A STUDY ON AGRICULTURAL INDEBTEDNESS IN KERALA

Thesis submitted to the University of the Calicut
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Doctor of Philosophy in Economics

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Certificate

This is to certify that this thesis entitled, **"A STUDY ON AGRICULTURAL INDEBTEDNESS IN KERALA"** being submitted by Umaiban M M for the award of the degree of **Doctor of Philosophy,** to the Department of Economics, University of Calicut, Dr. John Matthai Centre, Aranattukara, is a record of bonafide research work carried out by her under my guidance and supervision. The contents of this thesis, in full or in part, have not been submitted and will not be submitted to any other institute or University for the award of any degree or diploma. Plagiarism is checked and found within the permitted limits.

Date: 18-07-2016
Place: Thrissur

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Declaration

I, Umaiban M M, do hereby affirm that this written account titled **"A STUDY ON AGRICULTURAL INDEBTEDNESS IN KERALA"** is a bonafide record of research done by me under the guidance of Dr. K P Mani, professor in Economics, University of Calicut. I also declare that this thesis has not been submitted by me earlier for the award of any degree, diploma, fellowship or any other similar title.

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Umaiban M M

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ACRONYMS

Abbreviation	Description
AVA	Average Value of Assets
AOD	Average Amount of Debt per household
EGAI	
IOI	Incidence of Indebtedness
AODL	Average Amount of Debt per indebted household
DAR	Debt-Asset ratio
TCD	Total Cash Due
TOI	Terms of Interest Rate
ROI	Rate of Interest Rate
hh (s)	Household (s)
NSSO	National Sample Survey Organisation
HYV	High Yielding Varieties
NPAs	Non Performing Assets
SF	Small Farmers
MF	Medium Farmers
LF	Large Farmers

Chapter I

Design Of The Study

CHAPTER I

DESIGN OF THE STUDY

1.1 Introduction

The significance of agriculture and allied activities in the economic development is well accepted and documented since time immemorial. Agriculture can be a source of growth for the national economy, prime provider of investment opportunities for the private sector and a driver of agriculture-related industries and the rural non-farm economy. Even though the share of agriculture in the GDP (Gross Domestic Product) in India has declined from half at the times of independence to less than one-fifth, even today agriculture remains to be the predominant sector in terms of employment and livelihood with more than half of India's workforce engaged in it as the principal occupation. The scope for using the merits of agriculture for poverty reduction and as an engine of economic growth for the agriculture based countries is still very much alive (Mani KP 2012). The share of agriculture in employment was 48.9 percent of the workforce [National Sample Survey Organization (NSSO) 2011-12] while its share in the Gross Domestic Product (GDP) was 17.4 percent in 2014-15 (Economic Survey 2015-16). During the last three years, the growth rates in Indian agriculture have been fluctuating at 1.5 percent in 2012-13, 4.2 percent in 2013-14 and (-) 2 percent in 2014-15. According to the CSO (Central Statistics Organization) estimates the growth in the agriculture 'agriculture, forestry and fishing' sector is estimated at 1.1 percent in 2015-16. The shortfall in growth in agriculture is explained by the fact that 60 percent of agriculture in India is rain fed and there have been two consecutive draught years in 2013-14 and 2014-15. Moreover, there are issues in irrigation and the efficiency, fall in growth rate of capital formation in the

sector and there is volatility in the markets, especially of prices altering and distorting cropping patterns of some crops (Economic Survey 2015-16). In India administered prices have been influencing market prices of many commodities (Acharya 1997).

The agriculture scenario of India has changed in the 1990s when the economic reforms have brought in a shift in terms of trade in favour of agriculture. Though the shift in terms of trade in favour of agriculture has not translated in to agricultural growth, some argue that changes are taking place, slowly but steadily, in the sector in terms of cropping pattern shifts towards high value crops like vegetables and horticultural crops (Gulati and Muller 2003). Even though, the micro aspects or the ground realities in the context of liberalization has not received due attention of the farmers (Deshpande and Naika 2002), some improvements have been reported over the seventies and eighties (Acharya 1992, Reddy 1997). While the decline in the input subsidies have pushed the cost of cultivation upward, deregulation and trade liberalization have not only increased the output prices but also opened up new vistas to the farming community in terms of new crops and cultivation. However the net impact of these policies is not clear as reflected in the micro level happenings such as farmer suicides (Deshpande 2002). Rao (1994) argues that "farmer" (typically, small, poor and unorganised) has new opportunities opened to him to increase his output as also to widen his contacts with the markets and the world outside his village. However it would not be easy for him to make the transition from the survival- oriented traditional attitudes and modes of behaviour which still prevail among a larger number of farmers to the ruthlessly competitive environment of the modern markets dominated by powerful organised groups. Obviously, the farmer would remain vulnerable in the new environment until he acquires the capacity to withstand its pressures (Rao, 1994, pp. 393-394). In fact, it is observed that trade liberalisation is not sufficient to stimulate agriculture exports (Weeks 1997).

Given the yield in agriculture and limited scope for increasing acreage under cultivation, India has to enhance productivity in agriculture by investing in key inputs, so as to ensure food security for the growing population. Credit is an important mediating input for agriculture to improve productivity. Access to institutional credit enables the farmers to enhance productivity by investing in machinery and purchase of variable inputs like fertilizers, quality seeds, manure and providing funds till the farmer receives payment from sale of produce, which is at times depleted and staggered. Input use by farmers is sensitive to credit flows to the agriculture sector. During the last two decades, the Indian agriculture has experienced a number of severer challenges such as slowdown of growth, shifts in cropping pattern, volatility in agricultural commodity prices etc (Mani K P). Among this, indebtedness of the peasantry is a serious and unrelenting issue among the farming community in India.

The literature on agricultural indebtedness is supporting with the arguments that "agricultural farmers facing the problem of vicious circle of debt trap due to low investment, low productivity and low income. More specifically, agricultural production is depended on climatic conditions, and it is faced with volatility by market, prices, climate etc; it ends up with poverty and debt. Theoretically, a high investment on agriculture and use of modern equipments by the result of credit worthiness would lead to efficient allocation of resources and give highest output to farmers. If it is not so, a reversal trend will take place. Cobweb model or cobweb theory (Nicholas kaldor analysed the model in 1934, kaldor, 1938 and Pashigian, 2008) is a phenomena which explains the situation that, why prices might be subject to periodic fluctuations in certain types of markets. It describes cyclical supply and demand in a market where the amount produced must be chosen before prices are realized. Producer's expectation about prices is assumed to be based on observations of previous prices.

The amount and extend of indebtedness was first calculated by All India Credit Survey Report in 1951-52 in very concrete and comprehensive

manner. The survey revealed that 69.2 percent of the cultivator was in debt and the average debt per cultivating family was Rs363.70 during 1951-52. It rose to Rs473 in 1961-62 and 66.7 percent of the cultivator was found to be indebted as per the All India Rural Debt and Investment Survey 1961-62. After a decade, while the share of indebted cultivator falls to 46.1 percent, the average debt per cultivator household was increased to Rs605. The 70th (2013) round survey report of AIDIS (All India Debt and Investment Survey) further confirms India's worsening agrarian crisis that, the percentage of indebted households was 31.4 percent among rural households and 22.4 percent among the urban households during 2013-14. In 2002, these were 26.5 percent and 17.8 percent respectively (AIDIS reports). The Average Amount of Debt per household (AOD) is seen to be less in the rural sector than in the urban, the values being Rs32522 and Rs84625 respectively. Compared to this, the AOD per indebted household was Rs103457 and Rs378238 in the rural and urban sectors respectively (AIDIS January-December 2013, NSSO 70th round). The report states nearly 40 percent of households take loans from non-institutional sources like money lenders. Nearly 60 percent of the total outstanding loan is taken from institutional sources. The bank's share is (43 percent) followed by co-operative society (15 percent).

The following section reviewed some of the major literature on the topic under study.

1.2 Review of Literature

This section is devoted to the review of literature relevant to the topic of the study. Some of the similar studies which have direct relevance to the problem under investigation have been traced out. Thus; literature review aims to expose the critical points of current and collected knowledge on the topic under study. Indebtedness has been a persistent problem with all economic activity. Several studies in this regard have been conducted from time to time

and a number of high level committees have made innumerable recommendations for reforms in the functioning and rehabilitation of the rural credit structure. The main thrust of Indian public policy towards rural credit must be to ensure sufficient and timely credit at reasonable rates of interest to a large segment of the population. Unless pragmatic measures in this regard are resorted to, the chances of curing the problem of indebtedness remains remote. National Sample Survey Organization (NSSO), individual researchers and planners have made a number of studies on this subject–agricultural indebtedness. To throw light on the contemporary bearing of this malice, the findings of some studies have been comprehended under the following sub sections:

i. Agriculture and indebtedness
ii. Agricultural credit
iii. Factors led to indebtedness
iv. Consequences of indebtedness

1.2. (i) Studies on agriculture and indebtedness

Ramesh Chand et.al (2015) has made an estimation of farm income in India in his paper "Estimates and Analysis of Farm Income in India 1983-84 to 2011-12". He opined that, the income earned by the farmers after paying for input costs and the wages for hired labour is low to high growth in different periods during the last three decades. He suggests that, the farm income is the most appropriate measure of farmer's well-being. He found that, none of the periods do farmer's income or profitability of farming show any squeeze. The pace of growth in farmer's income that began around 2004-05, which reduced the disparity in growth in income of farmers and non-farmers, could not be sustained after 2011-12. The discrimination against agriculture is also sometimes seen in the disparity in per worker income in the agriculture and non-agriculture sector –per worker income in the non-agriculture sector has reportedly risen at a much faster rate than per worker income in agriculture

(Chand 2008). Some studies have stretched this inference to found that the income is very low (Narayanamoorthy 2006) and not rising, and this is said to be one of the reasons for rising agrarian distress and farmers abandoning farming. Some scholars observed a strong bias in policies against the sector (Lipton 1970, 1977) and some allege that markets tend to be biased against agriculture as the prices of primary commodities rise at a much slower rate than prices in the manufacturing sector (Singer 1950, Harvey et al 2010, Sarkar 1994). He inferred that, growth in farm income after 2011-12 has plummeted to around one percent and this is an important reason for the sudden rise in agrarian distress in recent years.

Bhalla G S and Gurmail Singh (2009) examine "Economic Liberalization and Indian Agriculture: A State wise Analysis". This study reveals that the performance of agriculture at the state level in India during the immediate pre-reform period has been characterized by deceleration in the growth rate of crop yields as well as total agricultural output in most states. By ending discrimination against tradable agriculture, economic reforms were expected to improve the terms of trade in favour of agriculture and promote its growth. The paper also analyzes the cropping pattern changes that have taken place in area allocation as well as in terms of value of output. The slowdown in the process of cropping pattern change means that most government efforts to diversify agriculture have failed to take off.

Balasaheb Vikhe Patil (2008) examines "Agricultural Indebtedness: Crisis and Revival". Rural indebtedness is an obstacle for development, requires in depth analysis so as to address the problems in all its dimensions. Highlighting the inadequacies in rural access to finance, it points out that improvement in credit delivery would help but a correction in planning strategy is more important. Credit measures alone will not reduce the problem.

Sukhpal Singh, Manjeet Kaur et.al (2008) made an attempt to study "Indebtedness among Farmers in Punjab" with an object of assessing the overall debt positions of the farmers in Punjab and identify the factors affecting their indebtedness. The important suggestions are improve the institutional agricultural credit system, regulate and continuously monitor the functioning of non-institutional sources of finance, reduce farmers' fixed costs in heavy machinery etc. It was found that 89 percent of farm households in Punjab is indebted and all farm size categories are equally indebted.

Brajesh Jha (2007) presented a paper on "Agricultural wages in India: A State level Analysis". According to him, real wages in agriculture have increased consistently in most of the states during the last decade of 1990's. The divergence between agricultural productivity and real wages in agriculture increases during the 1990's. Regression analysis highlighting the determinants of wages in Indian agriculture, for the year 1983, 1993-94 and 1999-2000 shows that the effect of labour productivity on agricultural wage has decreased. A weakening of the linkage between growth in real wages and productivity growth in agriculture towards the end of the 1990's is evident from different data sets and the influence of statutory minimum wages (SMWs) on agricultural wage appears to have increased during the 1990's. The analysis shows that labour productivity is the most important determinant of wages.

Deshpande R.S. and Khalit Shah (2007) analyses "Agrarian Distress and Agricultural Labour". They analyse the agrarian crisis in the Indian agriculture during the last decade and traces its impact on the agricultural labour. It is quite known that the share of GDP of agricultural sector has been going down but at the same time the workforce in the sector is not declining with the same rate. As a result, the density of agricultural labour is increasing and consequently the surfacing. The process of marginalization of the farmers has not only left indelible mark on the farm economy but it has also produced marginalization of the household economy as such. Agricultural labourers are

the worst sufferers in the process. In this context, it is the small, medium farmers and agricultural labourers who are caught in a vicious circle of low investment, low productivity and low income that repairs a Schultzian break to affect a break away from the low level equilibrium.

Dharma Raju Palli (2007) analyses "The Continuity Crisis: Andhra". According to him, the creation of sustainable markets can cause ripples of economic rejuvenation. Since the revitalization of the land loan sector is the major concern of the policy makers and the industry players, the solutions that are being put forward should be pragmatic. More than ideology and sympathetic attitude, understanding the ground realities with an open mind would be the first step towards finding the way out of crisis. Problem identification on realistic grounds, prioritising based on the degree of intensity and suitable corrective measures are the need of protecting the livelihoods.

Ratna Reddy V and Pridhvikar Reddy P (2007) examine "Increasing Costs in Agriculture: Agrarian Crisis and Rural Labour in India". They attempt to examine the viability of agriculture and the relative shares of farmers and labourers over the last three decades in order to understand the initial factors contributing to the crisis. By using the cost of cultivation data for major states over a period of three decades, this paper examines the changes in profitability and factor shares for important crops. It is argued that the declining viability of agriculture and the ongoing crisis is apparently technological as it is critical for improving land productivity. Labour costs are rising due to higher wages as well as higher labour use per unit of land. While increasing labour cost hurt the interests of the farmers, the promotion of labour-saving technologies would adversely affect the labours. The policies should be to safeguard the interests of both farmers and labours i.e. the entire rural community.

Himnashu (2006) made an attempt to study on "Agrarian Crisis and Wage Labour: A regional perspective". This paper looks at the determinants

of agricultural wages and its linkage with agricultural productivity across NSS regions. Since level of agricultural wages not only vary a great deal across states but also across regions within states. The basic objective of this study is to analyze the trend in agricultural wages from 'Agricultural wages in India' as well as employment and unemployment. The results of the analysis emphasize the importance of agricultural productivity in explaining variation in agricultural wages along with literacy, causalisation of non-farm employment and unionization of the work force. The results also suggest the increasing importance of agricultural productivity in explaining variations in agricultural wages overtime. In this context, the study concludes that, the agrarian crisis of the 1990s has been further aggravated after 1999-2000.

Jalna Rao V and Usha Nori (2006) analyses "Distress Mitigation of Farmers: An Evaluation of State government's Policy Response: The Case study of Andhra Pradesh" by collecting the secondary data from the state government on the suicide from 1997 till the end of April 2006 and classified the Mandals and Villages in accordance with the intensity of distress, although farmers suicides have been reported from all the districts in the three regions of the state. The paper focuses on the ground realities causing agrarian distress and efficacy of the broad measures initiated by the government of Andhra Pradesh in recent years, to stem the tide of distress in farming community. A deeper probe into the government's supportive measures calls for an immediate augmentation of the public investment in the agricultural sector.

Narayanamoorthy A and Kalamkar S S (2006) in their paper "Has Agrarian Crisis Made any Impact on Agricultural Wages and Employment in India: An Exploratory Study" an attempt has been made to find out the impact of agrarian crisis on the wage rate and employment of the agricultural labours covering major states and crop in India. They used state-wise and crop-wise data covering the period over twenty years. The study shows that real wage rates of both skilled and unskilled labours has decelerated in most of the states during

the period of agrarian crisis (1990-91 to 1999-2000). While labour use (man hour/hectare) in absolute terms has not declined uniformity in all crops, labour yield ratio has declined in almost all crops and all the states under analysis. The results of the study tend to suggests that there is a reduction in wage rate and crop wise labour use in most of the states during the period of agrarian crisis.

Deshpande R S and Nagesh Prabhu (2005) in his paper "Farmer's Distress" analyses the extent of indebtedness. It has been five decades since independence, yet several policy initiatives framed by central and state governments do not really reach their intended beneficiaries to the farmers. The findings of the National Sample Survey Organization (NSSO) 59th round are revelatory of the plight of our farmers; over 48 percent of them are indebted and nearly two-thirds of the farmers are frustrated with profession.

Kalamkar S S and Narayanamoorthy (2005) in their paper "Indebtedness of Farmer Households Across States : Recent Trends, Status and Determinants" made an attempt to study the trends and determinants of the incidence as well as extend of indebtedness among the farmer households mainly using the data available from the National Sample Survey Organization (NSSO) reports. The study shows that the incidence of indebtedness ranges from about 18 percent in Assam to 82 percent in Andhra Pradesh during the year 2003. The extent of indebtedness has also increased substantially across the states during 1991-92 and 2003. While the average debt per household increased; it is found to be very high in states like Punjab, Kerala, Haryana, Andhra Pradesh and Tamil Nadu. The regression analysis carried out to find out the determinants of the indebtedness suggests that whenever the availability of credit per hectare of net sown area is higher, the extent of indebtedness is also high. Thus the extent of indebtedness has considerably increased among the farmer-households over the last one decade across the states. Both the incidence as well as the extent of indebtedness is found to be relatively high among those states that are relatively developed in terms of agriculture.

Mishra (2005) "Decomposition and Variability in Farm Households Assets and Debt", observed that farm families in USA often hold large quantities of wealth and like any other family asses their financial progress by reviewing their network position periodically. Wealth has an impact on many decisions such as production requirements and succession of the farm. This study also measures how much of the variability in farm household assets and debt is attributed to the variability in farm and non-farm source of assets and farm and non- farm sources of debt.

