. There is positive correlation between the total family income and expenditure on recreation by agricultural and non-agricultural labourers.
28. There is positive correlation between the total family income and expenditure incurred on education by agricultural and non-agricultural labourers.

SUGGESTIONS

Based on the above findings, some useful suggestions were offered to increase the income of rural households to make them to realise the importance of prudent spending to impart the need for savings and profitable investment to them and to relieve them from the burden of indebtedness.

Small scale industries and cottage industries may be started to provide employment opportunities to rural household especially to weaker sections like agriculture labourers, artisans etc. This will help to solve unemployment and under employment and will also reduce over pressure on land and consequent low wage structure.

Steps may be taken to provide institutional loan to rural households to start subsidiary occupations like dairy farming, poultry farming, bee keeping, sericulture etc. Which will provide additional income and employment.

With the assistance of voluntary agencies like youth clubs, social service organisations etc., the rural households should be enlightened about prudent spending and evils of extravagant and unwise expenditure and their possible indebtedness. They should also be educated about the allocation of expenditure for most needed and important items.

Proper steps should be taken to inculcate in the rural household about the importance and the need of savings and profitable investment. For this purpose the help of local Panchayats, District Co-operative Union, Youth Clubs and other Voluntary agencies can be sought.

Owing to lack of proper banking institutions in the rural areas, the savings made were either kept idle or utilised for unproductive purpose. So steps should be taken to start banking institutions in the rural areas and new novel deposits schemes may be introduced to attract more rural savings.

The institutional agencies should provide liberal loans to indebted rural households to get them relieved from the households to get them relieved from the households to get them clutches of non-institutional agencies.

B I B L I O G R A P H Y

1. Azad, R.N.
1978
Integrated rural development with focus on employment, Kurushetra, Vol XIX pp-52.
2. Burnalal, S.S
1979
New stretegy for rural development Yana Vol-XXI pp-52.
3. Dr. Bhagoliwal, T.N
1979
Economic of labour and social welfare published by Sahitya Bhawan - Agra 282003.
4. Bruchural, L.G
and Hankes, G.R
1977
Home interviews with families Vol XXXIX, pp-167.
5. Brayne, F.L
1968
Developing villages India - Raising the standards - pp-49.
6. Good, G.V and Scates,
D.E. 1954
Methods of Research, New York pp-607-643.
7. Gupta, R.D
Socio economic condition of Agricultural labourers - Kurushetra, Vol XIX No.9, pp-10.
8. Gordon Hayes.R.
1967
Farm organisation and management- published by Sahitya Bhawan pp-49, 109,100.
9. Ghosh, D.
1979
The Agricultural labour Yojana, Vol XXIX, No-12. pp.22.
10. Hardyal singer
1974
Socio economic condition of Agricultural labourers. Kurushetra, Vol.11, No.2. pp-10.
11. Jati, R.K.
1977
Village based industries of rural development Kuushetra, Vol.XXV No.10. pp-6 to 7.
12. Jivan Datt
1977
Village based industries of rural development Kurushetra, No 10, Vol XI pp-612.

13. Kurian, C.T. and Josef James
1960-70. Economic changes in Tamil Nadu
Allied publishers private Ltd
pp.24.
14. Lakhani, K.G
1973 Problems of economic development,
K.G College, Bombay. pp.115.
15. Madan, G.R, Ramash and Bhatayar, K.P
1964 Changing pattern of Indian Village,
village, Chand & Company-Delhi
pp-322 to 343.
16. Memoria, C.B
1976 Agricultural problems in India
Allahabad, Kitab Mehal, pp-418.
17. Moser, C.A
1958 Survey method in social investigation
London-William Heiman Ltd,
pp-162, 167, 177.
18. Muthiah, C
1968 Development of landless labourers,
Rural India Vol-10 No.1 pp-11 to
13.
19. Rastogi, T.N
1977. Indian industires labour, pp-2.
20. Reddy, V.R and Jeya shankar, S.R.
1977 Analysis of a village economic
structure Rural India, No.1
pp-13 to 16.
21. Randhawa, M.S
1968 Developing villages India. Studies
in problems-published by Delhi
pp.49.
22. Rao, V.K.R.V
1979 Agricultural labour in India,
Rural India No.4. pp.23.
23. Shah, S.M
1968 Rural Development planning and
reforms, pp.7.
24. Saxena, R.C
Labour problems and Social welfare
Published by K.N. Gupta Jai
Prakash & Company meerut
City pp.564, 704, 758.