Sukhpal Singh and Toor M S (2005) examine "Agrarian Crisis with Special Reference to Indebtedness among Punjab Farmers". Punjab peasantry is in the clutches of severe indebtedness. To overcome the problem of debt trap, effective reasons should be taken by the government, social organizations and farming community. The government should exercise a strong check on the activities of non-institutional credit agencies and provide institutional credit facilities to the farming community at low rate of interest with easy repayment facilities. The farmers need to be educated to manage their living and consumption expenditure within their means. In the given socio-economic and political structure of the Punjab economy, these measures can help to improve income and lessen the incidence of indebtedness in rural Punjab.

Sukhpal Singh (2004) examines "Crisis and Diversification in Punjab Agrculture: Role of State and Agribusiness. He examines the nature and magnitude of crisis in the farm sector in the state and analyses diversification strategies recommended and adopted so far, more specifically contract farming experiments. The paper also discussed some possible ways to tackle the farm sector crisis in a sustainable manner. Agricultural diversification will work only if the current system of procurement based on Minimum Support Price (MSP) is charged in favour of new crops because it provides a powerful economic incentive to prolong the wheat paddy rotation. In fact, diversification should

also be more than that crop diversification and include other allied and nonfarm activities in rural areas.

The Situation Assessment Survey of Farmers carried out by the National Sample Survey Organization (2003) came out with several striking findings on farmer's conditions; half of farmers are indebted and much of indebtedness was due to agricultural expenses, inequality in income between the rural and urban households and between the cultivators and non-cultivators has been growing.

Sharma R K and Surendra Mehar (2001) made an attempt to study "Indebtedness of rural households and labour productivity" with an objective to study the changes, incidence of indebtedness, and therefore to examine the nature of the sources of credit etc. It also examines the distribution of debt by assets group by using Lorenz curve. They have been used correlation and regression techniques. It may be concluded that, the incidence of indebtedness; defined by proportion of households reporting cash loans increased. The results of the study support the hypothesis that agriculturally developed regions are able to obtain more debt per household from various agencies.

Jugale and Patil (1997) revealed that the economic viability of PACS is higher in irrigated than non-irrigated regions. The large number of small farmer members has borrowed a small share of total loans; whereas a few big farmers have enjoyed a large share of loans.

Davies (1996) "Insolvency in Agriculture: Bad Managers or the Common Agricultural Policy" conducted an empirical investigation of the annual rate of insolvency in agriculture and horticulture in England and Walves revealed a relationship with the price of land. The rate of insolvency was negatively related to the current price of land but the lag structure estimated suggests that the rate of insolvency could be positively related to the land price of two years previously. In accordance with a theoretical model which shows

that the optimal gearing strategy under rising land prices induces farmers to increase their indebtedness.

Brajesh kumar jha and Dayanath jha (1995) made a study on "Farmer's Attitude towards Risk in the Greenbelt of India" by adopting multi-stage stratified random sampling technique. Depending on certainty equivalent that is, whether his certainty equivalent is greater than equal to or less than the expected value of the risky project, each sample farmer was classified as risk-prefer, risk neutral and risk averse. Although, the study found risk aversion as the most dominant attitude, one fifth of total farmers were risk prefers. It was as high as one third for the large farmers. The personal variables were operational holding, off farm income, size and structure of family, education, experience, progressiveness and attitudes towards decision makers. The risk aversion appeared to be the most prevalent risk attitude amongst farmers, while the average degree of risk-aversion was relatively small in the study area. As high as one third of farmers of Greenbelt were risk – prefers.

Ramaiah P and Murali Manohar K (1995) made an attempt to study the life patterns of tribes in the Telangana region of Andhra Pradesh in their paper "Tribal Indebtedness" by the way of comparative study of the problem of indebtedness among the dominant tribes. They clearly indicate that, the magnitude and causes of tribal indebtedness is the predominance of non-institutional lenders in the tribal money market. As the farm and family are inseparable, owned funds may be invested in farming activities and the borrowed amount may be utilized for family consumption or for meeting the expenditure on social and religious ceremonies, etc. due to this nature of farming, one should not state that the loans that are borrowed for productive purposes are diverted for unproductive purpose.

Raj and Chauhan (1994) "Farmer's Debt: Causes, magnitude and Way out" opined that a large proportion of Indian Farmer debt is due to

expenses relating to socio-religious obligations. Risk and uncertainty in Indian agriculture is also responsible for farm indebtedness. Although banks have made remarkable progress after nationalization to retrieve farmers from the grip of money lenders, they have not made much headway in reducing debt. The extent of rural indebtedness increased from Rs.7500 million in 1950-51 to RS. 39210 million in 1970-71. The legal, moral and educational measures to be taken to deal with the debt problem are discussed briefly.

Power (1991) "The Extend of Farm Indebtedness" observed that by the end of 1989, 32 percent of farmers in the Irish Republic had current loans for farming purposes. Thus leaves a large number of farmers without liabilities and a low overall level of farm indebtedness. Results from the National Sample Survey shows that the extent of borrowing is greater on large farms and those earning higher levels of income. In 1989, a relatively small number of farms were in a serious situation of over borrowing. While the decline in farm income will definitely affects the ability to repay outstanding loans in an increasing number of cases.

Badhani and Saksena (1990) "Credit Based marketing system Pennons for poor peasants: A Case Study", opined that the rural indebtedness is an age old problem in India. Despite considerable efforts undertaken by the government in the post independence period to eliminate the influence of money lenders and traders from the rural economy, the problem remains. A credit based marketing system is in operation. This arises when the farmers face the problem of supporting himself during the off season, when income is not available, purchasing goods on credit from village traders, he is forced to sell his agricultural produce at a very low price. The sample consists of 100 households and the resultant data show trading practices, rates of interest changed and socio- economic back ground of respondents. Solutions to the problem include establishing a consumer credit co-operative society which should be well

charged with the marketing of agricultural products and establishing reasonable interest rate for credit.

Dawar (1989) "Overdue in Agricultural Advances: Causes and Remedies" examined the magnitudes of agricultural indebtedness to various institutional agencies in India with special reference to Andhra Pradesh, the causes of indebtedness, reviews measures taken by government, and suggests measures for improving the recovery of loan instruments.

Alan Richards (1980) has analyzed "The Agricultural Crisis in Egypt". The paper probes the historical origins of and current responses to the agricultural problems of Egypt. Much of the difficulty stems from the fact that the class structure, the distribution of resources and the social bases of both Nasser's and Sadat's regime house blocked either the mobilization of the peasantry on the one hand or the provision of decentralized incentives on the other. After a brief assessment of Nasser's land reforms, price policies, and investment strategy, the current responses of changing crop patterns and mechanization are assessed. Such a strategy seems unlikely to succeed, but no other obvious alternative strategy is at hand.

Siva Kumar (1978) "Aspects of Agrarian Economy in Tamil Nadu: A Study of two Villages" examined the problems of production and marketing faced by different classes of cultivators in two selected villages in Changalpatta district of Tamil Nadu. The differences in yield per acre among the different classes are described to their choice of input use and their resource constraints. The large scale farmer is the most market oriented of all classes selling 87 percent of his gross output, where as the medium, petty and landless peasants sold 68 , 25 and 26 respectively. Indebtedness and the urgent need for cash forced the petty peasants and landless peasants to sell their paddy at prices which are most disadvantageous.

1.2. (ii) Studies on Agricultural Credit

Edit (2010) "Credit Linkages with Factor and Product Markets: A Study in Andhra Pradesh". The credit transactions, depend on informal sources is high (80.70 percent) in Guntur District. The occurrence for tie up loans is declining as it is only 16.74 percent in the total borrowings. Instead, borrowings from the landlords and other private operators are high. The interest on the loans is the same as with the lenders of input dealers and commission agents. But they are faced by low quality inputs and high commission on their produce. They could exercise freedom to choose their seed and to sell their crop whenever they want.

Jayasheela and Vishwanatha (2008) analyses "Agricultural Credit in the Post WTO Period". They argue that agricultural credit has a significant positive relationship with agricultural output. The analysis indicates that the flow of institutional credit to agriculture during the post WTO period is not positive. As a result this trend may not help the farming communities at large, particularly the medium and small farmers' community.

Kareemulla K (2008) made a study on "Bank Credit for Agriculture Versus Farm Indebtedness in Utter Pradesh". For the macro level analysis, he used secondary data on credit flow from RBI, NABARD etc. The indebtedness status data for the state as brought out by the 59^{th} round of NSS was used. He found that, the estimated number of indebted farmer households was 6.9 million in UP, while it was 43.4 million in India. The major impediment, as it appears is the level of indebtedness among the farmers in the state. Default of loans caused by crop failure and diversion of funds for non-productive purposes acts as stumbling blocks in smooth flow of credit to agriculture. Therefore, aggressive measures towards the crop insurance coverage and proper credit follow up by the institutional agencies are essential for rejuvenating agricultural credit system in Utter Pradesh.

Murthy and Veena (2008) “Impact of Agricultural Credit through PACRDBs” opined that the co-operatives are the most important financial institutions in the rural areas. In terms of network, outreach and coverage, they account for about 43 percent in the credit flow for agriculture. The long term as well as short term co-operative credit played an important role in the agricultural credit scenario and made significant contribution in getting indebted farmers, out of the clutches of money lenders and also in the private capital formation in agriculture and development of rural areas.

Golait Ramesh (2007) made an attempt to analyze the issues in agricultural credit in India, in his paper “Current Issues in Agriculture Credit in India: An Assessment”. The analysis reveals that the credit delivery to the agriculture sector continues to be inadequate. The banking system is still hesitant on various grounds to purvey credit to small and marginal farmers. The situation calls for concerted efforts to augment the flow of credit to agriculture, alongside exploring new innovations in product design and methods of delivery, through better use of technology and related processes.

Kamalakannan and Namasivayam (2007) “Institutional Agricultural Credit in Post-Reform Period” have stated that in the field of co-operation, the Primary Agricultural Credit Societies provide mainly short and medium term loans to the agricultural sector.

Satish P (2007) analyses “Agricultural credit in the Post-Reform Era: A Target of Systematic Policy Challenges”. It suggests that a set of reforms which will reverse the policy coaractation for agricultural credit. It argues that the successful promotions of the deepening of rural financial markets, which would ensure uninterrupted flow of credit to agriculture, will require systematic rather than isolated efforts with related actions being undertaken on several fronts.

Jery J T (2006) in his study "Working of Primary Agriculture Co-operastive Bank: A Case study", evaluated that, the banks showed good performance in giving loans to the farmers, particularly crop loans on the basis of specified scale of finance and jewel loans with some formalities to meet any needs of the farmers. This has the implication that the positive growth trends in performance variable of PACS need to be sustained and strengthened.

Satish P (2005) has analyzed "Agricultural Credit: Are There Two Distinct Classes of Borrowers". According to him, there are two classes of borrowers; one class which has smaller land holdings, less capital equipment, and is at the lower end of economic prosperity. This co-operative borrower class mainly comprises the small and marginal farmers. The other class which emerges is basically the capitalist farmer who takes up farming on a commercial basis. This class is more sophisticated having larger land holdings and higher amounts of capital equipment. Commercial banks should be the preferred institutions for the first category of borrowers while the co-operatives with their less formal and more user friendly systems can serve the small farmer types of clients. Keeping these factors in view, the co-operative banking and commercial banking system would need to turn with their lending practices to suit these characteristics.

Gautam Purkayastha (2001) made an attempt to study "Rural Indebtedness in Assam: Changing Scenario". In Assam, unlike the rest of India, informal sources, rather than institutional ones, remain much sought after as sources for borrowing funds. The reasons for the observed trend are to be found in the decline of the co-operative credit infrastructure and the failure of development schemes under successive governments. The co-operative credit infrastructure has been found to be miserably poor and almost on the verge of withering away. The restructuring of the co-operative credit societies should start forth with and it should be done more or less in the line of Grameen Banks which met with high degree of success in Bangladesh.

Surinder S Jodhka (1997) examines "Debt, Dependence, and Agrarian Change" based on a field study. According to him, Green Revolution changes the nature of demand for credit. The bigger farmers no more needed 'short term' loans for financing crops. Also they did not find the Primary Agricultural Credit Societies (PACS) on avenue for power and patronage. Most of those who borrowed regularly from PACs were small, marginal or middle level cultivators or those who owned to land and worked as agricultural labours or artisans in the village. Though most of the farmers had regular debt relations with artisans, the relationship cannot be characterized as that of dependence in the sense that the traders did not exercise any control over the production decision of the farmers.

Gurdev Singh (1995) made a study on agricultural finance based on a decision paper "Agricultural Finance in the context of Technology led Development of Agriculture". It is based on two questions; that is, how to make the institutional credit a more effective instrument of agricultural development and what type of credit support will be available for agricultural development in the post - financial sector reforms regime. It was pointed out that, institutional credit has made important contributions to the growth in agricultural output. This contribution has been more effective and efficient in post – green revolution phase. At the same time, it was also argued that the financial sector reforms cannot be a guarantee for adequate flow of credit to agriculture and to the weaker sections. In the context of adequacy of flow of credit, viability of investment was considered as an important aspect.

Khandakar Qudrat I Elahi (1995) has sought to explain the "Impact of Institutional Credit on Paddy Production in Bangladesh". To achieve this objective, two types of models were estimated; time series and cross section. Both models show that institutional credit has substantial effect on paddy production in Bangladesh as it significantly affects the demand for inputs used in paddy production. The impact of credit is higher on those crops where

the cost of cultivation and the use of purchased inputs are higher. The cross section model shows that the bank credit has greater impact up on input demand than credit received from other sources. Bank credit particularly affects the demand for chemical fertilizer. The study has great policy implications as, to increase the credit and it must be provided to farmers in right time and right amount.

Sha A K (1994) "Business Development Planning in PACS", opined that the success of Business Development Planning (BDP) project in India, to increase agricultural productivity and production, linked with storage and marketing and thereby raise the income of farmers through the activities of Primary Agricultural Credit Societies (PACS) has mainly dependent on the voluntary adoption of the planning function by the management of the PACS.

1.2. (iii) Factors led to Indebtedness

Nair K N and Ramakumar R (2007) examine the impact of agrarian distress on different socio-economic groups, the strategies livelihood adopted by households and the local institutions in shaping these strategies in their paper "Agrarian Distress and Rural Livelihood: A study in Upputhura Panchayat, Idukki District, Kerala". The study is based on data collected from in depth socio-economic experiences conducted in Upputhura Panchayat in Idukki. The strategies of livelihood formed in response to a shock could vary across households depending on the extent of their asset ownerships. The study showed that in formulating coping strategies, households benefited from increased access to a number of public institutions created through public action in earlier years. Access to household to the different welfare institutions was declining in recent years.

Narasimha Rao P and Suri K C (2006) examine "Dimensions of Agrarian Distress in Andhra Pradesh". They argue that indebtedness is not new to rural AP, while suicide dues to indebtedness are. What forces farmers to take

that lives is not the amount of debt purse, but the changed nature of agriculture involving high costs and low or negative returns. The changed nature of policies has largely removed the farmers from the policy arena and led to their increasing immiserisation.

Pal and Wadhwa (2006) "An analysis of the Special Safe guard Mechanism in the Doha Round of Negotiations", have stated that the international commodity prices have remained extremely volatile during the implementation of the provisions of agricultural trade. (opined that the opening up of the agricultural sector to international trade has made the farming community in Kerala vulnerable to surge imports, decline and high volatility in prices, as happened in the case of many other developing economies.

According to Shreyas (2006) "Agricultural Crisis and Debt Suicide in Wayanadu", the experience of Kerala during the past decade shows how and to what extend a traditional export-oriented agriculture sector in a small local economy can suffer due to trade liberalization. With a decline in exports, rise in imports and a consequent drop in prices, coupled with frequent droughts, stagnant production and productivity, farm income declined drastically and increased the indebtedness of farmers. A sad manifestation of the severity of the situation was the wide spread suicides by farmers in the state.

Vijayakumari R (2005) made "An Economic Analysis of Rural Indebtedness in Northern Telangana Zone of Andhra Pradesh". She analyses the extent and structure of rural indebtedness, reasons for indebtedness etc by using random sampling technique. She pointed out the reasons for indebtedness is the lack of technical knowhow, decline in irrigation facilities, increasing biotic and a biotic constraints, lower crop yields etc. She suggested three important remedial measures, i.e. improvement of irrigation facilities, arrangement of sufficient credit from institutional sources and provision of remunerative prices, storage facilities, quality inputs etc.

Joginder Singh and Sindhu R S (2004) analyses the reasons for the declining trend of agricultural production, in their paper "Factors in Declining Crop Diversification: case study of Punjab". They used the technique of co-efficient of variation. The declining diversity has serious repercussions in terms of overuse of natural resources, ecological problems and growing income risk. As diversity in the production pattern declines, variability in the gross value production also increases. The growth has stagnated due to limited expansion of cropped area and decline in the productivity of major crops. Consequently, the production scenario is largely dominated by wheat rice rotation.

According to Government of Kerala (2003) Report, in the recent period there was significant rise in imports of commodities like pepper, cardamom, tea etc; which seems to have affected domestic prices of the crops in Kerala and in turn, the financial position of the cultivators. The imports further increased, following Free Trade Agreement (FTA) with countries like Sri Lanka, which produces and exports many of the commodities which are produced and exported from Kerala.

According to National Sample Survey Organization (NSSO) (2003) Report, "Report on Indebtedness of Farmer Household"; half of the farmers are indebted and much of the indebtedness are due to agricultural expenses; inequality in income between the rural and urban households and between the cultivators and non-cultivators. The report also stated that, the sluggishness in production and decline in prices, inter alia, due to lower exports and higher imports increased the debt burden of the farmers. In general, incidence of indebtedness in rural areas in Kerala is higher than the national average. This is due to the factors like concentration on cash crops, higher value of assets per household and availability of credit through good network of both formal and informal credit agencies.

Sali (1998) “An Enquiry into the Non-Performing Advances of Primary Co-Operative Agricultural and Rural Development Banks in South Kerala” has come to the conclusion that sudden increase in NPAs is due to loan waives policy, inadequate income generated from project, illness of family number, division of income, conspicuous consumption, defective loaning policies and lack of access to consumption loan.

Jayanthi and Balakrishnan (1997) “Managing Financial Risk in Banking” opined that the unprecedented rise in credit to some extent has contributed towards mountain levels of overdue of banks.

Rao and Satyanarayana (1997) “Overdue: Causes and Consequences” reckoned that education, annual income, socio-economic status, land holdings and irrigation, potentiality are the crucial variables that influence the repayment behavior of borrowers of co-operatives in Maharashtra.