25. Srivastava, S.K
1968
Agricultural Economics and Cooperation
pp.11 to 12.
26. Milton snodgrass, M
and Luther. Wallace,
T. 1970.
Agricultural economics and growth,
printed in U.S. pp.88.
27. Schulater, W.C
1972
How to do research work, New York,
prentice Hall, pp.78. 79.
28. Surma, V.K
1977
Rural development strategies
Kurushetra, Vol.XXIX.No.13.pp.102.
29. Uppal, J.S
1978
Indian economic problems published
by Tata Mograw Hall, New Delhi-49
pp.43 to 45.
30. Varghese, K.V
1976.
Problems facing Agricultural labourers
Kurukshetra, Vol.VI, pp.10 to 13.
31. Young, P.V
Scientific social survey and
Research, New York, Prentice Hall
Ltd. pp.176.205, 106, 207,212.
32. Agricultural labour
in India Report of
the First Enquiry
1950-51
Vol. I - All India pp.44, 157.
33. Agricultural labour in
India Report of
the Second Enquiry
1956-51
Vol I, All India pp.100, 404, 3,12,31.
34. Labour Bureau
Ministry of labour and employment
Government of India pp.49,
109, 110.
35. Changing Agrarian
relations in
India.
1974
Papers and proceedings of seminar
held at the NICD, Hyderabad.

36. NCAER,
1965 All India rural household survey
Vol II (income Investment and saiving)
New Delhi pp.Viii to ix.
37. NCAER
1972 Household income, saiving and consumer
expenditure. New Delhi pp.9.
38. NCAER,
1960 Delhi saving survey, Bombay, Asia
publishing house, pp.7.
39. RBI,
1951 Rural credit survey Report Vol.I,
Part, I-Bombay pp.226-227.
40. The Tamil Nadu
indebted
Agriculturalist
1976. Published in Tamil Nadu Gazette
Part IV. pp.48.
41. Report on a frame work for Income and price policy by
sheering groups of income set up by the RBI in 1964, Bombay.
42. India
1979-80 Publications Division, Ministry of
information and Broadcasting, Government
of India. pp.281.

A P P E N D I C E S
- - - - -

APPENDIX I

Questionnaire to elicit the Information regarding the Income and Expenditure Pattern of Agricultural And Non-Agricultural labourers.

I Personal Data :

1. Name of the Home Maker -
2. Name of the panchayat -
3. House No.:

II Type of the Family - Nuclear/Joint

III Socio-Economic and Demographic Characteristics:

S. No.	Members	Age	Sex	Relation ship to the Head of the family	Occu- pation	Edu- cation	Income per month
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							

IV. Other Sources of Income

- a. Business earnings ;
- b. Receipts from properties such as i) Land :
ii) Building:
- c. Income from Investment ;
- d. Allowances from parents and in laws ;
- e. Other Incentives ;
- f. Bonus received during last year ;

V. Economic Status

- a. House or home in which you are living : Owned/rented/free
if owned,

-----		-----	
Description	Value in Rs.	Description	Value in Rs.
-----		-----	
1. Tiled		2. Tin roofing	
2. Thatched		4. Others	
-----		-----	

If Rented House, Rental Value per month :

2. b. Vehicles:

Do you have any Vehicles? : Yes/No.