Mani et.al (1996) “Some Reflections of Capital Formation in Indian Agriculture”, while examining the level and composition of Gross Domestic Capital Formation at the national level with particular reference to agricultural sector, observed that even though institutional credit for agriculture has increased substantially over the years, the share of long- term finance to total institutional credit seemed to be very low as 15-20 percent.

Gosh (1995) “Overdue in Rural Credit” has revealed that from the opinion of West Bengal, Government Experts, NPAs are alarming due to the low recovery position of government sponsored schemes such as Integrated Rural Development Programmes, DADP etc. it shows that the government machinery for the supervision of these programmes and bank officials are equally responsible for the malady.

Bhatt (1993) “Recovery of Agricultural Loans” has remarked that writing off loans had considerable impact on the recovery performance of

banks. The announcement by the government regarding the waiver of loans has aggravated the situation of indebtedness as the borrowers expected such schemes in future and deliberately avoided paying the installments and interest.

Dandekar (1993) "Limits of Credits, Not Credit Limits", has stated that the dependence of marginal and small farmers on informal sources for credit is still high. That means, the small farmers have low accessibility to institutional credit as 18 percent, while other two groups, ie medium and large farmers accounted for 29 and 55 percent respectively of the total credit from institutional sources. In other words, the non-institutional share in the total credit has decreased with increasing farm size.

Athreya et.al (1990) in his paper "Barriers broken: Production Relation and Agrarian Change in Tamil Nadu" have stated that there are many reasons for the indebtedness; firstly, the agricultural activities are typically seasonal and heavily dependent upon monsoon rainfall. Secondly, though distribution of institutional credit for agricultural purpose has increased, still farmers rely on non-institutional sources (money lenders and others). Thirdly, the domination of middlemen in agricultural product market, which presents farmers from getting remunerative prices for their produce, is also considered to be one of the main reasons for the indebtedness.

1.2. (iv) Studies on Consequences of Indebtedness

Deepamkumar et.al (2016) made an effort to understand the trends of farmer suicides in India in his paper "Farmer Suicides in India-Trends Across Major States, 1955-2011". He used secondary data published by National Crime Record Bureau (NCRB). He found that (SMR) Suicide Mortality Rate, that highlights several important facts. In India, the SMR ratio that is the ratio of farmer SMR and non-farmer SMR has always been lower than one. According

to him, Kerala and Maharashtra are the worse affected states. Prabhjeet Kaur H.S – Dhaliwal et.al (2011) "Farmers Suicides in Punjab: A Discriminate Analysis Approach", study the contribution of some important factors in discriminating the distress levels of the two groups of population namely, population with suicide victim cases. The discriminating analysis reveals that the income from crops, income from the dairying and total loan outstanding are the main factors which are discriminating the two groups of population. The study concludes that there is a strong need to increase the net retain from crop and dairying. Moreover, the problem of loan outstanding should also be addressed. This will help in reducing the farmers' distress by improving their economic lot.

Sidhu B.S, Sukhpal Singh et.al (2011) analyses "Farmer Suicides in Punjab: A Census Survey of the two most affected districts". In recent years, many farmers in the Punjab state have committed suicides, most of which are being linked with the problem of indebtedness. The average size of debt was relatively higher and income lowers in the debt caused suicide cases. Regulation of non-institutional lenders is necessary to prevent them from charging exploitative rate of interest from farmers and pushing them into a debt trap. They opined that, the government should strengthen the educational network in these areas to improve literacy levels of rural people in order to equip them for better livelihoods and to cope with economic distress.

Verma A.K. (2011) analyses "Farmers Suicides and State hood Demand in Bundelkhand". According to him, farmers' suicides in Bundelkhand are a result of several years of neglect of the agricultural sector and industrial backwardness. Neither the Utter Pradesh nor the Madhya Pradesh government has made efforts to address the basic issues of ecological degradation, agricultural modernization and rural indebtedness. The demand for a separate state only serves to satisfy political ends and is no solution for the multiple problems of Bundelkhand's farmers.

Gopal Iyer K and Saroj Arora (2010) argue that the causative and precipitant factor for suicide is indebtedness among the farmers; in their paper "Indebtedness and Farmers' Suicides". The important observations of the study are; farmer's income has been falling rapidly during the last five years. Indebtedness of farmers increased much faster during the last five years. They concluded that the Punjab farmers are heavily indebted to the tune of more than 50 percent of the NSDP from agriculture. The indebtedness of Punjab farmers is very high. Therefore the farmers suicides have became a serious issue.

Karmakar K V (2008) has stated that, while the farmers suffer from the problem of indebtedness, the bankers suffer from the problem of increasing non-performing asset and losers due to indebtedness and the financing agencies may lose their viability to receive finance from higher financing agencies.

Rukmani (2008) from her study on "Problem of Recovery in PACS" has suggested that proper procedure with a suitable repayment schedule should be adopted for the recovery of loans at the time, when the farmer sells their produce. Efforts should be made well in advance to recover loans installments by sending timely reminders and notices to the parties concerned before the date.

Sailaja (2008), in the study on "Problems of Recovery in PACS argued that loan need not be sanctioned in a hurry. Every application for loan should be properly and thoroughly scrutinized so that no loan is sanctioned to any ineligible applicant.

Sharma et.al (2008) from their study on "Recovery Management in Rural Credit" have suggested that the introduction of crop insurance scheme, provision of adequate price for farmer's products, nominal interest rates and implementation of Kissan Credit Cards by banks are the measures to tackle the problem of indebtedness.

Sidhu and Sucha (2008) “Agricultural Credit and Indebtedness in India: Some Issues” have stated that consequences of loans and their transformation into outstanding debt are considerably influenced by sources of loans. It is a well known fact that availability of loans from formal sources makes them cheap because interest rates on regulated loans are very low. But when loans are available from informal sources, they involve high interest rates.

Srijit (2008) “Risks Farmers Suicides and Agrarian Crisis” suggested the formalization of formal loans through a onetime measure of providing long-term loans by banks to farmers to enable them to repay their debts to money lenders. The total Panchayat Raj Institutions and Non-government Organizations should be facilitators of this process.

Sukhpal et.al (2008) “Indebtedness among Farmers in Punjab” have suggested that, regularize and continuously monitor the functioning of non-institutional sources of finance, improve the functioning and lending procedure of the commercial banks and strengthened the functioning of co-operatives are the important measures to tackle the problem of indebtedness.

Vasudevulu C et.al (2008) from their study on “Problems of Recovery in PACS” have stated that the high level of overdue restricts the capacity of lending institutions to recycle funds, besides threatening the prospects of continued flow of external credit for agricultural development. A wide range of causes influence the level and the trend in overdue of the agriculture credit institutions.

According to Aher (2007) “Distress and Relief: Issues in Farmers Committing Suicides”, uncertain monsoon, non-availability of credit increasing, prices of seeds, pesticides and fertilizers, agriculture has became a most critical industry and suffering due to economic distress and they commit suicide on large scale in different provinces. The tackling of farmer’s problems thus becomes key factor in re building new India. In order to provide human face to

the liberalized economy, agricultural credit reforms are urgently needed to bridge the gap between agriculture and other sectors.

Gyanmudra (2007) made a review on "Farmers Suicide – Facts and Possible Policy interventions". This book is an attempt to analyse in depth investigation into the farmers' suicide. Obviously, not only the farmers of Maharashtra but the farmers of all states of India are under distress. Farmers have always been organized for freedom from debt. The authors claimed that there is no particular concentration of suicides in any specific land holding category. This suggests that the size of landholding does not seem to affect the propensity of farmer to commit suicide. The roots of distress are in terms of social and financial distress. Awareness has to be increased about institutions mechanism for the betterment of farmers. Emphasis was given on the interaction between government functionaries and village society with active monitoring of farmers, removing loopholes of existing money lending etc.

Jeromi P D (2007) made an attempt to study "Farmers Indebtedness and Suicide: Impact of Agricultural Trade Liberalization in Kerala". The experience of Kerala during the past decades shows how and what extent a traditional export-oriented agricultural sector in a small local economy can suffer due to trade liberalization. With a decline in exports, rise in imports and consequent drop in prices, coupled with frequent droughts, stagnant production and productivity, farm income declined drastically which increased the indebtedness of farmers.

Lall and Singh (2007) attempt to capture the picture of increasing suicide among farmers in the country in their paper on "Farmers Suicide: An Analysis". The minimum support price mechanism, high cost of production, low price of the producers, import and subsidies, the economic policies, the WTO agreements and common minimum programme are responsible for the present agricultural crisis. Relief Packages and Policies for farmers are only an

immediate relief and it ignores the remunerative prices. The MSP (Minimum Support Price) mechanism and high agro-input cost is more puzzling phenomenon for low crop yield and agriculture crisis.

Mohanakumar (2007) conducted a study of 630 cases of farmer suicides in Kerala state. Poverty is the cause and effect of agrarian crisis in Kerala. The poverty among farmers was driven by fall in the prices of agricultural products, high wage and cost of production. This paved the way for increasing rural indebtedness for the farming population. Indebtedness is the immediate reason for suicides by farmers in Kerala.

Ramaneja et.al (2007) "Farmer's Suicide: A Sociological Perspective" observed the various reasons for farmers suicides. They are economical like- faulty inputs like spurious seeds, pesticides and fertilizers, their high prices; low and fluctuating prices, inadequate marketability of the output etc. Ecological factors include drought, fluctuating yield, devastation caused by the natural-scientific establishments etc. ill health of farmers, alcoholism, and prevalence of various additions. Depression, lack of social and community fall back and early marriage are the major sociological factors.

Sidhartha Mitra and Sangeetha Shroft (2007) made an attempt to study "Farmers Suicides in Maharashtra". This article argues that the loss in competitiveness of the Indian cotton farmers after the opening up of India's agricultural economy in the mid 1990's was a major reason for the increase in farmers' suicides. In Maharashtra there was a suicide epidemic owing to a decline in profit income to levels that were significantly negative. Thus the loss in the competitiveness of the Indian cotton farmers after the opening up of India's agricultural economy in the mid 1990's was a major reason for the increasing incidence of farmers' suicides.

Sindhu and Kamal (2007) "Development Experience of Indian Agriculture: An Appraisal of Post-reform period", opined that India is a land of

marginal and small farmers. The small size of operational holdings became a big hindrance to bring improvement in Agriculture. Mainly due to economic distress, about one lakh farmers had committed suicide in the country between 1998 and 2003. Most of them were small and marginal farmers.

The Export Group Report on the problem of agricultural indebtedness (R Radhakrishnan, 2007) has recommended that rescheduling of loans in the case of natural calamities like floods, cyclone, drought etc and has suggested waiver of interest liability for the extent of period of the loan. The waiver liability is proposed to be met equally by the central and state governments.

Akkineni Bhavani Prasad (2006) analyses "Farmer's Suicides: Andhra Pradesh". She argues that the farmer's organization can help in fighting out the injustice, provided the authorities circulate the various policy decisions and enactments made by them. At present, there is no opportunity, what so ever to the farmer to get remunerative prices for his produce basing on the existing market structure for the agricultural products.

Narayanamoorthy A (2006) in his paper "Relief Package for Farmers: Can it Stop Suicide" finds that, the relief package for Vidharbha's farmers announced in early July will not end distress in the region because it does not address its root causes. The total package appears to be large; it is not going to provide any immediate relief to the farmers. The main reason for farmer's suicides or distress is that agriculture is no longer a profitable enterprise. Income from crop cultivation is not enough to meet the annual cultivation expenditure in most of the states including agriculturally developed states. In fact, farmers from vidharbha and other regions were expecting the announcement of remunerative prices for cotton and complete waiver of loans in the relief package.

Surinder S Jodhka (2006) made a paper "Beyond 'Crisis'; Rethinking Contemporary Punjab Agriculture". He argued that though a large proportion of Punjab's population continues to live in rural areas, the so-called traditional structure has undergone many fundamental shifts during the period following green revolution. The internal differentiation among caste and class that the farming sector has experienced during the green or post-green revolution periods have weakened the latter's position in regional and national policies. The fact that smaller land holders increasingly finding it hard to stay in agriculture, and are moving to other occupations clearly shows the nature of pressure agriculturists in Punjab are confronted with the weakening of farmer's movements and the marginalisation of the context of this fragmentation of the agrarian communities.

Mohana Kumar S and Sharma R K (2006) made an "Analysis of Farmer Suicides in Kerala. The agrarian crisis and farmer's distress in Kerala are closely linked to the neo liberal policy regime implemented in the country in the recent past. The association between the two is more in the regions of the state that are heavily dependent on export oriented crops such as coffee and pepper. The worst affected are the small farmers as they are more vulnerable to crop loss and price decline. Unless the plight of farmers is addressed in terms of changing the macro policies regulating taxes, prices and imports, the condition of the farmers cannot be improved on a substantial basis, either by increasing the availability of institutional credit or providing some alleviatory steps to the victims of suicide families.

Praveen Jha (2006) analyses "some aspects of the well-being of India's agricultural labour in the context of contemporary agrarian crisis". It examines the key-elements of contemporary agrarian crisis and its possible consequences for agricultural labourers. It appears that their economic conditions, in any case quite fragile and vulnerable even in 'better' times, have been quite a bettering in recent years. He concludes that the socio-economic

condition of agricultural labourers has complex linkages with the larger structure and space of economic transformation and specific public policies addressed at their well-being. However, it is only natural that in a predominantly agricultural country in terms of occupational structure, well-being of labour in rural areas has a lot to do with the development in the agricultural sector.

Sridhar V (2006) made a paper on "why Do Farmers commit Suicide: The case of Andhra Pradesh". Individuals and communities are under pressure to cope with the changes brought about by a churn in socio-economic conditions. The policies associated with the process of economic liberalization have imposed a stress on the peasantry leading to suicides. The tragic developments in rural Andhra Pradesh should compel us to draw important lessons for India's agrarian economy.

Srijit Mishra (2006) made an attempt to study "Farmer's Suicides in Maharashtra". According to him, an agrarian crisis has precipitated a space of suicides in Maharashtra. The suicide mortality rate for farmers in the state has increased. The farmers now depend on the input dealer for advice, leading to supplier – induced demand, and an informal source of credit, which results in a greater interest burden. Thus the farmer is faced with yield price, credit, income and weather uncertainties. The way out is to merge bold public policy initiatives with civil society engagement.

Suri K C (2006) in his paper "Political economy of Agrarian Distress" pointed out the reason for agrarian districts in India lie in the conjunction of the changing nature of agriculture and democratic policies. With cultivation becoming an un rewarding occupation, the growing disparities of wealth between the rural and urban areas, the inability of farmers to unite and bring pressure on the governments and a disjunctive between the interests of the farmers and those of the political representatives, have all led to the neglect of agriculture and deterioration in the condition of farmers.

Surinder Sud (2006) Farmers Suicide Cases: Emerging Issues" pointed out that, growing indebtedness is one of the major causes of rising cases of farmer's suicides. As agriculture is the principal livelihood source for 65 percent of India's population, the prime concern is the deceleration in its growth, combined with insufficient capital formation. They are interlinked with factors like infrastructure gap, monsoon dependency, genetic erosion of crop varieties, weak linkage between research and extension and post harvest marketing support.

Vaidyanathan (2006) "Farmers Suicide and the Agrarian Crisis" opined that people are driven to the extreme step of suicide not only because of careless large borrowing from high cost sources and for non-productive uses but also because the increase in net income from loans used for productive purposes falls below expectations. Suicide afflicted households have also borrowed heavily for digging or deepening wells and for cultivating input-intensive high-value crop in the expectation of high yields and good prices. Failure of these expectations is a major reason for their inability to repay the debt.

According to Indian Bank Report (2005-2006), for better recovery and to tackle the problem of indebtedness, adequate incentives should be given to the farmers for proper repayment of loans and to the employees of the bank for better recovery.

Jayaraman et.al (2005) their study on "Rural Credit in Karnataka, systematic weakness and corrections have suggested that, bank officials should strictly monitor the utilization of loan by frequent visits to the borrowers, so that the loans are choosen by them for the purpose for which they are sanctioned.

Joshy et.al (2005) "Requirement and Repayment of credit in Punjab Agriculture" opined that, there is a need to redirect the commercial banks to extend loan facilities liberally to small farmers. This would pave the

way for lessening the role of non-institutional agencies and thus help the farmers to escape from the clutches of money lenders to avoid indebtedness.

Mohanty B B and Sangeeta Shroff (2004) made an attempt to study the “Farmer’s Suicides in Maharashra”. The study based on three districts of Maharashtra reveals that crop losses, indebtedness and market imperfections cause economic hardship to farmers; social factors are also at work, which lead in some cases to their suicides.

Rao V M and Gopalappa D V (2004) analyses “Agricultural Growth and Farmer’s Distress: Tentative Perspective from Karnataka”. This paper presents clues from Karnataka indicating that farmer’s distress is an outcome not of lack of agricultural growth, but, paradoxically, of the enterprising qualities of labours or farmers who pursue growth and even achieves it in good measure. The indications are that farmers in Karnataka respond quite well to changing markets and are receptive to new technologies. But the drought – prone environment, combined with a non-caring policy regime, turns into victims the very producers who bring about growth.

Vyas V S (2004) analyses “Agrarian Distress: Strategies to protect vulnerable sections". According to him, present policies and programmes neither protect a sizable sections of the agricultural population from natural and market- induced uncertainties nor enable them to contribute meaningfully to overall growth of the economy. It is possible, however, to turn the trade by enhancing investment to strengthen the resource base of agriculture, diverting suitable instruments to compensate small and marginal producers for losses from natural calamities, designing organizational interventions to impart strength to their economy, lightening the interest burden from non- formal sources of credit and encouraging rural financial institutions to take over the debt of the farmers from non-institutional sources. A positive feature in our

situation is that we have some examples of success in all these areas. There is a need to extend and scale up these efforts.

Deshpande R S (2002) examines "Suicide by Farmers in Karnataka: Agrarian Distress and possible Alleviatory Steps". This paper attempts to identify the agro- economic situations faced by the farming community, as well as other factors, as reflected by the case studies of the suicide victims, and to suggest remedial measures to avert such tragedies in future. The loss of crops due to inferior quality of inputs and adequate knowledge of technology has been quite common. This needs to be dealt with using a proper input delivery system and making the 'railhasamparka Kendra' more powerful and properly equipped to help the farmers in the process of adaption of technology. He suggested taking steps in order to discourage the interlocking of inputs and credit market.