VII. Food Expenditure per month

SNNo.	Item	Produced at home	Purchased in the Market.	Cash (Amount)
1.	Cereals			
2.	Pulses			
3.	Vegetables			
4.	Oil and fats			
5.	Fruits			
6.	Milk and its products			
7.	Meat and fish			
8.	Prepared foods			
9.	Others specify			

VIII. Clothing:

Items	Cash	Credit	Frequency	Amount spent in
1.	Clothing			
2.	Construction			
3.	Dhobi			
4.	Others			

IX. Household Operation

	Items	Expenditure
1.	Water	
2.	Electricity	
3.	Fuel	
4.	Domestic Servants	
5.	Miscellaneous	

X. Furniture**XI. Household Equipment****XII. Transport****XIII. Personal Expenditure**

No.	Items	Amount (Rs.)
1.		
2.		
3.		
4.		

V. Health

	Items	Expenditure
1.	Fees for Doctors	
2.	Fees for Hospital	
3.	Medicine	
4.	Miscellaneous	

XV. Education

Items	Expenditure
1. Tuition fees	
2. Books and Supplies	
3. Others	

XVI. Recreation

Items	Expenditure
1. Entertainments	
2. Play Equipment	
3. Vacational Expenses	
4. Pilgrimage	
5. Clubs	
6. Others	

XVII. Savings

YES/NO

If yes,

Mode of saving	Frequency	Amount saved	Method of investing savings
1. Hindi			
2. Post Office Savings			
3. Bank account			
4. Insurance			
5. Provident Fund			
6. Purchase of Govt. Bonds			
7. Others			

XVIII. Indebtedness;

1. Whether your Income, in the last year was adequate for your expenses:

YES/NO

2. If no, How did you meet your credit requirements ?

By borrowings/By Savings

3. If by borrowings How did you raise the balance amount?

Agencies	Amount	Rate of interest	Period	Reason
-----	-----	-----	-----	-----

Money Lenders

- Cooperatives
- commercial Banks
- Friends and relatives

Government

Others (Specify)

XIX. Miscellaneous Items

1. Charity
2. Gifts
3. Dependents outside the Home
4. Taxes other than house tax

XX. Do you plan your budget?

YES/No

If yes, Who plans the budget?

XXI. Do you feel that you have enough money to meet all your expenses.

YES/NO

If not, Which are the items to procure, which you are hard pressed?

XXII. Which are the items you would like to increase expenditure on if you had more money to spend?

1.

2.

3.

4.

XXIII. Do you think you could economise on some items of your expenditure

YES/NO

If yes,

What are the items you could economics

1.

3.

2.

4.

XXIV. Aims and aspiration of the family:

Questionnaire to elicit the Information regarding the Income and Expenditure Pattern of Agricultural And Non-Agricultural Labourers.

I. Personal Data :

1. Name of the Home Maker -
2. Name of the panchayat -
3. House No :

II. Types of the Family - Nuclear/Joint

III . Socio-economic and Demographic Characteristics:

S.Members No.	Age	Sex	Relation-ship to the Head of the family	Occu-pation	Edu-cation	Income per month.
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

IV. Others Sources of Income

- a. Business earnings :
- b. Receipts from properties such as i) Land ;
ii) Building :
- c. Income from Investment :
- d. Allowances from parents and in laws :
- e. Other Incentives :
- f. Bonus received during last year :

V. Economic Status

- a. House or home in which you are living : Owned/
rented/free

If owned,

-----		-----	
Description	Value in Rs.	Description	Value in Rs.
-----		-----	
1. Tiled		3. Tin roofing	
2. Thatched		4. Others	
-----		-----	

If Rented House, Rental Value per month:

2. b. Vehicles;

Do you have any Vehicles ? : YES/NO

If yes,

Type	Number	Value (RS)
Bullock Cart		
Cycle		
Sectoer		
Others (Specify)		

c. Others

If any assets you have please furnish the details

Details	Number	Value in Rs.
Cattle		
Utensils		
Jewels		
Furniture		
Others		

VI. Income from House:

1. Did you rent out any portion or room of your house during the last year ? YES/NO
2. How much did you receive : Amount in Rs.