Murphy Halliburton (1998) made a paper on "Suicide: A Paradox of Development in Kerala". He examined how Kerala could have a high suicide rate despite high literacy and an impressive socio-economic development. He also proposes that, in addition to all the planning strategy, labour relations, land reforms and related issues, the problem of suicide in Kerala should be continue to be studied to get a more holistic view of the complexities of development.

Muzaffar Assadi (1998) analyzes farmer's distress in Karnataka in his paper "Farmer's Suicides: Sign of Distress in Rural Economy". He argues that these suicides reflect the inability of the Indian states to tackle the larger issues afflicting the agrarian economy. Even though state intervention in the transformation of agrarian structure is undeniably a fact, most of the time it ends up in piecemeal legislations or works, thereby, the state has been viewed more as a 'discourse state' than as a 'subsidy or welfare state' by the large number of peasants in India. In fact, introducing agrarian capitalism from above than from below, through such means as new technology, green revolution, land

legislations, co-operative system, IRDP, etc the focus is not on the issues of internal contradictions and ambiguities either in it or in the process of development.

Revathi E (1998) analyses misusing issues of farmer's, in her paper "Farmer's Suicides: Missing Issues". She finds non-inclusion of irrigation and inadequacy of sources of credit are the important reasons for the tragedy. The role of professional money lenders is gone in the villages. Whatever surplus that an agriculturist (middle and big farmers) gets is now being invested either with the commission agents or with the finance companies in the different head quarters. On the other hand, the sources of credit available to the farmers besides the institutional are commission agents, dealers and sub-dealers of pesticides and private sources. The study reveals that neither the commission agents nor the pesticide dealer finance the credit needs of the farmers. She felt that there were some missing issues in farmer's suicides. Firstly, she pointed out that irrigation was an implicit cause for the soaring debts on the farmers. The cotton farmers entirely depended on private irrigation. She observed that, in the creation of private irrigation, farmers made heavy investment that led to accumulation of debts. Secondly, she ascribed the sources of credit as another reason for the farmer's suicides. She pointed out that most of the studies found commission agents and the pesticide dealers meet the credit needs of the farmers. They charged 15 to 20 percent higher price over the normal price.

Hawton et.al (1997) opined that the proportional mortality ratio for suicides is higher in farmers than in the general population. The reasons for this are likely to be complex, but may include easy availability of farmers, stress related to work, financial difficulties and family problems. A psychological autopsy study of suicides conducted in the case of 84 farmers who died during 1991-94 is presented and some preliminary findings are discussed.

Jaganath and Altaf (1993) from their study on "Priority Sector Financing in India and Recovery of Bank Advances" observed that the increased overdue in commercial banks restricted the smooth flow of credit. If the dues accumulated alarmingly, then the health of banking system would be jeopardized and the recycling of funds, which is the key element in development of banking system, would be adversely affected.

Dawar (1989) "Overdues in Agricultural Advances: Causes and Remedies" examined the magnitude of agricultural indebtedness to various institutional agencies in India with special reference to Andhra Pradesh, the causes of indebtedness, review measures taken by the government, and suggests measures for improving the recovery of loan installments.

1.3 Research Gap

In the above pages, we have reviewed the available literature on the broad theme of agricultural indebtedness. From those discussions it is evident that, sufficient literature is available on the topic at macro level. Many of these studies came in late 1960's as a consequence of the agricultural distress in the country. These earlier studies focused more on institutions. Hence, still research gap remains at macro level. Coming to the Kerala state level, there are only a few studies focusing on agricultural indebtedness. The available studies discussed, determinants, farm suicides etc, that too in isolation. The present work is a consolidated approach towards agricultural indebtedness in Kerala focusing on institutions and borrowers.

1.4 Statement of the problem

There are shifts in cropping pattern in Kerala agriculture from 1980's. This is followed by structural changes also. As a consequence of shifts in cropping pattern and structural changes, the cost of cultivation tremendously increased but without corresponding spurt in commodity prices, leading to

reduction in agricultural income and profit. These factors lead to indebtedness among the farmers. To augment this problem, many farmers used to divert the agricultural credit for other purposes including absolutely unproductive purposes. In short, high cost, low prices, under utilization of credit, diversion of credit etc lead the farmers to a debt-trap. As mentioned earlier, recent studies on this phenomenon are rarely done in Kerala state. Thus, this study is attempted with the following objectives.

1.5 Objectives

The specific objectives of the study are:

- To assess the sources and utilization pattern of agricultural credit.
- To measure the extent of agricultural indebtedness.
- To identify the determinants of agricultural indebtedness.

1.6 Hypothesis

1. There are significant inter temporal changes in the composition of sources of agricultural credit.
2. There is significant relation between cost of cultivation, scale of finance and agriculture credit disbursed.
3. There is negative and significant relation between agricultural income and agricultural indebtedness.

1.7 Methodology of the study

This section discusses the methodological aspects of the study. It deals with the sources of data, sample design, selection of the sample farmers, method of data collection and the statistical framework for the analysis of the data collected.

1.7 1 Sources of data and sample design

The study made use of both primary and secondary data. Secondary data have been collected from various publications of Reserve Bank of India (RBI), Government of India (GOI), state governments, National Bank for Agriculture and Rural Development (NABARD), Planning commission, Kerala State Planning board, Department of Agriculture, co-operatives, revenue, directorate of economics and statistics Kerala, All India Debt and Investment Survey (AIDIS), Rural Credit Surveys, National Sample Survey Organization Reports (NSSO), Kerala Development Report, Economic survey and Economic review.

Multi-stage systematic random sampling technique was used to select the districts, blocks, panchayats and the sample farmers for the purpose of primary data collection. On the basis of indebtedness among the farmers, crop diversity, rainfall and the determinant factors of indebtedness, three districts, Thrissur, Palakkad, and Wayanad with reasonable high levels of crop intensity for various crops are selected for the study. From these districts 9 blocks, Puzhakkal, Mullassery and Anthikkad from Thrissur district, Kuzhalmannam, Kollamkode and Chittur from Palakkad district, Kelpatta, Panamaram and Sulthan Bathery from Wayanad district were selected by taking into consideration the cropping pattern and indebtedness so as to support the objectives of the study. Taking into consideration the indebtedness and the area of cultivation under different crops at the state level and in these districts, blocks and panchayats major crops such as paddy, coconut, areca nut, banana, pepper etc were stratified for the study. Out of these blocks, 9 panchayats were selected for the survey. The surveyed Panchayats were Muttil, Pulpally, and Ambalawayal from Kalpetta Block, Kuzhalmannam, Puthunagaram and Nallepppilly from Kuzhalmannam block, and Anthikkad, Venkitangu and Adat from Anthikkad block respectively. A field survey was carried out during the period from January 2014 – May 2014 based on personal interview by using a

detailed pre-structured schedule. The schedule gives detailed information on land use pattern, cropping pattern, cost of input-use, cost of different crops, revenue earned from different crops, livestock enterprises, loans etc. The study also examined the sources of agricultural credit, (institutional and non-institutional sources), utilization of borrowed money for different purposes, outstanding and overdue to all sources of finance etc. It covers utilization pattern of credit and also identified the determinants of indebtedness among the farmers in Kerala in order to study the extent of agricultural indebtedness.

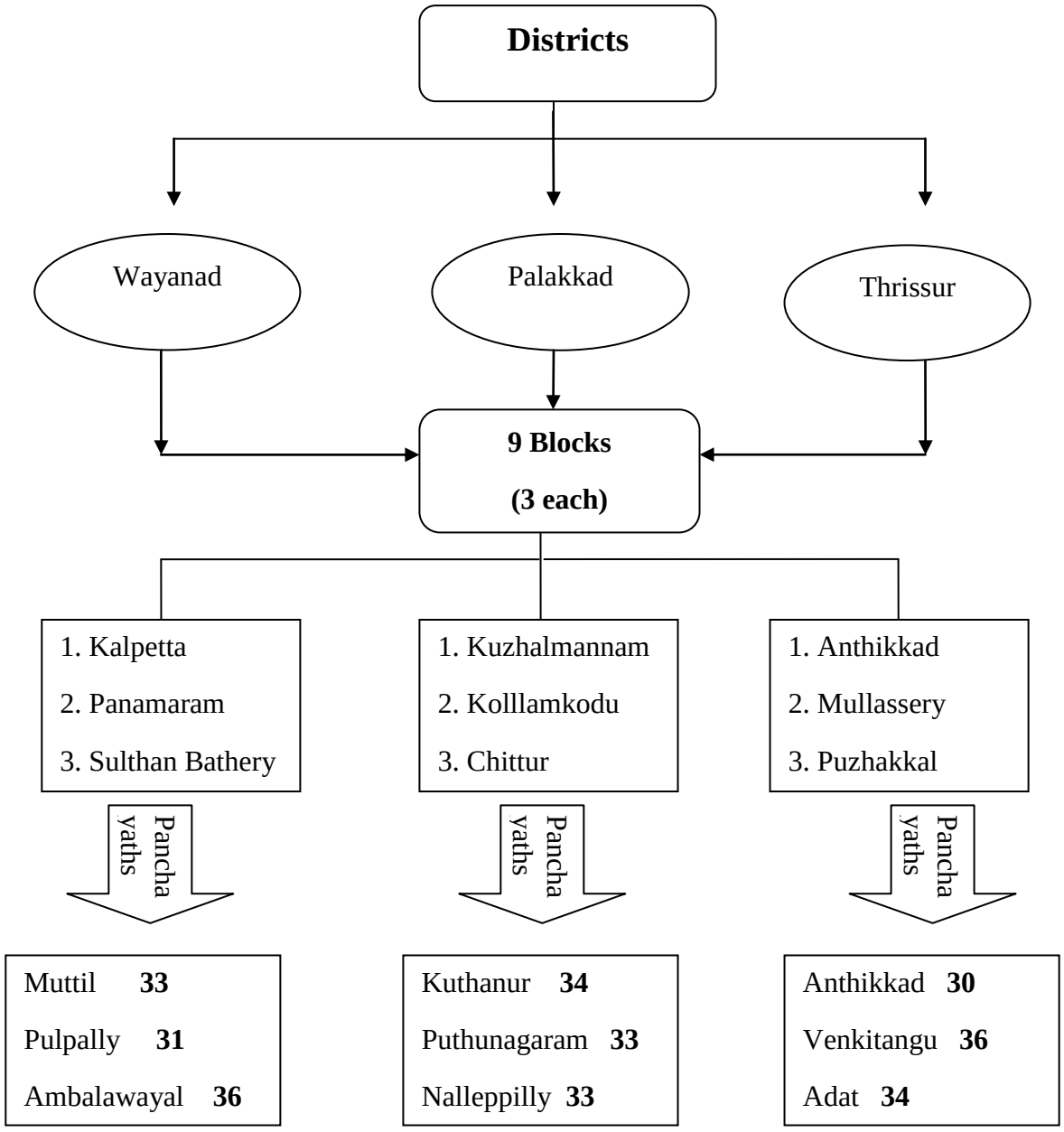
In order to make the study more coherent and comprehensive, 300 surveyed farmers were again categorized into three sub divisions such as Small Farmers (SF), Marginal Farmers (MF), and Large Farmers (LF) according to their size of ownership of land. It is classified as the farmers possess land less than or equal to 2 hectares are considered as SF (Small Farmer). Those farmers having land area greater than or 2 hectares and less than or equal to 5 hectares are considered as MF (Marginal Farmer) and those farmers having land greater than 5 hectares are considered as LF (Large Farmers). In this regard, the survey found that, only 4 percent (12 persons) are Large Farmers (LF); comprising 11 males and only 1 female. Small Farmers (SF) constitute 223 households (74.3 percent); 170 males and 53 females. Other 65 farmers (21.7 percent) are Marginal Farmers (MF) comprising 58 males and 7 females.

The most commonly used averages, percentages; diagrammatic methods are used for the analysis of general characteristics of the primary data. The cost and return of each crops worked out to identify the real situation of agricultural production and there by identify the causes of agriculture indebtedness and its consequences. Multiple regression method is used to identify the determining factors of indebtedness. In order to check out, whether there exist significant relation between these factors with the level of indebtedness; chi square test and correlation techniques were used. Utilization

pattern of agriculture credit have been examined in this study with multiple regression technique.

Figure 1.1

Sampling Frame



Note: Numerical numbers corresponding to each Panchayat represents number of farmers surveyed.

1.8 Concepts and definitions

The terms and concepts used in the study are as follows.

1.8.1 Household

A group of persons normally living together and taking food from a common kitchen constitutes a household. The word "normally" means that temporary visitors are excluded but temporary stay-always are included. Thus, a son or daughter residing in a hostel for studies is excluded from the household of his/her parents, but a resident employee or resident domestic servant or paying guest (but not just a tenant in the house) is included in the employer/host's household.

1.8.2 Household size

The size of a household is the total number of persons in the household.

1.8.3 Cultivator households

All households operating farm land during the preceding date of survey are treated as 'cultivator households.

1.8.4 Regular wage/salaried household

Persons working in farm or non-farm enterprises not run by their own households and, in return, getting salary or wages on a regular basis (i.e. not on daily basis or on periodic renewal of work contract) are treated as regular salaried/ wage employees.

1.8.5 Casual labour household

Persons working in farm or non-farm enterprises not run by their own households and, in return, getting wages under terms of daily or periodic work contract are treated as casual wage labourers. An urban household reporting that major source of its income during the 365 days preceding the date

of survey was casual wage employment of members was treated as a 'casual labour' household.

1.8.6 Household assets

Household assets represented all that were owned by the households and had money value. This included physical assets like land, buildings, livestock, agricultural machinery and implements, non-farm business equipment, all transport equipment, durable household goods and financial assets like dues receivable on loans advanced in cash or in kind, shares in companies and cooperative societies, banks, etc. Agricultural implements also considered as the farm assets.

1.8.7 Liabilities

All claims against a household held by others were considered liabilities of the household. Thus all loans payable by the household to others, irrespective of whether they were cash loans or kind loans were deemed as liabilities of the households. Unpaid bills of grocers, doctors, lawyers, etc., were also considered liabilities of the household.

1.8.8 Cash loans

All loans taken in cash were considered to be cash loans, irrespective of whether those loans were repaid or proposed to be repaid in cash or in kind. Cash loans, generally, covered borrowings at specific rates of interest for specific periods of time. However, if a loan was taken even at ‘nil’ rate of interest from relatives and friends, it was considered to be a cash loan. The loans may be taken against a security or without any security. Dues payable by the household owing to purchase of goods under a hire purchase scheme were treated as cash loans.

1.8.9 Kind loans

All loans taken in kind (except the cases of hire-purchase) irrespective of whether those were already repaid or yet to be repaid in cash or in kind were considered to be kind loans payable.

1.8.10 Outstanding debt

Outstanding debt is the debt that has yet been repaid in full. In general, interest is calculated over the outstanding debt rather than the original amount borrowed. Table 4.33 represents total outstanding amount of debt of the indebted sample farmers. It includes all loans taken by the farmers from different sources.

1.8.11 Overdue

Loans and interest which are not repaid on due date are known as overdue. The accepted standard of measurement of overdue is in relation to ‘demand.

1.8.12 Demand

Demand means the quantum of loans which have fallen due and not those, which are yet to become due for repayment.

1.8.13 Non Performing Assets (NPAs)

NPAs are those loan assets where interest and principal installment are in arrears beyond two quarters. Thus, a loan asset would become a non-performing asset if the installment or interest remains overdue for six months.

1.8.14 Willful defaulters

Those borrowers who have not repaid the loan even after having adequate income and the capacity to repay are termed as willful defaulters.

1.8.15 Non-willful defaulters

The defaulters who do not have adequate income and capacity to repay the loan dues are defined as non-willful defaulters.

1.8.16 Assets

Assets represent all the things owned by the household which have money value, e.g. land, buildings, livestock, agricultural machinery and implements, non-farm business equipments, all transport equipments, durable household goods, dues receivable on loans advanced in cash and in kind, shares in companies, cooperative societies, banks etc., national plan saving certificates and the like, deposits in companies, banks, post offices and with individuals. However, crops standing in the fields and stock of commodities held by the household will not be considered as assets for the purpose of the survey.

1.8.17 Valuation of assets

The money value of all durable and non-durables including agricultural implements is calculated.

1.8.18 Farm business

Farm business comprised household economic activities like cultivation, including cultivation of plantation and orchard crops, and processing of produce on the farm etc.

1.8.19 Category of farmers

Classification surveyed farmers according to the area of land possessed.

1.8.20 Small farmers (SF): those farmers possess agricultural land below or equal to 2 acres.

1.8.21 Medium Farmers (MF): Those farmers possess agricultural land between 2 acres to 5 acres.

1.8.22 Large Farmers (LF): Those farmers possess agricultural land above 5 acres.

1.9 Scheme of the study / plan of the study

The present study is divided into six chapters. First chapter deals with the introduction; which covers the literature review, objectives, methodology, concepts and definitions, data sources and statement of the problem.

The second chapter provides a policy perspective on agriculture indebtedness.

In chapter three, a brief description of agricultural debt and credit situation in India and Kerala are examined.

The detail of debt among the sample farmers, sources and utilization pattern is focused in fourth chapter.

Extent and determinants of indebtedness among the farmers in Kerala are analyzed in chapter five.

Chapter six summarizes the findings of the study, followed by references.

Chapter II

Agricultural Indebtedness: a Policy Perspective

CHAPTER II
AGRICULTURAL INDEBTEDNESS: A POLICY PERSPECTIVE

2.1 Introduction

Several types of policy instruments have been initiated by the government in order to achieve the goals and objectives of agriculture development. The following discussions summarise the policy aspects of indebtedness.

Agricultural policy in India has witnessed different phases during the last five decades. The period from 1950-51 to the mid-1960s, treated as the pre-Green Revolution period, witnessed agrarian reforms, institutional changes and the development of major irrigation projects. The second phase started with the onset of the Green Revolution technology in the mid 1960s. The next phase in Indian agriculture began in the early 1980s. This phase witnessed a considerable increase in subsidies and support to the agriculture sector. During this period while public sector spending in agriculture for infrastructure development started showing a decline in real terms, but investments by farmers kept moving on a rising trend (Chand, 2001; Mishra and Chand, 1995). The rural economy started witnessing a process of diversification, which led to growth in non-food grains output like milk, fishery, poultry, vegetables, fruits, and so on. This accelerated a largely market-driven growth in agricultural GDP during the 1980s. The decade of the 1980s not see any major policy initiative for agriculture; wider spread of improved technology was the main factor for output growth.