VII. Food Expenditure per month

No.	Item	Produced at home	Purchased in the Market.	Cash (Amount)
1.	Cereals			
2.	Pulses			
3.	Vegetables			
4.	Oil and fats			
5.	Fruits			
6.	Milk and its Products			
7.	Meat and fish			
8.	Prepared foods			
9.	Others specify			

V.	Health			

	Items		Expenditure	

1.	Fees for Doctors			
2.	Fees for Hospital			
3.	Medicine			
4.	Miscellaneous			

XV.	Education			

	Items		Expenditure	

1.	Tuition fees			
2.	Books and Supplies			
3.	Others			

XVI. Recreation

	Items	Expenditure
1.	Entertainments	
2.	Play Equipments	
3.	Vacational Expenses	
4.	Pilgrimage	
5.	Clubs	
6.	Others	

XVII. Savings YES/NO

If yes,

	Mode of saving	Frequency	Amount saved	Method of investing savings
1.	Hindi			
2.	Post Office Savings			
3.	Bank account			
4.	Insurance			
5.	Provident Fund			
6.	Purchase of Govt. Bonds			
7.	Others			

XVIII. Indebtedness:

1. Whether your Income, in the last year was adequate for your expenses:

YES/NO

2. If no, How did you meet your credit requirements?

By borrowings/By Savings

3. If by borrowings How did you raise the balance amount?

Agencies	Amount	Rate of interest	Period	Reason
----------	--------	------------------	--------	--------

Money lenders

Co-operatives

commercial Banks

Friends and relatives

Government

Others

(Specify)

XIX. Miscellaneous items

1. Charitaty
2. Gifts
3. Dependents Outside the Home
4. Taxes other than house tax

XX. Do you plan your budget?

YES/NO

If yes, who plans the bydget?

XXI. Do you feel that you have enough money to meet all your expenses.

YES/NO

If not, which are the items to proceure, which you are hard pressed?

XXII. Which are the items you would like to increase expenditure on if you had more money to spend?

- 1.
- 2.
- 3.
- 4.

XXIII. Do you think you could economise on some items of your expenditure

YES/NO

If yes,

What are the items you could economis.

- | | |
|----|----|
| 1. | 3. |
| 2. | 4. |

XXIV. Aims and aspiration of the family:

APPENDIX II

ai. Multi-Correlation Test Analysis

Corrleation between the income level of agricultural labourers and expenditure incured on food.

Income level(x)	<u>Expenditure incurred on food (y)</u>			
	0-100	100-200	200-300	300-400
0-100	10	3	0	0
100 -200	8	9	5	5
200 -300	6	25	4	0
300 -400	0	5	5	5

Taking the mid point of income level and expenditure incurred on food.

x	dx	f	fdx	fdx ²	dy	y	f	fdy	fdy ²
50	-2	46	-96	184	-2	50	48	-96	192
150	-1	12	-12	12	-1	150	10	-10	10
250	0	0	0	0	0	250	0	0	0
250	1	0	0	0	1	350	0	0	0
			-----	-----			-----	-----	
			-104	196			-106	202	
			-----	-----			-----	-----	

$$r = \frac{\sum fdy \sum fdx - \sum fdx \times \sum fdy}{N}$$

$$\sqrt{\frac{\sum fdx^2 - \frac{(\sum fdx)^2}{N}}{N} \times \frac{\sum fdy^2 - \frac{(\sum fdy)^2}{N}}{N}}$$

Substituting the values,

$$\frac{163 - (-104 \times -106)}{100}$$

$$\sqrt{\frac{196 - \frac{(-104)^2}{100}}{100} \times \frac{202 - \frac{(-106)^2}{100}}{100}}$$

$$= 52.76$$

$$\frac{52.76}{87.96}$$

$$= .5998$$

=====

ii. Correlation between the income level of non-agricultural labourers and expenditure incurred on food.