A new phase was started in India's economic policy in 1991 that marked a significant departure from the past. The government initiated a process of economic reforms which involved deregulation, reduced government

participation in economic activities and liberalization measures. Though these reforms were not directed at the agriculture sector, a devaluation of the exchange rate, liberalization of external trade and removal of protection to industry indirectly affected it. At the international level, there was a new trade accord and the WTO required the opening up of the domestic market. Initially, there were strong apprehensions about the impact of trade liberalization on Indian agriculture, which turned out to be a real threat for several commodities produced in the country. All these changes raised new challenges and provided new opportunities that required an appropriate policy response. The price intervention of the last two decades had a very limited coverage, and there was a sort of policy vacuum. There was a strong pressure on the government to make a formal statement regarding its agriculture policy so as to provide a new direction to agriculture in the new and emerging scenario. In response to this, the Government of India announced New Agricultural Policy in July 2000, which is known as National Agriculture Policy 2000. Strengthening agriculture is critical for facing the challenges of rural poverty, food insecurity, unemployment and sustainability of natural resources. Agriculture is the science and practice of activities relating to production, processing, marketing, distribution, utilization and trade of food. This definition implies that agricultural development strategy must address not only farmers but also those in marketing, trade, processing and agri-business. In this context, efficient rural credit system assures added importance (S S Acharya 2006). The need for agriculture credit however becomes all the more important when it moves from traditional agriculture to modern agriculture. The agriculture sector at present is facing with a number of constraints like very small land holdings, dependency of population on agriculture, agriculture labour if often under employed, production suffers from weather risks, capacity of saving and investment of the farmer is very low, low productivity due to low use of inputs etc. Therefore, farmers need credit to increase productivity and efficiency in agriculture. Generally, farmers need credit in order to purchase new inputs, purchase of

implements, better management of risks, permanent improvement in land, better marketing of products to face crisis etc. The following table (2.1) gives a clear picture about the history of rural credit policies initiated in India.

Table 2.1
Evolution of Policy instruments for agricultural development

Year	Committee	Objective / major change
1875	Deccan Riots Commission	To obtain and destroy the bonds, decrees and other documents in the possession of the money lenders.
1880-1901	Famine Commission	Famine largely ended by 20th century.
1904	Co-operative societies Act	Premier institution for disbursing agriculture credit
1912	New Act passed	Gave legal recognition for the Provision of rural credit
1915	Maclagan Committee	Made 3-tier cooperative credit structure
1926-27	Commission on Agriculture	For rural credit
1929	Central Banking Inquiry Committee	
1934	Reserve Bank of India Act	specific provision for attention to agriculture credit
1935	Sir Malcolm Darling report	Submitted a report to set up an Agricultural Credit Dept in central and state governments, state coop banks to co-ordinate RBI functions for agricultural credit
1936-37	RBI 1st activity	found that entire finance required by agriculturalists supplied by moneylenders, coop and other agencies were negligible
1935-1950	RBI builds a co-operative credit structure	Short term and long term credit
1945-1950	Dozen committee appointed	To study the progress of provision of rural credit
1951	Provision of credit	Legislation on money lending was advocated to their malpractices
1954	Report of All India Rural Credit Survey	Build a broader credit structure. Extended provision of credit through SBI and using it to extend commercial banking facilities to rural and semi-urban areas
1963	Agricultural Refinance Corporation	To provide funds by means of refinance, in vain.
1966	All India Rural Credit Review	to review supply of rural credit to improve

	Committee	flow of agriculture credit.
1969	Social control and nationalization of commercial banks	played catalyst role to efforts of leveraging the bank system for extending agriculture credit. Concept of priority sector was introduced to help neglected sectors like agriculture
1975	Agricultural Refinance and Development Corporation (ARDC)	credit allocation for agriculture lending
1977	Recommendation from Narasimham Committee in 1975, Regional Rural Banks or RRBs were set up	
1982	National Bank for Agriculture and Rural Development (NABARD) set up	
1991	Report of Committee on Financial System	setting up of various committees/task forces
1995-96	RIDF or Rural Infrastructure Development Fund	Strengthening , rural credit delivery system

Despite all these efforts, the productivity level remained low. To find out reasons for this and remedy the situation the Government of India set up the Royal Commission on Agriculture in 1926. Based on its report submitted in 1928, several far-reaching steps were taken. One of them was the establishment of the Imperial Council of Agricultural Research (ICAR).

2.2 Evolution of rural credit in India

Here an attempt is made to sketch the historical evolution of Indian agriculture which is followed by the agricultural policies.

During the colonial period, government policy with respect to land settlement and the extent of commercial penetration into the agrarian economy differed from region to region depending on various considerations such as extraction of raw materials, mobilizing revenue, defense etc. This extraction of revenue was facilitated by the creation of revenue collectors who had no interest in productive cultivation. These revenue cultivators were later converted into absentee landlords and a zamindari system of land tenure was ushered in

throughout the eastern states. This led to sub-infatuation and growth of a parasitical class of land lords, merchants and money-lenders (Bhaduri 1983).

2.2.1 Land Reform

As is well known, the land reforms taken up by the Indian Government were in three spheres: (a) abolition of intermediaries, (b) tenancy reforms, and (c) ceiling on landholdings.

Abolition of Intermediaries

All the states passed Acts in this respect by 1953. The implementation was under process throughout the decade of the 1950s. As a result, 20 million tenants were brought into direct relationship with the state (Dandekar and Rath, 1971). This legislation was implemented quite forcefully and led to some positive changes. However, compensation was paid to the landlords.

At the time of independence, the prevailing land tenure system was complex. The agrarian structure at the time of independence had several features that inhibited agriculture. These were the existence of rent-receiving parasitic intermediaries between the actual tillers of the soil at the bottom, and the government at the top, great inequity in the ownership of land, concentration of agricultural land in the hands of the upper classes who shunned physical labour and took little personal interest in farming, widespread prevalence of insecure tenancies on extortion terms inhibiting the optimum utilization of the tenants' land, a preponderance of miniscule uneconomic holdings and to the extreme fragmentation and subdivision of holdings." The post-independence land reform agenda naturally included the abolition of intermediaries between the state and the cultivator, tenancy reform, reducing concentration of land ownership and the consolidation of land ownership and the consolidation of fragmented holdings. However, not all items in the agenda were effectively implemented (Appu P.S, 1996, pp.XV-XII).

The inefficiency and slowness of the implementation of the legislation abolishing intermediaries across states due to various reasons including resistance by intermediaries, nonetheless concluded, and mentioned Gunnar Myrdal and Wolf Ladejinsky in his support, that the social and economic powers of the former intermediaries came to an end with the implementation of legislation. However, the reforms had some major weaknesses. It allowed the intermediaries to retain a substantial amount of land for their "personal cultivation," a term that was so "loosely defined in the legislation that no rights were conferred on tenants-at-will and share croppers," resulting in millions of tenants and under-tenants being evicted. Also the payment of compensation to the former intermediaries resulted in heavy public expenditure. (Appu, 1996, pp. 72-79)

Tenancy Reform

After the introduction of the Permanent Settlement in the early years of the 19th century, there was a large scale eviction of tenants. The colonial government responded by legislating a measure of protection to the tenant, starting with the Rent Act of 1859 and culminating in the Bengal Tenancy Act of 1885, which extended security of tenure and fixity of rent to a claim of tenancy. The other provinces also enacted similar laws. The first Five Year Plan defined that owners of land in a holding not exceeding a family holding as small owners and those holding land in excess of a family holding but less than the limit for resumption for "personal cultivation" (three times the family holding) as middle owners.

Appu (1996, p. 91) clearly remarks that "all these meticulous exercises in hair splitting in verbal juggling aimed at reconciling the conflicting interests of landowners and tenants, seems to have been undertaken ignoring the realities of the power equation in the countryside and the character and capability of the administrative machinery. The basic fact is that the policy of

'land to the tiller' could not have been carried out without hurting the private property rights. But the policymakers were unwilling to wound and afraid to strike." Ignoring ground realities and overestimating the honesty and capability of administrative machinery at application levels in the context of tenancy reform is equally applicable to India's planners from the fifties to now.

NSS (2004) claims that "though the measure of land reform undertaken since independence appear to have deterred the growth of exploitative tenancy, there is still a huge proportion of tenanted land in total operated area". What is most remarkable about farming in rural India is the significantly high proportion of total tenanted operated land by a small proportion of holdings." What is remarkable is that NSS does not define what is meant by exploitative tenancy, let alone what its growth would have been in the absence of land reform. Nor does it say why concentration in leased-area is unduly high.

Ceiling on Landholdings

The origin of the policy of ceilings of landholdings in the post-independence era is the report of the Agrarian Reform Committee (chaired by J.C. Kumarappa) submitted in 1950. The Committee evolved three norms for holdings sizes: Basic, Economic and Optimum. The economic holding was defined as one that would, based on the prevalent agro-economic conditions, afford a reasonable standard of living to the farmer and his family, provide full employment to his family, and a pair of bullocks. Under the assumption that the rehabilitation of the large number of uneconomic holdings would not be feasible, the committee defined the Basic holding as one, though smaller than an Economic holding, was nonetheless viable, thus determining the lowest viable holding size. While viability considerations determined the lower limit of holdings size as the Basic holding, social justice considerations led committee to define upper limit or ceiling as three times the size of Economic holding, which

it called the Optimum holding. In effect, the committee expected holdings below the basic holding to be exempt from any land ceiling laws and only land above the Optimum holding was to be acquired by the state.

Ceiling on landholdings was imposed with a purpose to reduce the inequality in the distribution of land. The objective was to acquire the surplus land and redistribute it among the landless labourers and medium and small farmers. The ceiling laws in India were enacted in two phases, first in the early 1960s and later in the early 1970s. However, of all the land reforms measures, ceiling on landholdings was most unsuccessful in India. Primarily due to the failure of land redistribution to the extent expected by the rural poor, rural unrest grew all over the country in latter half of the 1960s. The policy on ceiling on land-ownership and agricultural property has been driven solely by consideration of social justice in a context in which a large proportion of the population will remain dependent on agriculture for their livelihood.

So far as overall failure in implementation of land reforms is concerned, it is attributed to lack of political will. However, it also needs to be admitted that despite all the shortcomings, there have been some achievements through land reforms. Abolition of Zamindari was fairly efficiently implemented in all the states as compared to tenancy and ceiling laws (GOI, 1976:87). Jammu and Kashmir was the first state to implement all the legislation properly (Kotovsky, 1964:50, 116). After national guidelines were framed, there has been some progress in the implementation of ceiling, by the early 1980s, West Bengal, Karnataka and Kerala made progress in implementation of land reforms. West Bengal protected the rights of sharecroppers through ‘Operation Barga’; Karnataka conferred occupancy rights of land to the tenants through Land Tribunals; and in Kerala the implementation of Tenancy Laws was effectively done through tenant associations (Joshi, 1982:66).

2.3 Estimates of Rural Indebtedness

Attempts have been made from time to time to assess the extent of rural indebtedness. The status of debt was estimated before and after independence. The major commissions estimated rural indebtedness before independence is Deccan Riots Commission 1875, Famine Commission 1880, Central Banking Enquiry Committee 1929, etc. All of these committees found that, pre-independence period witnessed the dominant role of non-institutional sources in supply of rural credit. The noteworthy among them were indigenous bankers and the money lenders. They exploited the illiterate farmers with exorbitant interest rate.

After independence, the committee on agrarian reforms (chaired by J.C. Kumarappa) in its report of 1950, observed that, collective farming to be suitable essentially for the development of reclaimed waste land. After examining three other alternatives, namely capitalist farming, state farming and individual peasant farming, it categorically rejected capitalist farming as its adoption in its view "would deprive the agriculturists of their rights in land [and] turn them into mere wage earners," was unenthusiastic about state farming, except once again, on reclaimed waste land, and opted for individual peasant farming.

The idea of co-operative farming surfaced in the form "cooperative village management" in the First Five Year plan with the village as the unit of land management with individual families or groups of families cultivating blocks of land allotted by the village management body. However, right of ownership of the village land would be recognized and compensated through an ownership dividend at the end of each harvest. Dandekar (1974, p. 53) strictly comments that "This was a rather naive concept based on a utopian notion of a village and plain ignorance, or unwillingness to see the truth, about village community functioned."

The Second plan, according to Dandekar "offered lip service though with less conviction," to cooperative village management and the third plan made no mention of village management and thereafter the concept was quietly dropped. The idea of bringing together holdings below a certain level into small cooperative farms did not proceed very far either. It also went out of consideration after the Third plan.

Although the problem of landless agricultural workers was recognized and the need to provide increased employment opportunities (on and off farm) was also recognized as Dandekar (1974, pp 84-85) points ideas on increasing employment opportunities "were not very clear, in any case, they were not elaborated . . . what was said with respect to the landless workers in the First Five Year Plan was plainly evasive." In particular, there was no understanding that the development strategy being capital intensive by its very design could not generate the rising employment opportunities for such workers. Indeed the implicit presumption then was the problem of their employment was to be solved within the agricultural sector itself. Dandekar (1974, p. 87) points out that "the Eighth Plan emphasized that landlessness was a root cause of poverty and that access to land was a major source of employment and income; that such access could be achieved either by a more equitable distribution of land or providing security of tenure to tenants and share croppers who are the actual cultivators." In his summing up of the official approach to transforming the traditional agriculture, Dandekar (1974, p.89) correctly argues that the so-called "land problem", which the First Five Year Plan claimed overshadowed all other problems, was "an excessive burden of population which the land has to bear and a satisfactory solution is supposed to be to let the land continue to bear this burden", again illustrating the lack of recognition of the lessons of development history.

2.3.1 National Income Committee (1949)

The first systematic estimates of the extent of rural indebtedness were made in the first report of the National Income Committee in 1949. The Committee estimated the rural debt at Rs. 915 cores of which 83 percent non-productive and only 50 percent of this was supplied by co-operatives. The government of India and Reserve Bank of India were to play an active role in the supply of rural credit since the launching of First Five Year Plan in India in 1951. Many expert committees were appointed from time to time to improve the flow of credit from institutional sources.

2.3.2 All India rural credit survey committee (1951-52)

The committee, appointed by the Reserve Bank of India in 1951 under the chairmanship of Gorwala, undertook a comprehensive survey of rural credit and submitted its report in August 1954. The survey revealed that the shares of institutional and non-institutional sources of rural credit were 7.3 percent and 92.7 percent respectively. The committee recommended (1) production oriented short term credit called "the crop loan system", based on crop outlay and not on the basis of ownership of assets as done in the past; (ii) creation of new institutions like National Cooperative Development and Ware Housing Boards, the All India Warehousing Corporation and state warehousing companies in order to promote storage, processing and marketing facilities etc.

The Reserve Bank of India has undertaken systematic surveys to assess the liability of the Indian peasantry at intervals. The first of these surveys known as Rural Credit Survey 1951-52 estimated amount of debt owed to the agriculturist and professional moneylenders from 14.2 percent and 44.8 percent respectively of total debts. According to the survey, the percentage of borrowing families among rural families was 51.7 percent and of which about 63 percent of rural families were in debt and average amount of debt per family was Rs. 283. The average amount of outstanding debt per family varied from Rs. 29 to Rs.

1200. The survey assessed amount of total rural debt at Rs. 750 crores. The burden of debt was higher on small cultivators as compared with cultivators with large holdings and the portion of borrowing families was large among cultivators than among non-cultivators. After this report, Rural Credit Follow up Survey, 1956-57 found that there is a general trend of an increase in the volume of debt.

The decadal surveys by the NSS of assets and liabilities provide a rich source of data on indebtedness of farmers and their access to institutional credit. The Expert Group on Agriculture Indebtedness (EGAI, 2007) draws extensively on this body of data. The share of cultivators among rural households has steadily declined from 72.4 percent in 1971 to 59.7 percent in 2002 (NSS, 2005a, statement 2), with significant interstate variations. The incidence of indebtedness having drastically declined from 43 percent in 1971 to 20 percent in 1981 has increased slowly since then to 27 percent. There are substantial interstate differences in the extent of indebtedness, but the pattern of change over time is broadly similar across states. However, the debt-asset ratio of rural cultivator households declined from 4.13 percent in 1971 to 1.61 percent in 1991, increased in the nineties to reach 2.49 percent in 2002.

On sources of borrowing and hence of accumulated debt, rural households (cultivator and non-cultivator) borrowed more than they repaid in 1971-72, 1981-82, 1991-92 and 2002-03, with differences increasing substantially from being relatively small in 1971-72 (NSS, 2006). The proportion of households reporting cash borrowing, after falling from 29.3 percent (23.4 percent) for cultivators (non-cultivators) in 1971-72 to 20.6 percent (16.7 percent) in 1981-82, started rising steadily to 22.4 percent (18.4 percent) in 2002-03. However, there is no jump in the proportion between 1991-92 and 2002-03. The proportion of cultivator households reporting cash repayments fluctuated. However, the proportion of non-cultivator households reporting repayments increased steadily.

All-India Rural Credit Review Committee (1967) estimated the short term credit requirements by 1973-74 at Rs. 2000 cores. The actual supply of institutional credit for short term purposes amounted to Rs. 859.30 crores, i.e., 42.97 percent of the estimated requirements. A sum of Rs. 2550 crores would be anticipated advance in 1979-80 as estimated by the Planning Commission of India, while the real advances extended by the institutional sources was Rs. 2928.10 crores, i.e., 114.83 percent of the anticipated advances (AIDIS, 59th round).

2.3.3 Mehta Committee (1959)

This committee favoured revitalisation of a large number of credit societies to expand rural credit. The committee felt that the Government could contribute to the share capital ranging from Rs. 1000 to Rs. 10,000 on a matching basis and its contribution to "the special bad debt reserve" to weak societies. The committee recommended for the provision of funds even to the tenant cultivators. It desires that a large portion of the loan would be in kind form to avoid misapplication of loans. It favoured quick measures to link credit with marketing to reap the benefit of organized marketing that would help in the recovery.

2.3.4 Patel Committee (1961)

The Government of India appointed this committee in July 1961 to examine the question of organizational, procedural and administrative difficulties associated with routing taccavi loans and other facilities of the Government through cooperatives. The committee's report came in 1963. The committee recommended that all loans for normal production should be arranged through the cooperative institutional agency and Government would have provided finance directly to the farmers only in certain cases of high financial risks.