Income level (y)	Expenditure incurred of food (x)				
	0-100	100-200	200-300	300-400	400-500
0-100	0	0	0	0	0
100-200	12	6	0	0	0
200-300	15	17	10	0	0
300-400	0	4	6	7	0
400-500	0	1	3	8	2
500-600	0	0	3	2	3
600-700	0	0	0	1	0

Taking the mid point of Income level and expenditure incurred on food.

dx	f	fdx	fdx ²	dy	f	fdy	fdy ²
-3	0	0	0	-3	52	156	312
-2	60	-120	240	-2	14	128	28
-1	47	-47	47	-1	0	0	0
0	0	0	0	0	12	12	12
1	11	11	11	1	16	32	64
2	16	32	64	2	0	0	0
3	0	0	0	3	0	0	0
		-124	362			-140	416

Substituting the values,

$$r = 345 - \frac{-124 \times -140}{100}$$

$$\sqrt{\frac{362 - \frac{(124)^2}{100}}{100} \times 416 - \frac{(140)^2}{100}}$$

$$= \frac{171.4}{213.84}$$

$$= \frac{.8015}{=====}$$

b(i) Correlation between Income and expenditure on clothing by the agricultural labourers.

Income level(x)	Expenditure incurred on clothing (y)			
	0-10	10-20	20-30	30-40
0-100	10	3	0	0
100-200	7	22	8	0
200-300	0	4	4	2
300-400	2	29	6	4

Taking the mid point of income level and expenditure incurred on clothing.

x	f	dx	fdx	fdy	fdx ²	y	f	fdy	fdy ²
50	43	-2	- 43	-50	172	5	50	-50	200
150	36	-1	- 36	4	36	15	-3	+4	-3
250	0	0	0	0	0	25	0	0	0
350	-28	1	- 28	4	-28	35	4	4	4
			-107	-42	180		51	-42	201
			=====	=====	=====		=====	=====	=====

$$r = \frac{\sum f dx dy - \frac{\sum f dx \times \sum f dy}{N}}{\sqrt{\frac{\sum f dx^2 - \frac{(\sum f dx)^2}{N}}{N} \times \frac{\sum f dy^2 - \frac{(\sum f dy)^2}{N}}{N}}}$$

Substituting the values

$$r = \frac{6 - \frac{(-107 \times -42)}{100}}{\sqrt{\frac{180 - \frac{(-107)^2}{100}}{100} \times \frac{201 - \frac{(-42)^2}{100}}{100}}}$$

$$= \frac{6 - 44.52}{\sqrt{67.64 \times 183.36}} = \frac{-38.52}{\sqrt{12402.47}} = \frac{-38.52}{111.36}$$

$$= -0.3459$$

=====

(ii) Correlation between income and expenditure on clothing
by non-agricultural labourers

Income level (x)	Expenditure incurred on clothing (y)					
	0-10	10-20	20-30	30-40	40-50	50-60
0-100	0	0	0	0	0	0
100-200	1	0	0	0	0	0
200-300	0	3	3	3	0	0
300-400	0	0	7	11	12	11
400-500	0	1	7	9	13	2
500-600	0	0	3	12	5	1
600-700	0	1	2	0	2	1

Taking the mid point of income level and expenditure
incurred on clothing.

x	f	dx	fdx	dx ²	fdx ²	y	dy	fdy	fdy ²
50	0	-3	0	9	0	5	-3	-15	9
150	6	-2	-12	24	24	15	-2	-12	4
250	9	-1	-9	1	9	25	-1	-9	1
350	0	0	0	0	0	35	0	0	0
450	4	1	4	1	4	45	1	45	20
550	22	2	44	4	88	55	2	110	44
650	-3	3	-9	9	-27	65	3	195	9
		18			98			58	98