The Government should continue making budgetary provisions increasingly in strengthening the cooperative resources. It recommended that the recovery of cooperative overdue would have priority over the outstanding/overdue of taccavi loans. The committee desired effective steps to rationalise the central banking structure so that there would be one central bank for each district. The committee also recommended that steps would be taken to create an agency of the land mortgage banks at a level below the district level wherever the primary land mortgage banks functioned at the district levels only. The Government of India generally accepted its recommendations.

2.3.5 Mirdha Committee (1964)

The committee on Cooperation was constituted by the Government of India in August 1964, and it submitted its report in August 1965. It felt that the cooperative movement is the best organization to protect the small man from the exploitation of the rich and that it is an instrument for promoting social justice.

2.3.6 All-India Rural Credit Review Committee (1966)

This committee, headed by Venkatappiah, submitted its report in July 1969. The committee observed that "except in a few areas, the predominance of non-institutional credit continued over the years, despite inroads made by the growth of cooperative credit, and suggest reorganization of cooperative credit. Its main recommendations were (i) introduction of crop loan system in areas where it was not in existence; (ii) fixation of scale of finance separately for as small an area as possible, preferably taluk and also separate scale of finance for irrigated and un-irrigated areas; (iii) simplification of lending procedures to improve production and recoveries; and (iv) establishment of two new organizations namely the Small Farmers Development Agency (SFDA) to identify the problem of potentially viable small farmers and ensure them supply of agricultural inputs, services and credit; and the Rural

Electrification Corporation to help rural electrification schemes through the State Electricity Boards.

The committee observed that the role of commercial banks in the sphere of rural credit might be considered in six areas like "(i) production credit; (ii) investment credit; (iii) credit for the infrastructure; (iv) distribution credit; (v) credit for activities jointly undertaken with agriculture and (vi) credit to cooperatives engaged in agricultural activities". It also addressed that date should be fixed in each state beyond which no taccavi loan should be provided except to meet situations of widespread distress such as floods and famines. These recommendations had been implemented in the subsequent years.

2.3.7 Santhanam Committee (1969)

The Committee on Co-operation headed by Santhanam, in its report in 1969, recommended that "the scale of cultivation finance should include a reasonable amount towards the consumption expenses of the members' family. It further recommended that village societies should be empowered to pursue action under the Land Revenue Recovery Act also to drive up recovery measures. In order to augment resources of the village societies, the committee recommended that the margin between lending rate to members and its borrowing rate from the central banks should be three percent.

2.3.8 Farmers Service Societies (1971)

The National Commission on Agriculture , in its interim report in December 1971 recommended for the establishment of a new type of organization at the base-level, called the Farmers Service Societies in order (i) to provide all types of credit, technical guidance and a full package of services especially to small farmers to develop their farms in an integrated manner; (ii) to cover effectively a large area of operation, a block or population of 10,000 so that it could function as a viable unit; and (iii) to provide for a two-third

representation to enable the weaker sections to control the society. Such societies could be either financed by commercial banks or by cooperative banks. It was accepted and a scheme was put into operation since 1973-74 in almost all the states.

2.3.9 Large-sized Adivasi Multi-Purpose Cooperative Societies (1971)

A special study group, under the Chairmanship of Bawa (1971) recommended the organization of large-sized Adivasi Multi-Purpose Cooperative Societies in tribal areas as the bottom level structure with the objectives of (i) providing all types of credit under a single rule. (ii) Providing technical guidance; and (iii) arrangement for marketing of agricultural and tribal based products and such societies were established in tribal areas.

2.3.10 The Committee on Cooperative Land Development Banks (1973)

This committee headed by Madhava Das studied the structure of the land development banks in different states and desired the continuance of the existing unitary and federal systems as they have their own advantages and disadvantages. It suggested for strengthening the existing structure by setting up regional/divisional officers of the Central Land Development Bank with adequate technical and other staff to provide necessary support to the base level structure in the matter of the formulation of the schemes and their implementation. The committee recommended that “there should be close link between the State Cooperative Bank and the various Government departments. The committee stated that there was concentration of overdue in the case of farmers holding above 10 acres in almost all states except in Punjab and recommended for amendment to certain provisions of the existing Acts for enabling the banks to take prompt and effective measures against the defaulters.

The post WTO period has thrown a new challenge to Indian agriculture, as domestic prices of several commodities have turned higher than

international prices. This has made imports attractive and caused an adverse effect on exports. The situation calls for improving the competitiveness of Indian agriculture. This requires improvement in efficiency in agricultural production, marketing, transport, and so on. This is the third challenge before Indian agriculture. There is also an equity concern relating to various regions and classes of farmers and labour households. There is a strong feeling in the country that while intervention in food markets has benefited only agriculturally progressive regions, rain fed and dry land agriculture regions have been ignored.

There is a widespread belief that India is currently in the midst of an agrarian crisis. The report of the Expert Group on Agricultural Indebtedness appointed by the Ministry of Finance claims that "Indian agriculture is currently passing through a period of severe crisis. Although some features of the crisis started manifesting themselves in certain parts of India during the late 1980s, the crisis has assumed a serious dimension since the middle of the 1990s. One of the tragic manifestations of the crisis is the large number of suicides committed by the farmers in some parts of India." (EGAI, 2007, p13).

The Government of India announced New Agricultural Policy in July 2000, which is known as National Agriculture Policy 2000. The National Agriculture Policy (NAP) aims to attain a growth rate in excess of 4 per cent per annum in agriculture over the next two decades. It lays down a couple of other goals to attain this growth. These are: growth that is based on efficient use of resources and that conserves India's soil, water and biodiversity; growth with equity, that is, growth which is widespread across regions and farmers; growth that is demand driven and caters to domestic markets and maximizes benefits from exports of agricultural products in the face of challenges arising from economic liberalization and globalization; and growth that is sustainable technologically, environmentally and economically. It is further stated that the policy will seek to promote technically sound, economically viable, environmentally non-degrading and socially acceptable use of the country's

natural resources – land, water and genetic endowments–to promote sustainable development of agriculture.

The National Agriculture Policy (NAP) proposes to put large areas of wasteland to use for agriculture and afforestation. To manage land resources, another measure emphasized by the NAP consists in the use of the watershed approach, which is also proposed for rain fed agriculture. The NAP calls for special efforts to raise the productivity and production of crops to meet the rising demand for food. It says that major thrust will be given to rain fed and irrigated horticulture, floriculture, roots and tubers, plantation crops, aromatic and medicinal plants, bee keeping and sericulture for segmenting food supply, export and generating employment in the rural areas. Emphasis is added on raising livestock and fishery production. The NAP expresses concern about the narrowing and erosion of India's plant and genetic resources in the last few decades.

A very high priority has been accorded by the NAP to evolving location-specific and economically viable improved varieties of agricultural and horticultural crops, livestock species and aquaculture. There is an added emphasis on regionalization of agricultural research based on identified agro-climatic zones. The policy reiterates the government's resolve to provide a favourable economic environment for promoting farm investments through: (a) the removal of distortions in the incentives, (b) improvement in terms of trade with manufacturing, and (c) external and domestic market reforms.

The NAP acknowledges the problem of declining public sector investment in agriculture. It proposes to re-channelize available resources from support measures towards asset formation. The NAP advocates land reforms by focusing on a consolidation of holdings, redistribution of surplus/waste land among the landless, tenancy reforms, development of the lease market and recognition of women's rights in land. Other areas listed for policy attention are

private sector participation through contract farming, assured markets for crops especially for oilseeds, credit, and horticultural crops, and increased flow of institutional credit, and strengthening and a revamping of the cooperative credit system. The NAP recommends the institution of the Agriculture Insurance Scheme covering all farmers and all crops throughout the country with a built-in provision for insulating farmers from financial distress. Other measures suggested under this include: (a) enhancing flood proofing anf drought proofing through insurance, (b) ensuring remunerative prices through the announcement of the Minimum Support Price (MSP), and (c) future trading in agricultural products.

It is widely believed that India is in the midst of an agrarian crisis. The Expert Group on Agricultural Indebtedness appointed by the Ministry of Finance and Chaired by the eminent econometrician Professor R. Radhakrishna, former Director of the Indira Gandhi research Institute for Development Research, Mumbai, on page 13 of its report (July 2007) firmly asserted that "Indian agriculture is currently passing through a period of severe crisis…the crisis has assumed a serious dimension since the middle of the 1990s. One of the tragic manifestations of the crisis is the large number of suicides committed by the farmers in some parts of India."

The Expert Group and contributors to the growing literature on the crisis have attributed the crisis to several factors: the role of systemic economic reforms of 1991; the opening of the Indian economy to external competition and investment after decades of insulation; the impact of India's implementation of its commitments under the Agreement on Agriculture of the Uruguay Round of Multilateral Trade Negotiations; neglect of Agriculture in the planning process since the mid 1980s; the decline of public investment in agriculture; slowing of the rate of agricultural output; stagnation of yield per hectare of land and growing indebtedness of farmers.

Among the contributory factors of the agrarian crisis cited by EGAI (2007), agricultural indebtedness seems to have some firm empirical support. The NSS data show that the incidence of indebtedness among farmers has increased slowly from 20 percent in 1981 to 27 percent in 2002, although there is no evidence of a faster rate of increase during the decade of the nineties. Moreover, the share of the institutional sources of credit has been fluctuating since 1981 after rising dramatically from 31.7 percent in 1971 to 63.2 percent in 1981, in part due to the expansion of bank branches in rural areas after nationalization of banks in 1969. Unfortunately the share of money lenders, having fallen from 69.7 percent in 1951 to 16.1 percent in 1981 began rising thereafter reaching 27.8 percent in 2002. Debt incurred for production purposes also declined after 1981, most of the decline being accounted for by increase in debt-financed household expenditure. Thus the rise in the incidence of farm indebtedness, the share of money lenders as a source of debt finance and in the use of debt for financing household expenses is disquieting. However without a detailed analysis of these trends one cannot draw a firm conclusion that they contributed to the agrarian crisis.

The National Commission on Agriculture (1976) projected that the realistic/graduated requirement of credit for agriculture would be Rs9400 cores by 1985. But the Planning Commission's targets for 1984-85 were Rs5415 cores, while the actual disbursement of credit in 1984-85 was Rs5810 cores as reported in the Seventh Plan Draft. Although Planning Commission's anticipated target of credit for 1984-85 was surpassed by actual disbursement in 1985 was not fulfilled.

2.3.11 High Level Standing Committee (1974)

The Reserve Bank of India appointed a high level standing committee under the headship of Ojha to review the flow of institutional credit to the rural sector. The terms of reference of the committee were to review and

assess; (i) the requirements and availability of institutional credit for agriculture and rural sector; (ii) the progress of flow of credit and complementary inputs to weaker sections; (iii) the matters connected with delivery, timely recovery and regional imbalances related to the institutional credit; and (iv) the coordination between credit institutions and the various State Government agencies. The committee was expected to make suitable recommendations to strengthen the rural credit system in India.

2.3.12 Sivaraman Committee (1979)

The Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development, headed by Sivaraman, in its interim report submitted in November 1979, recommended the establishment of a National Bank for Agriculture and Rural Development under the control of the Reserve Bank of India to decentralize its functions. The committee, in its final report, submitted in January 1981, has made several recommendations for strengthening the rural credit system in the country. The committee felt that through (i) identification of target groups like small/ medium farmers, landless agricultural labourers, rural artisans, scheduled castes and schedules tribes; (ii) simplification of terms and procedures of credit; (iii) updating of land records, (iv) project-based lending; and (v) creation of suitable infrastructure to ensure supply of inputs and services, the credit to the weaker sections could be quickly facilitated. It recommended that "the development agencies including the credit institutions have to plan and progress together and ensure that credit is tied up with development programmes and supported by appropriate backward and forward non-credit linkages".

The committee strongly urged that in the matter of dispensing long term credit, primary agricultural credit societies should act as agencies of land development banks. Regarding overdue, it did not favour the State Governments in giving total exemption to all classes of defaulters. It desired that there should

be strict observance of financial discipline by all concerned for sound and sustained growth of the cooperative credit system in India. It recommended for amending the Indian Penal Code to provide for deterrent punishment to willful defaulters.

The Government of India accepted the committee's interim report for setting up a new National Bank for Agriculture and Rural Development and the same came into being on 12th July 1982. At a conference arranged by the Planning Commission in March 1982, most of the recommendations of this committee had been endorsed by the representatives of the Central Government, State Governments, Reserve Bank of India, Agricultural Refinance and Development Corporation financing banks and others concerned.

Though several investigations were made on various aspects of rural credit and committees were appointed from time to time ever since the establishment of the Reserve Bank, the epoch making event in the history of rural credit was the launching of the All-India Rural Credit Survey (AIRCS) by Reserve Bank in 1951-52.

2.4 Estimates on Agricultural Indebtedness-Evidences from AIDIS (All India Debt and Investment Surveys)

This section analyses the salient aspects of debt of rural households, as revealed by the results of the decennial household surveys on debt and investment, for different benchmark years during the period 1951-52 to 2013-14. The incidence of debt of rural households and the relative role of institutional and non-institutional agencies in financing rural households is discussed. The results indicated that the proportion of households reporting indebtedness declined over the decades. However, the share of institutional agencies in total debt, in particular the commercial banks, steadily increased over the decades, while non-institutional sources showed a steep decline. Also,

the share of debt for productive purposes for both farm and non-farm business has increased during these period.

In order to study both the demand and supply sides of credit in the household sector, the Reserve Bank had conducted the 'All-India Rural Credit Survey' in 1951-52 and the results of the Survey were published in 1954. Information on assets, economic activities, particulars of credit operations and the incidence of indebtedness in the rural areas were collected to assess the demand for rural credit. Further, data on the extent and mode of operations of different credit agencies were also collected with a view to examine the supply side of credit. The first Rural Credit Survey was followed up with a similar Survey in 1961-62 by the Reserve Bank. The scope of the survey was extended to include capital expenditure in the household sector and other associated indicators of the rural economy. The second survey was accordingly titled 'All India Rural Debt and Investment Survey' and results were published in 1965. Both the surveys by the Reserve Bank were conducted for rural areas only.

2.4.1 Surveys by the NSSO

The National Sample Survey Organisation (NSSO) has been conducting All-India Survey on Debt and Investment, decennially, since its 26th round (1971-72) in both rural and urban areas. These surveys generate basic information on assets, liabilities and capital expenditure in the household sector of the economy. The All-India Debt and Investment Survey (AIDIS), which was carried out as part of the 59th round of the National Sample Survey (NSS) during January to December 2003, was the sixth such survey conducted at the all-India level. These reports by NSSO give the estimates of indebted households and the amount of debt classified by various aspects at the State and all-India level in both rural and urban areas. At present, the decennially conducted AIDIS is the only nation-wide enquiry providing data on household assets, indebtedness and capital expenditure.

The main objective of the AIDIS is to generate reliable estimates on assets, liabilities and capital expenditure of the household sector. The survey provides the details of household liabilities required for the formulation of credit policy of financial institutions and planning for development. According to the AIDIS, the agency from which a loan was taken treated as the credit agency. The credit agencies were either 'institutional agencies' or 'non-institutional agencies'. The various agencies which were treated as 'institutional agencies' are: government, co-operative agencies, commercial banks including Regional Rural Banks, insurance, provident fund, financial Corporation/institution, financial company and 'other institutional agencies'. The agencies which were treated as 'non-institutional agencies' are: landlord, agriculturist money lender, professional money lender, trader, relatives, friends, and professionals, and 'others'. Of all the parameters in AIDIS, credit agencies and terms and rate of interest of loans have been probed into more deeply than the rest, in view of their historical importance with respect to the supply side and cost of loans, respectively.

2.4.2 All India Debt and Investment Survey (1951-52)

Although, India inherited a basic network of credit cooperatives from the colonial era, the Reserve Bank's first decennial AIDIS 1951-52 (RBI, 1954) report found that 92.8 per cent of rural households relied on informal financial sector. The investigation extended over nearly 1, 30,000 families having residents in 600 villages and all types of credit agencies in 75 selected districts. During 1951-52, an increase in debt was recorded in all the 75 districts (in 20 districts the increase in debt was below 50 per cent; in 31 districts the increase varied from 50 to 100 per cent; in 19 districts from 100 to 200 per cent; and in 5 districts the increase exceeded 200 per cent).

The moneylenders' continued dominance in the beginning of Plan period (around 70 per cent of rural credit) despite all measures to control them, suppress or supplant had led to the suggestion that 'any realistic system of rural

credit should seek to incorporate him in itself rather than compete with him or wishfully expect to eliminate him'(RBI, 1954). Among creditors, the moneylender, and among moneylenders the professional moneylender dominates the rural credit scenario. The dominance itself has been made possible by the ineffectiveness of all attempts to organise a competitive agency for supply of rural credit. The first AIRCS (All India Rural Credit Survey) had opined that the co-operatives were 'utter failure' in providing rural credit, but added they had a vital role in agricultural credit. Loans from relatives (virtually interest free) accounted for 14 per cent of the reported borrowings of cultivators. About 6 per cent of the total borrowings of cultivators were from traders and commission agents. The combined contribution of Government and Cooperatives was about 6 per cent of the total rural credit, each accounting for about 3 per cent. As for commercial banks, 1 per cent represented the insignificant part played by them in the direct financing of the cultivator. In 44 out of the 75 districts selected for the Survey, not a single pie was reported as having been borrowed by cultivators from a commercial bank.

AIDIS (RBI, 1954) pointed out that "agricultural prices during the Survey year witnessed a stagnation followed by a steep decline for the first time in a period over ten years". However, a large part of the working funds borrowed by subsistence farmers seems to be related to consumption rather than production. The problem turned into more complicated due to the socio-economic structure of the village with its characteristics of caste and inequality. Other factors that might have aided to the trend towards an increase in debt were relatively large incidence of drought, famine and inclement seasonal credit.

As our description built upon statistical data analysis and survey of literature, the brief about significance of informal credit agencies in supplying credit to rural areas during 1950s can be summarised as follows: Moneylenders were dominant not only due to their effective adaptation to rural areas, but also the ineffectiveness of any other competitive agency. Traders and

Commission Agents were in direct contact with the cultivators and much of this financing was really in the nature of advance payment for purchase of products. The indigenous bankers were financier of trade and also traders themselves as well as finances moneylenders. Commercial banks were more interested in rural areas more for the purpose of getting deposit rather than financing either agriculture or cottage industry.

2.4.3 All India Debt and Investment Survey (1961-62)

In this second Survey by Reserve Bank, the outstanding loans owed to agriculturist moneylenders accounted for about 46 per cent of the aggregate outstanding of all rural households, nearly double the share compared to first Survey. The share of outstanding loans owing to professional moneylenders was next highest though their share declined constituting 15 per cent of the aggregate outstanding. As per the Survey findings on all-India basis, the share of cooperatives was at 9.1 per cent, 'others' at 8.9 per cent, traders and commission agents at 7.7 per cent, relatives at 6.8 per cent and government at 5.3 per cent in the total outstanding debt. The shares of landlords and commercial banks in the aggregate outstanding were negligible at 0.9 per cent and 0.4 per cent, respectively. This fact signifies the continuance of informal finance in rural India that might have prompted the nationalization of commercial banks in 1969 in the first phase. The State-wise position in respect of outstanding loan owed to different credit agencies. It can be ascertained that the outstanding loans owed to agricultural moneylenders constitute 74 per cent of the aggregate outstanding of the rural households in Bihar, about 64 per cent each in Andhra Pradesh and Madras and about 60 per cent in Mysore. Their share was very low in Jammu & Kashmir (7 per cent) and reflects low dependence on agriculture and Gujarat (9.8 per cent) due to higher share of cooperatives (20.3 per cent). On the other hand, the share of cooperatives was below 5 per cent in Bihar (0.9 per cent), Rajasthan (2.0 per cent), and West Bengal (4.1 per cent). For other states, it varied between 7 – 14 per cent. The

share of professional moneylenders in the aggregate outstanding was the highest in Orissa (37.3 per cent) followed by Rajasthan (35.3 per cent), Madhya Pradesh (31.0 per cent), and Uttar Pradesh (24.5 per cent). It was very low in Mysore (1.4 per cent), Jammu & Kashmir (5.4 per cent), and Kerala (5.6 per cent) and varied between 6-15 per cent in other states. The share of Government in the aggregate outstanding was about 19 per cent in West Bengal and Maharashtra, 15 per cent in Assam and 12 per cent in Orissa. In all other States, it was 5 per cent or less.

The first three categories of informal lenders – landlords, agricultural moneylenders, and professional moneylenders – are not necessarily distinct from one another depending on the locality. But generally speaking, landlord money lenders extend credit to tenants; agricultural moneylenders primarily deal with agricultural labourers and small farmers; and professional moneylenders service a wider range of customers and may register themselves as companies, partnerships, and trusts (Ghate, 1992). Those in the fourth official category, 'traders and commission agents' are also known as indigenous bankers. In contrast to professional moneylenders who lend their own money, indigenous bankers broker funds between banks and their clients, who tend to be traders rather than farmers. One of the important reasons for continued dependence on moneylenders is that the formal credit delivery structure has not stretched to the villages despite its penetration (Ghate 1988). The formal credit delivery channels also lack the personal bonds that moneylenders enjoy with the borrowers. Borrowers obtain their loans more promptly from non-institutional sources. The survey revealed that the percentage of indebted households to the total households was between 67 and 69 for the cultivators and at 52 for non-cultivators. The average debt for an indebted household recorded an increase and was Rs647 cores in 1961-62. The outstanding total debt stood at Rs2380 cores.

2.4.4 All-India Debt Investment Survey (1971-72)

This survey, undertaken by the Reserve Bank of India, revealed that a Rs. 3,848 core was the total debts of the rural households as on 30th June 1971. This accounted for an increase of Rs. 96.73 percent in the total rural debts over the position in 1961. Rs. 3,374 core was the total debt of the cultivation in 1971. This represented an increase of 102.04 percent as compared to their total debts in 1961. In the report, it was found that "although the non-institutional agencies still occupy a dominant position in the supply of credit to the rural households, their predominance is steadily declining while the institutional agencies are foregoing ahead. Thus, debt owed to non-institutional agencies formed 68 percent of the total debt of cultivators in 1971 as against 82 percent in 1961. On the other hand, there was a relative rise in the proportion of debt owed to institutional agencies from 18 percent in 1961 to 32 percent in 1971".

2.4.5 All-India Debt Investment Survey (1981-82 to 1991-92)

At the outset, it may be mentioned that the Survey results of 26th round (1971-72), 37th round (1981-82), 48th round (1991-92) and 59th round (2002-03) of AIDIS are comparable across the Agency-wise and State-wise over the periods. In order to compare the progress of formal and informal finance after the bank nationalization and to provide an overview of the flow of credit to rural areas in terms of credit agency-wise, we have analyzed these Survey results in a comparative manner and State-wise separately. It is important to note that there are problems in using data from these surveys given the sharp reduction in sample size of households and villages, especially in the 37th round in 1981-82. It may further be mentioned that, the estimates of household debt starting from 48th round in 1991-92 are based on both cash and kind, whereas earlier that it was based on cash debt.

2.4.6 All-India Debt Investment Survey (2001-02)

It can be assessed that the informal/non-institutional finance was gradually declining during the 1960s, was very nearly broken during the 1970s,

with the institutional agencies making steady inroads into the rural scene. The share of institutional credit agencies in the outstanding cash dues of the rural households at the all-India level increased from 29 per cent in 1971 to 61 per cent in 1981 and then the pace of increase was arrested rising to 64 per cent in 1991. During the following decade, the share declined by about 7 percentage points and reached 57 per cent in 2002. It seems that credit cooperatives, commercial banks, and other formal financial sector programs in rural areas have not displaced informal sources of credit, altogether. The 2002 AIDIS survey revealed that 43 per cent of rural households continue to rely on informal finance, which includes professional moneylenders, agricultural moneylenders, traders, relatives and friends, and others.

2.4.7 All-India Debt Investment Survey (2013-14)

The survey period of the 70th round was from January to December 2013; covered 35000 households. For this survey, the NSSO defined an agricultural household as one in which at least one member was self-employed in agriculture (even if part-time) and which produced at least Rs 3000 worth of agricultural produce in a year. The Survey found that, nearly 90 percent of India's farmers have less than two hectares of land, according to the most extensive survey of farm households (NSSO 2013-14). The survey says the average farm household makes less than Rs 65000 a month from all sources of income. Over half of all agricultural households are in debt; and 42 percent of them owe money to banks and 26 percent owe money lenders. Over 40 percent of agricultural households have Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNRE GS) job cars, showing that even those households not classified as 'labourers' utilise the scheme. One in three farm households has less than 0.4 hectares of land and less than 0.5 percent are large farmers, having over 10 hectares of land. Large farmers are often absentee landlords, the data indicates; 54 percent of farmers with over 10 hectares possess land in other states. Scheduled Caste and Scheduled Tribe farm households were over

represented among the poorest class with the smallest land holdings. Large farmers were almost exclusively OBC or forward caste. While wheat is the most commonly grown crop in the first half of the year, paddy growing dominates the second half. In both seasons, however, sugarcane is the most profitable crop, giving its cultivator an average of over Rs 80000 per season.

2.4.8 Agriculture and indebtedness

Agriculture sector is the kingpin of Indian economy. It accounts for 13.2 percent of Gross Domestic Product (GDP). It employs 63.3 percent of the population directly engaged in agriculture (Economic Survey, 2014-15). Therefore, agriculture is viewed as the engine of economic development and is the only activity capable of generating surplus large enough to stimulate growth in other sectors of the economy (William 1981). Though agriculture plays an important position; Indian agriculture has entered a phase where it is facing multiple and complex challenges in growth, sustainability, efficiency etc. The biggest challenge seems to be the sharp decline in the growth rate experienced after the mid 1990s. The income levels of a large part of agricultural population namely, small, medium holders and agricultural labours continue to be low and it results in certain imbalances. This slowdown in output growth is largely responsible for stagnation in farm income and is causing heavy indebtedness and rural distress. Majority of the agriculturists in India are either owners of small and medium landholdings or landless agricultural labourers. Agriculture sector in India has undergone significant structural changes in the form of decrease in share of GDP, indicating a shift from the traditional agrarian economy toward a service dominated one. This decrease in agriculture sector can be seen from table (2.2).

Table 2.2

Income distribution of agriculture sector in India

Year	Agriculture share in GDP	Population dependent on Agriculture	Agriculture Per Capita (in Rs)
1980-81	39	70	4745 (56)
1990-91	32	65	5505 (48)
2000-01	25	59	6652 (42)
2010-11	16	58	10865 (32)
2015-16	13.8	58	31618 (41)

Source: Government of India (GOI), Ministry of Finance, Department of economic Affairs, Economic Division (various years).

Note: Figures in brackets are percentage of the total.

Credit is the basic input for rural poor not only for productive purposes but also for consumption requirements. Therefore institutional credit at reasonable terms and conditions to the rural poor get significance and a precondition for farming activities. Credit from the moneylenders who charge exorbitant rates of interest and often resorts to several questionable practices leading to the rural poor being permanently trapped into the clutches of moneylender and landing him into bonded labourer. Because of vicious circle of poverty in which, with the deficit family budgets, the expenses of the rural poor far exceed their income. Thus, the poor villagers are permanently trapped in the net of usurers. The number of those in the grip of this vicious problem is very large. As a matter of fact, the evil facet of India's rural sector is heavy indebtedness of the rural people. These poor people are permanently trapped in the vicious circle of poverty.

2.5 Agricultural stagnation and indebtedness

Development of rural credit system has always been a complicated affair and this is clear from India's farming history. Intermittent failures of monsoons, unscientific farming practices and rural indebtedness, seasonal need for credit and other risks has ensured that high interest rates remain a norm rather than an exception with respect to credit. When loan is taken under unfavorable terms or for non-income generating purposes and a farmer in turn is unable to repay over time and thus fall in persistent indebtedness. The extent and incidence of this debt depends on many factors such as cropping pattern, land use pattern, cost of production, sources of credit, utilization pattern of loan amount, etc. Here the sources of borrowing are classified into formal and informal sources. Sources such as Government, co-operative society and banks fall under formal sources and moneylenders, traders, relatives and friends, and others belong to the informal category. The unproductive needs are often not met by the institutional sources. Indeed institutional sources have been unable to meet the demand for credit even for productive purposes. While loans used for unproductive purposes can become a problem especially for the economically backward farmers, they can be particularly burdensome if accompanied by high rates of interest; as is well known, this depends on the sources of funds. The poor villagers are being crushed under the burden of heavy indebtedness. This debt burden passes and increases from generation to generation.

2.5.1 Cropping Pattern, cost and returns

Cropping pattern is one of the determinants of indebtedness; which shows the proportion of the area under different crops at a definite point of time, is an indicator of development and diversification of the sector. Food crops and non-food crops or cash crops are the two types of crops produced by the agricultural sector. As the prices of the cash crops are becoming more and more attractive, thus more and more land has been diverted from the production of food crops into cash or commercial crops. This has been creating the problem

of food crisis in the country. Since the early days of green revolution there are signs of imbalance in cropping pattern. Technological changes of mid-sixties caused significant shifts in land utilization, in favour of crops like wheat and rice at the cost of area under coarse cereals, pulses and oilseeds. This shift was the combined effect of differentiate rates of technological changes among crops, irrigation bias of new technology causing shift of land away from dry crops in favour of irrigated crops and the associated policy of price support system as well as market intervention by the government for certain crops. A change in cropping pattern is determined by factors like agro-climatic conditions, technological, infrastructural and institutional environment and profitability signals (SRK Reddy, 2011).

The level of cropping intensity is determined by several factors. The most important factor is the availability of water from natural rainfall and man-made resources. However, the scope for year round cropping activities in most states of India is severely constrained by the seasonal distribution of rainfall. The other crucial variable that determines the level of cropping intensity is the availability of labour. The characteristics of the farms according to holding size in India suggest that labour availability is an important determinant. It showed that, as the average size of holding increases, the average family size increases but not in the same proportion. As a result, land per capita will go up and population density decline with an increase in the holding size. In other words, an inverse relationship is established between cropping intensity and holding size (Mruthyamjaya and Praduman Kumar 1989). Therefore, the relationship between indebtedness of farmers and the cropping pattern can be considered to be mutually complementary, reflecting a resemblance of cause and effect relationship. Cropping pattern is a function of several variables such as climatic conditions, nature of soil, availability of irrigation facilities, agricultural technology, development of transportation and marketable and marketed surplus (B Singh 2012). A change in all of these factors leads to a

change in cropping pattern, which will change the crop yields and ultimately affect the income of farmers. It primarily depends on the nature of crop concerned. Cropping pattern is generally understood as the proportion of area under different crops during a particular period. A change in cropping pattern implies a change in the proportion of area under different crops which generally brings about a change in agricultural output.

Increasing input utilization, low productivity rates and the increasing cost of cultivation required huge finance for agricultural practices. The cost of cultivation has gone up on account of growth hybrid variety crops while productivity of the land and selling price of agricultural produce have not increased proportionately. These factors have contributed to the stress of farmers. Therefore, the lower section of the peasantry is forced to sell or lease-out their land and many of them join the labour market. Cultivation of two or more crops on the piece of land is an age-old practice in India's agriculture. The importance of cropping system can be considered in a wider perspective as combination of activities leading to diversification and specialization in agriculture. It has importance both from the point of view of individual farm and the nation as a whole (B R Kumar et al 2012).

2.5.2 Risk and Agriculture

Agriculture has always been a risky prospect, where ever it is depending on the monsoon and climatic conditions and thus subject to vagaries of nature like flood, drought etc. It becomes risky with intermittent failure of the monsoons and other customary vicissitudes of farming. The distress is also caused by growing risks of the commercialized and modernized farmers which further leading to rural indebtedness. Here, the farmer has some risk of taking the loan because the repayment is subject to the yield from agricultural production; that also a risky prospect. Rural farmer households require credit for a number of reasons, which include both productive and unproductive purposes.

Short-term requirements of credit to meet the working capital needs and long term credit needs for the capital goods for farm sectors are well recognized. Since the savings of these households being small, any other needs such as health related expenses, social obligation are also met through borrowings. It is because of the declining share of public agricultural investment and support systems.

2.5.3 Instabilities

Instabilities in the agricultural sector imply fluctuations in prices, fluctuations in income or output etc. There are two types of instabilities in the agricultural sector. They are: instability in prices and instability in income. Fluctuations in agricultural prices will not allow the farmer to have efficient crop planning. The crop pattern cannot be changed in mid season because of the biological nature of the crops. The ex-ante efficient crop plan may turn out to be most inefficient ex-post crop plan due to price fluctuations. It can be resolved by diversification of the crops by farmers only by using additional costs. It will further increase cost of production. Ultimately these fluctuations in the prices lead to fluctuations in the income of the farmers. It creates fluctuations not only the standard of living of the farmers, but also the demand for the non agricultural products. In short, the instability in the agricultural prices affects not only in the agricultural sector, but also in the non agricultural sector.

2.5.4 Income Instability

A change in agricultural prices may also result in a change in income of the farmers. i.e., price instability may also result in income instability. If the demand for agricultural products, in general rises, but the supply conditions remain unchanged, prices will rise and the total income will also rise. Similarly, if the supply of agricultural products increases due to some reasons but the demand conditions remains unchanged, prices will fall and if the demand for agricultural products is inelastic, fall in prices will result in fall in income also.

There are situations in agriculture when income may change without a change in prices or in other words, agricultural sector may experience income instability, without price instability. The repayment of debt was a major compulsion for farmers to sell their crop and the creditor usually insisted on repayment in the immediate post-harvest period at a very low price. To do this, the debtors were forced to borrow once again. Rural people have been under heavy indebtedness of the village moneylenders and co-operatives and banks and finance. The burden of this debt has been passed one from generation to generation.

2.6 Debt trap and vicious circle of poverty

Although all sections of peasantry have been adversely affected by the deceleration in agricultural growth rates, it is the small and medium farmers with limited resources who have been hit the hardest. The magnitude of the crisis affects the farmers in two ways; as distress associated with poverty stricken farmers struggling for subsistence and distress associated with risk prone upwardly mobile farmers. Limited access to resources and low productivity reduces the farming community to living on the margins of subsistence. They suffer from chronic hunger irrespective of their farm size. While technology and finance hold the key to ameliorate poverty, the poor farmers do not have adequate access to the formal banking sector. It creates a wide range of problems as declining output and total factor productivity growth, supply-side constraints etc. Revealing declining factor productivity requires concerted efforts in refining the available technologies and developing new technologies. For this purposes, the farmers are forced to take loans from formal and informal sources. Since the formal credit agencies are giving money after lengthy formalities, it takes more time than the informal sources like the money lenders or traders etc. They are charging high rate of interest. But the time constraint forced the farmers to borrow money at a usurious rate of interest. In fact, the farmers are not in a position to clear off the loans due to the frequent failure of the crops, low returns from the farm operations, increased cost of

productions etc. In the real context, the existing problems of poverty, debt-trap, poor access to credit, etc are dragging the sector again into distress condition. This burden of the debt passes from generation to generation. Thus, all the farmers are caught in a vicious circle of poverty and debt-trap irrespective of their farm size is the ultimate result. It is explained by Ragner Nurkes in his theory of "vicious circle of poverty". According to him, it is the situation where under developed countries are locked in a poverty situation, due to low productivity, low per capita income, low level of per capita saving, low level of per capita formation, which are again leading to low productivity. Finally, the standard of living of the people also will be affected because of this debt-trap. The upwardly mobile farmers are associated with commercial/modern farming and their distress is subject to risks. Given this background, we have to agree with the fact that, Indian farmers are in a debt-trap resulted by low investment, low productivity and low farm income.

Rural indebtedness has been the evergreen companion of the Indian peasants (Puja Mondal). According to a well-known saying, the Indian peasant is born in debt, lives in debt and dies in debt. The prevalence of poverty among agricultural laboring households is underlined by the prevalence of the rural indebtedness. With the increase in level of poverty as the result of decrease in income, the level of indebtedness increases. This burden of debt passes from generation to generation. From this chapter it is conclude that, despite number of policies were attempted to solve the problem of agricultural sector in the country especially the problem of indebtedness, majority of the farmers are under the grip of severe crisis, economic distress and vicious circle of indebtedness even today. It is because of factors like low farm income, poverty, price volatility, ancestral debt, small sized land holdings, illiteracy of the farmers, higher rates of interest for borrowings, types of crops cultivated etc. in this context, it is essential to investigate agricultural credit system and the

extend of indebtedness among the farmers in India in general and Kerala scenario in particular.