Substituting the values,

$$\begin{aligned}
 r &= 19 - \frac{18 \times 58}{100} \\
 &= 19 - 10.44 \\
 &= 8.56 \\
 &= \frac{6098.7536}{78.09} \\
 &= +0.1096 \\
 &=====
 \end{aligned}$$

c(i) Correlation between income and expenditure on transport by the agricultural labourers

Income level	Expenditure on Transport			
	0-10	10-20	20-30	30-40
0-100	6	0	0	0
100-200	25	5	0	0
200-300	15	16	0	0
300-400	15	18	0	0

Taking the mid point of income level and expenditure incurred on transport.

x	f	dx	fdx	y	dy	f	fdy	fdx ²	fdy ²
50	24	-2	-48	5	-2	59	-118	96	234
150	55	-1	-55	15	-1	-13	13	55	-13
250	0	0	0	25	0	0	0	0	0
350	-33	1	-33	35	1	0	0	-33	0
			-136				-105	118	221

Substituting the Values,

$$r = \frac{10-142.80}{\sqrt{-66.96 \times 110.75}} = \frac{-132.80}{\sqrt{1-7382.34}}$$

$$= \frac{-132.80}{-271.7} = +.4864$$

(ii) Correlation between income and expenditure on transport by non-agricultural labourers.

Income level (x)	Expenditure incurred on Transport (y)						
	0-10	10-20	20-30	30-40	40-50	50-60	60-70
0-100	2	0	0	0	0	0	0
100-200	1	1	0	0	0	0	0
200-300	9	20	2	3	4	0	0
300-400	3	12	4	5	3	0	0
400-500	2	4	0	2	0	0	0
500-600	3	3	2	0	0	0	0
600-700	0	13	1	1	0	0	0

x	f	dx	fdx	y	dy	fdx ²	f	fdy	fdy ²
50	11	-3	-33	5	-3	99	20	-60	180
150	10	-2	-20	15	-2	40	-74	148	-296
250	53	-1	-53	25	-1	53	-3	3	-3
350	0	0	0	35	0	0	0	0	0
450	-14	1	-14	45	1	-14	4	4	4
550	-34	2	-68	55	2	-134	0	0	0
650	-79	3	-237	65	3	-711	0	0	0
			-425			-667		95	-119

Substituting the values:

$$\begin{aligned}
 & \frac{28 - (-425 \times 95)}{100} \\
 r = & \frac{-667 - \frac{(-425)^2}{100} + \frac{-119 (95)^2}{100}}{100} \\
 & = 431.75 \\
 & \frac{\sqrt{517525.56}}{100} = \underline{\underline{.6001}}
 \end{aligned}$$

d(i) Correlation between income and expenditure on health by the agricultural labourers.

Income level (x)	Expenditure incurred on health (y)			
	0-10	10-20	20-30	30-40
0-100	0	0	0	0
100-200	4	6	1	0
200-300	3	6	5	0
300-400	7	1	2	0

Taking the mid point of income level and expenditure incurred on health.

x	f	dx	fdx	fdy	y	dy	f	fdx ²	fdy ²
50	8	-2	-16	4	5	-2	-2	32	-8
150	10	-1	-10	-5	15	-1	-5	10	5
250	0	0	0	0	25	0	0	0	0
350	15	1	15	0	35	1	0	15	0
			-11	-1				77	-3

Substituting the values,

$$r = \frac{6+11}{37}$$

$$= \frac{77 + \frac{121}{37} \times -3 + 1}{\frac{77-3.27 \times 3-0.02}{37}} = \frac{6.0.297}{-0.3629}$$

$$= \frac{5.713}{\sqrt{222.66}} = \frac{5.713}{-14.92} = -0.3629$$

(ii) Correlation between income and expenditure health by non-agricultural labourers.

Income level (x)	Expenditure incurred on health						
	0-10	20-20	20-30	30-40	40-50	50-60	60-70
0-100	0	0	0	0	0	0	0
100-200	2	0	0	0	0	0	0
200-300	0	2	0	0	0	0	0
300-400	2	12	13	11	2	0	5
400-500	0	7	3	2	5	5	0
500-600	0	2	5	2	4	5	1
600-700	0	0	2	0	3	0	0

Taking the mid point of income level and expenditure on health.

x	f	dx	fdx	fdx ²	y	dy	f	fdy
50	0	-3	0	0	5	-3	12	-36
150	12	-2	-24	48	15	-2	-18	+36
250	4	-1	-4	4	25	-1	-19	19
350	0	0	0	0	35	0	0	0
450	-2	1	-2	-2	45	1	22	22
550	16	2	32	64	85	2	30	60
650	3	3	29	27	65	3	6	18
			11	141				119

Substituting the values,

$$r = \frac{28 - 11 \times 119}{95} \div \frac{\sqrt{\frac{141 - 121}{95} \times 213 \frac{(119)^2}{95}}}{\sqrt{945.2}} = \frac{14.23}{\sqrt{945.2}}$$

$$= 0.0150$$

=====

e (i) Correlation between Income and expenditure incurred on Recreation by agricultural labourers.

Income level	Expenditure incurred on Recreation (y)			
	0-10	10-20	20-30	30-40
0-100	3	3	0	0
100-200	13	10	2	0
200-300	11	5	5	2
300-400	7	2	8	4

Taking the mid point of income level and expenditure incurred on recreation.

x	f	dx	fdx	fdx ²	y	dy	f	fdy	fdy ²
50,	18	-2	-36	72	5	-2	24	-48	96
150	36	-1	-36	36	15	-1	14	-14	14
250	0	0	0	0	25	0	0	0	0
350	-12	1	-12	-12	35	1	4	4	4
			-84	96			-58		114

Substituting the values,

$$r = \frac{6 - (-84 \times -58)}{95} \div \frac{\sqrt{96 - (-84)^2 \times 114 - (-58)^2}}{95}$$

$$= \frac{-45.28}{47.32} = 0.9370$$

(ii) Correlation between Income and expenditure on recreation by Non-agricultural labourers .

Income level (x)	Expenditure incurred on recreation (y)						
	0-10	10-20	20-30	30-40	40-50	50-60	60-70
0-100	2	0	0	0	0	0	0
100-200	1	0	0	0	0	0	0
200-300	1	1	0	0	0	0	0
300-400	6	8	18	5	3	2	0
400-500	3	10	4	7	1	2	0
500-600	1	3	5	5	2	3	0
600-700	1	0	2	1	0	1	0

Taking the mid point of income level and expenditure on recreation.

f	dx	fdx	fdx ²	f	dy	fdy	fdy ²
18	-3	-54	162	3	-3	-9	27
6	-2	-12	24	30	-2	-60	120
3	-1	-3	3	20	-1	-20	20
0	0	0	0	0	0	0	0
9	1	9	9	5	1	5	5
6	2	12	12	22	2	44	44
9	3	27	27	0	3	0	0
		-150	34			98	-86

Substituting the values,

$$r = \frac{28 - (-150 \times 98)}{97} \div \frac{\sqrt{34 - \frac{(-150)^2}{97} \times -86 - \frac{(98)^2}{97}}}{191.37} = \frac{179.54}{191.37} = 0.9381$$

f(i) Correlation between income and expenditure on education by the agricultural labourers .

Income level (x)	Expenditure incurred on education (y)			
	0-10	10-20	20-30	30-40
0-100	0	0	0	0
100-200	1	0	0	0
200-300	0	0	0	0
300-400	2	0	0	0

Taking the mid point of income level and expenditure incurred on education.

dx	f	fdx	fdx ²	dy	f	fdy	fdy ²
-2	0	0	0	-2	4	-8	-16
-1	2	-2	2	-1	0	0	0
0	0	0	0	0	0	0	0
1	2	2	2	1	0	0	0
		0	4			-8	-16

Substituting the values,

$$\begin{aligned}
 r &= \frac{6-0}{\sqrt{4x-16-21.3}} \\
 &= \frac{6}{\sqrt{150.8}} = \frac{6}{12.27} \\
 &= \underline{\underline{.4894}}
 \end{aligned}$$

ii) Correlation between income and expenditure incurred on education by non-agricultural labourers.

Income level (x)	Expenditure incurred on education (y)						
	0-10	10-20	20-30	30-40	40-50	50-60	60-70
0-100	0	0	0	0	0	0	0
100-200	2	0	0	0	0	0	0
200-300	0	0	3	2	0	0	0
300-400	0	0	0	0	0	0	0
400-500	0	5	2	0	0	0	0
500-600	0	4	0	0	0	0	0
600-700	0	1	0	1	0	0	0

Taking the mid point of income level and expenditure incurred on education.

dx	f	fdx	dy	f	fdy	fdx ²	fdy ²
-3	0	0	-3	4	-12	0	36
-2	4	-8	-2	15	30	16	-60
-2	0	-3	-1	1	1	2	-1
0	9	0	0	0	0	0	0
1	8	-9	1	0	0	-9	0
2	2	-16	2	0	0	-32	0
3	0	-6	3	0	0	-18	0
		-42			19	-40	-25

Substituting the values,

$$\begin{aligned}
 & \frac{28 - (-42 \times 19)}{20} \\
 & \frac{\frac{28 - (-42 \times 19)}{20}}{\sqrt{\frac{-40 - (-42)^2}{20} \times \frac{-25 - (-19)^2}{20}}} = \frac{67.7}{74.29} = 0.9112.
 \end{aligned}$$

g(i) Correlation between Income and Family Saving by agricultural labourers.

Income level (x)	Family savings (y)			
	0-100	100-200	200-300	300-400
0-100	0	0	0	0
100-200	1	0	0	0
200-300	0	2	0	0
300-400	2	1	0	0

Taking the mid value of income level and family saving.

dx	f	fdx	fdx ²	dy	f	fdy	fdy ²
-2	0	0	0	-2	-2	4	-8
-1	2	-2	2	-1	-1	1	-1
0	0	0	0	0	0	0	0
1	-5	-5	-5	1	0	0	0
		-7	-3			65	-9

Substituting the values,

$$r = \frac{6 - (-7 \times 5)}{\frac{-3 - (-7)^2}{6} \times \frac{-9 - (-5)^2}{6}}$$

$$= \frac{12.8}{13.89} = 0.9208$$

(ii) Correlation between income and family saving of non-agricultural labourers.

Income (x)	Family saving (y)				
	0-100	100-200	200-300	300-400	400-500
0-100	0	0	0	0	0
100-200	0	0	0	0	0
200-300	1	0	2	0	0
300-400	12	13	11	0	2
400-500	8	5	4	2	0
500-600	7	0	0	0	0
600-700	1	0	1	0	0

Taking the mid poin of income level and family saving.

dx	f	fdx	fdx ²	dy	fdy	fdy ²
-3	0	0	0	-3	216	-648
-2	0	0	0	-2	20	-40
-1	5	-5	-5	-1	5	-5
0	0	0	0	0	0	0
1	-38	-38	-38	1	0	0
2	-42	-168	-84	2	0	0
3	-12	108	36	3	0	0
		-93	71	241	241	-693

Substituting the values,

$$r = \frac{28 - (-91 \times 241)}{69}$$

$$= \frac{345.84}{571.76} = 0.6048$$