Chapter III

Agricultural Credit System and Indebtedness In India- an Overview

CHAPTER III

AGRICULTURAL CREIDT SYSTEM AND INDEBTEDNESS IN INDIA

3.1 Introduction

Agricultural credit has a significant role in supporting agricultural production and the wellbeing of the farming community in India. Indian agriculture is characterized by millions of medium and small farmers. Since agricultural production is characterized by uncertainties like weather uncertainties, price, irrigation etc farmers are facing difficulties in production in the present economic scenario. As the farming becomes uneconomic, farmers are compelled to use more inputs and fertilizers in order to increase their production and productivity. It increases the need of more agricultural finance. The farmers borrow money for production, subsistence and also for livelihood. Therefore farmers borrow year after year, yet he is not in a position to clear off the loans either because the loans are larger or his agricultural output is not large enough to pay off this debt (Tewari, 1969). Together, the low farm income results in a low level of investment caused by low level of productivity which will finally ends the farmers into a vicious circle and thus trapped the farmers in the vicious circle of debt-trap. The most tragic aspect of the phenomenon has been the increasing number of marginal and small farmers resorting to take large amount of loans at high rates of interest (Iyer and Manick, 2000).The only way to break this vicious circle is to invest more in agriculture (Rodan). It is also explained by different economists in different names as ‘critical minimum’ effort by Liebenstein, ‘bottleneck breaking’ by Ragner Nurkes, ‘linkage effect’ by Hrishman etc.

Agriculture credit market in India is classified into formal and informal sources of finance. Government, co-operative society and banks

are under formal sources and money lenders, traders, relatives and friends, and others belong to informal credit sources. A review of performance of agricultural credit in India reveals that, the inadequate and untimely credit along with procedural hassles from formal institutions compels the rural farmers to take loans from informal sources at exorbitant rates of interest. Given this background, it is worthwhile to examine the nature of agricultural indebtedness in Kerala. This chapter deals with the agricultural credit system and indebtedness in Kerala with a national outlook. Before going into an in depth analysis of the situation of indebtedness in Kerala, let us first have an all India picture to understand the status of Kerala in comparison with other states. The chapter analyses agricultural indebtedness into two sections. Section A gives the detail on agricultural credit system in India over the years and the agricultural indebtedness in Kerala explains in the later section B. This chapter is explained based on All India Debt and Investment Survey (AIDIS), the most important source of secondary data on the debt, assets, and savings of rural and urban households in India.

SECTION A

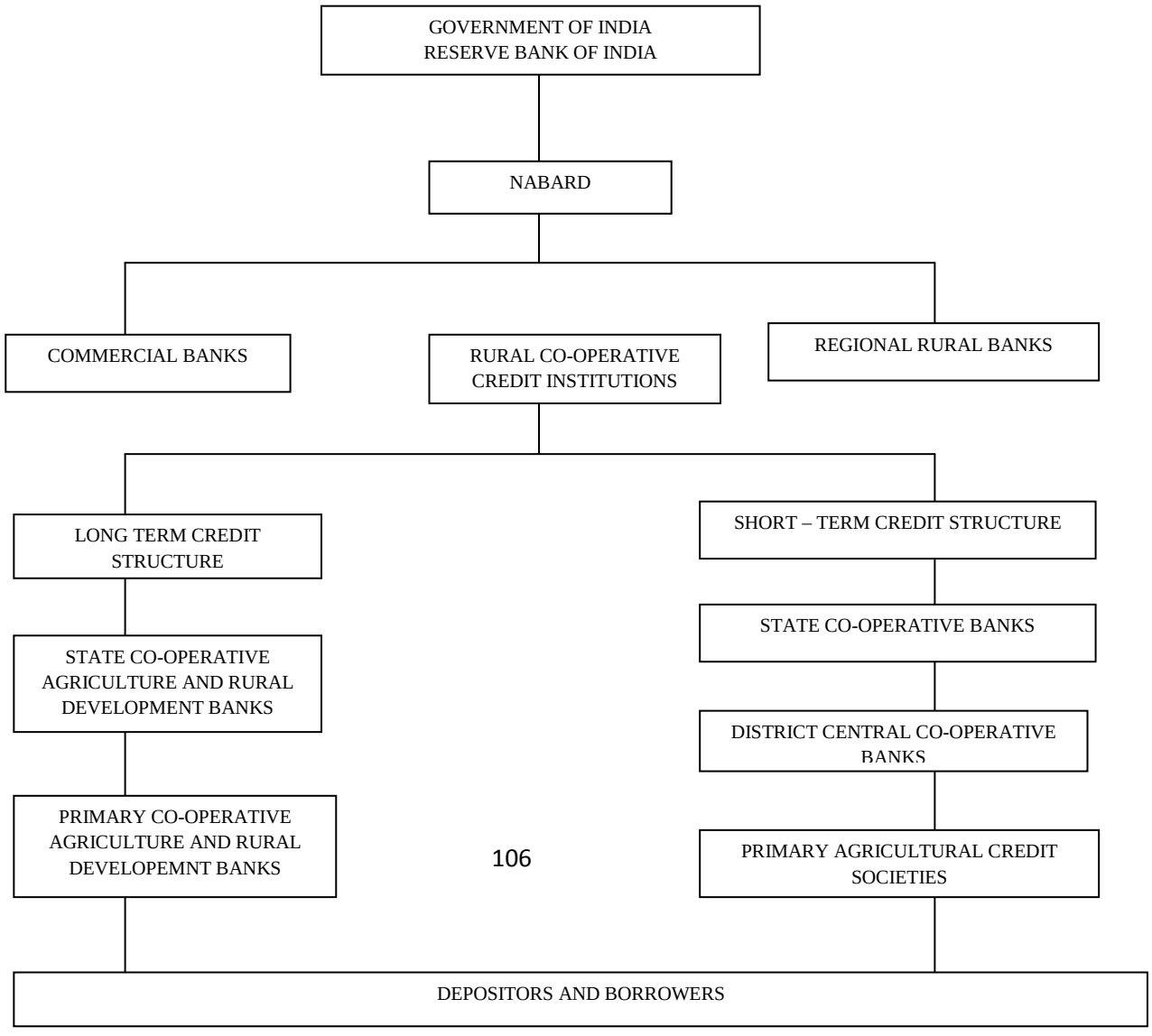
3.2 Agricultural Credit System in India

Credit plays a crucial role in agriculture and rural economy and is an integral part of the process of modernisation of agriculture and commercialisation of the rural economy (Sidhu *et al*, 2008). In this context, access to financial services becomes a pre-condition for agricultural development. Appropriate savings and credit systems that address the particular needs and constraints of the poor are important tools for increasing production among the rural poor (IFAD, 2004). The negative impact of lack of access to credit services on agricultural and non-agricultural productivity, income generation, farm profit, farm investment and household welfare in developing countries has been reported extensively in earlier studies (Diagne and Zeller,

2001; Okoruwa and Oni, 2002; Carter and Olinto, 2003; Foltz, 2004; Balogun and Yusuf, 2011; Bogale and Genene, 2012). In India, a multi-agency approach to agricultural credit is in place since several decades comprising cooperatives, commercial banks and Regional Rural Banks (RRB's). Several initiatives over time have been undertaken to improve farmers' access to institutional credit by strengthening the institutional mechanism of rural credit system. However, in spite of considerable efforts to streamline, reinforce, expand and institutionalise the agricultural credit system, achievements fall short of proclamations, policies and programmes. Ailing cooperatives, backtracked Regional Rural Banks (RRB's) and commercial banks with waning interest in rural credit have contributed to the ineffectiveness of the multi-agency system, hampering credit delivery (Kumar et al, 2010).

Figure 3.1

Structure of agricultural credit system in India



There are evidences that suggest the poor and medium sections of the rural community still remain excluded from the formal credit delivery mechanism (Satyasai, 2008). The NSSO's household survey to ascertain the status of farming and farmers in India in 2013 estimated that about 51 per cent of total farm households have been financially excluded. Only about 28 per cent of the total farm households in the country access credit from institutional sources with wide regional variations. It may compel the farmers to depend other non-institutional sources for their credit needs. Therefore the persistence of moneylenders in the rural credit market is still a major concern. The structure of agricultural credit system in India is depicted in figure (3.1).

3.3 Growth of Flow of institutional and non-institutional credit to agriculture

Since the AIDIS is the only source for collecting data on household asset, credit, debt etc, let us make an insight into all its rounds till date for the forthcoming analysis. The first AIRCS (All India Rural Credit Survey, 1951) had opined that the co-operatives were 'utter failure' in providing rural credit, but added they had a vital role in agricultural credit. Loans from relatives (virtually interest free) accounted for 14 per cent of the reported borrowings of cultivators during the first plan period. About 6 per cent of the total borrowings of cultivators were from traders and commission agents. The combined contribution of Government and Cooperatives was about 6 per cent of the total rural credit, each accounting for about 3 per cent. As for commercial banks, 1 per cent represented the insignificant part played by them in the direct financing of the cultivator.

The Interest Subvention Scheme for short term production credit (crop loans) which was started by the g government of India in 2006-07 was extended to private-sector banks from 2013-14. Presently the total number of loan accounts stands at 5.72 crore. Studies conducted by the RBI and National Bank for Agriculture and Rural Development (NABARD) indicate that the crop loans are not reaching the intended beneficiaries and there are no systems and procedures in place at several bank branches to monitor the end-use of funds. Also, although overall credit flow to the agriculture sector has increased over the years, the share of long-term credit in agriculture or investment credit declined from 55 percent in 2006-07 to 39 percent in 2011-12. According to NSSO 70th round data, as much as 40 percent of the finances of the farmers still comes from informal sources, despite an increase in the flow of institutional credit to agriculture in recent years. Usurious money lenders account for 26 percent share of the total agricultural credit (Economic Survey 2014-15, p. 80-81).

In the second Survey by Reserve Bank (1961), the outstanding loans owed to agriculturist moneylenders accounted for about 46 per cent of the aggregate outstanding of all rural households, nearly double the share compared to first Survey. The share of outstanding loans owing to professional moneylenders was next highest, though their share declined constituting 15 per cent of the aggregate outstanding. As per the Survey findings on all-India basis (table 3.1), the share of cooperatives was at 9.1 per cent, 'others' at 8.9 per cent, traders and commission agents at 7.7 per cent, relatives at 6.8 per cent and government at 5.3 per cent in the total outstanding debt. The shares of landlords and commercial banks in the aggregate outstanding were negligible at 0.9 per cent and 0.4 per cent, respectively. Starting with the survey conducted in 1951-1952 by the RBI, there have been seven rounds of surveys in the AIDIS series till date. Flow of credit to agriculture from different sources during 1951 to 2013 is presented in table (3.1).

Table 3.1

Credit Flow to Agriculture from Different Sources (In Per cent)

Sources of credit	**1951**	**1961**	**1971**	**1981**	**1991**	**2002**	**2013**
Institutional agencies	**7.2**	**14.8**	**29.2**	**61.2**	**64.0**	**57.1**	**56.1**
Government	3.3	5.3	6.7	4.0	5.7	2.3	1.6
Co-op. society/bank	3.1	9.1	20.1	28.6	18.6	27.3	29.4
Commercial banks including RRBs	0.8	0.4	2.2	28.0	29.0	24.5	25.1
Insurance	-	-	0.1	0.3	0.5	0.3	-
Provident fund	-	-	0.1	0.3	0.9	0.3	-
Other institutional agencies	-	-	-	-	9.3	2.4	0.35
Non-institutional agencies	**92.8**	**85.2**	**70.8**	**38.8**	**36.0**	**42.9**	**43.9**
Landlord	1.5	0.9	8.6	4.0	4.0	1.0	0.6
Agricultural money lender	24.9	45.9	23.1	8.6	6.3	10.0	8.1
Professional money lender	44.8	14.9	13.8	8.3	9.4	19.6	22.2
Traders and commission agents	5.5	7.7	8.7	3.4	7.1	2.6	-
Relatives and friends	14.2	6.8	13.8	9.0	6.7	7.1	11.5
Others	1.9	8.9	2.8	4.9	2.5	2.6	1.5
Total	100	100	100	100	100	100	100

Source: Computed from NSSO and RBI bulletin (Various years)

It can be observed from the table (3.1) that, the most remarkable performance was that of the commercial banks while the share of co-operative societies in the outstanding cash dues of cultivator households increased from 20.1 per cent in 1971 to 28.6 per cent in 1981, therefore dropping to 27.3 per cent in 2002, that of commercial banks rose to 29 per cent in 1991, after rising

sharply to 28 per cent in 1981 from a meager 2 per cent in 1971. It appears that the large number of branches that was set up by various commercial banks in 1970s and the subsequent introduction of rural banking schemes have driven the commercial banks to assume the role of principal credit agency in rural areas. It may be of interest to note that the share of government departments in the outstanding cash dues of cultivator households, after showing a decline from 7 per cent in 1971 to 4 per cent in 1981, again rose to 6 per cent in 1991 and dropped to 2 per cent in 2002 and 1.6 percent in 2013. As a whole, at the all India level, among the institutional credit agencies, the co-operative societies and the commercial banks were the two most important agencies in the rural sector. These two agencies together, shared 91 per cent of the entire amount of debt advanced by the institutional agencies, accounted for 52 per cent of the outstanding cash debt, with co-operative societies (27.3 per cent) accounting for a greater share than the Banks (24.5 per cent) in 2002. We have already seen the major trend and pattern of institutional sources of credit from this context. Now we have to look into the share, trend and pattern of institutional and non-institutional sources of credit in India.

3.3.1 Institutional agencies

The share of institutional credit was 7.2 per cent in 1951. It increased manifold to 64 percent in 1991, reflecting concomitantly a remarkable decline in the share of non institutional credit from around 92 per cent to about 36 per cent during the same period. However, the NSSO Survey (2013) reveals that the share of non-institutional credit has taken a reverse swing which is a cause of concern. The efforts to increase the flow of credit to agriculture seems to have yielded better results in the recent periods as the total institutional credit to agriculture recorded a growth of around 21 per cent during 1995-96 to 2004-05 from little over 12 per cent during 1986-87 to 1994-95. In terms of total credit to agriculture, the commercial banks recorded a considerable increase.

3.3.2 Non-Institutional agencies

The combined share of all the non-institutional credit agencies in the outstanding cash dues of cultivator households recorded a sharp decline of 32 percentage points during 1970s but the decline got arrested in the 1980s – the fall being just of about 3 percentage points but increased to 43 per cent in 2002 subsequently. The decline is found to be the steepest for the credit agency 'agricultural money lenders', whose share came down to 6 per cent in 1991 from about 9 per cent in 1981 and 23 per cent in 1971. Also it sharply declined to 8.1 percent in 2013. However, the share of 'professional money lenders' has reported a rise to about 9 per cent in 1991, after registering a fall to 8 per cent in 1981 from about 14 per cent in 1971. Subsequently, the share has jumped to about 20 per cent and 29 percent in 2002 and 22.2 percent in 2013 respectively. It may be because of ease of access from professional money lenders and the volume of amount is a matter of concern. The similar trend has been obtained from the field survey. Relatives and friends appear to be gradually losing their importance as a source of credit. From 14 per cent in 1971, their share fell to 9 per cent in 1981, and dipped further down to about 7 per cent subsequently. As a whole, among the non-institutional agencies, professional money lenders were the main source of credit. Among the non-institutional credit agencies, money lenders – both professional and agricultural – in that order were found to be important sources of finance in rural areas, their respective shares being 19.6 per cent and 10.0 per cent. The share of relatives and friends was 7 per cent of the cash dues of rural households.

3.4 State-level Changes during 1971 to 2013

The State-level estimates indicate that of the total outstanding cash dues, the share of institutional agencies has increased marginally during the

1980s in most of the states, after having increased substantially during the 1970s (table 3.2). However, the role of the institutional agencies, as judged from their share in the outstanding cash dues, varied from state to state. A snapshot of this variation in 2002 shows that in the rural areas, institutional credit agencies accounted for 85 per cent in Maharashtra, followed by Kerala (81 per cent), Himachal Pradesh and Orissa (74 per cent each) and Jammu & Kashmir (73 per cent). In contrast, not even 50 per cent of the debt was contracted through the institutional credit agencies in the rural areas of Andhra Pradesh (27 per cent), Rajasthan (34 per cent), Bihar (37 per cent) and Tamil Nadu (47 per cent). Following table (3.2), reveals a state wise outstanding of institutional and non-institutional loans from 1971 to 2013.

Table 3.2

Share of institutional and non-institutional agencies in outstanding cash debt of major states in India

Major states	Institutional					Non-institutional				
	1971 (26th)	1981 (37th)	1991 (48th)	2002 (59th)	2013 (70th)	1971 (26th)	1981 (37th)	1991 (48th)	2002 (59th)	2013 (70th)
Andhra Pradesh	14	41	34	27	25	86	59	66	73	72
Assam	35	31	66	58	60	65	69	34	42	32
Bihar	11	47	73	37	35	89	53	27	63	69
Gujarat	47	70	75	67	72	53	30	25	33	30
Haryana	26	76	73	50	55	74	24	27	50	48
Himachal Pradesh	24	75	62	74	78	76	25	38	26	23
Jammu and Kashmir	20	44	76	73	75	80	56	24	27	19
Karnataka	30	78	78	67	65	70	22	22	33	33
Kerala	44	79	92	81	79	56	21	8	19	25
Madhya Pradesh	32	66	73	59	52	68	34	27	41	49
Maharashtra	67	86	82	85	90	33	14	18	15	19
Orissa	30	81	80	74	78	70	19	20	26	28
Punjab	36	74	79	56	59	64	26	21	44	40

Rajasthan	9	41	40	34	40	91	59	60	66	68
Tamil Nadu	22	44	58	47	43	78	56	42	53	48
Uttar Pradesh	23	55	69	56	49	77	45	31	44	32
West Bengal	31	66	82	68	64	69	34	18	32	30
All India	29	61	64	57	60	71	39	36	43	39

Source: NSSO, Ministry of Statistics and Programme implementation (various years)

From table (3.2), it explains that, during the periods 1971 to 2013, the states do not reveal any uniform pattern in the share of institutional agencies in total debt. Compared to 1991, the picture has changed in some of the major states. Of the 20 major states in the rural, as many as 15 have shown a fall in the share of institutional agencies, notable among them are Bihar, Punjab, Haryana and West Bengal, where the fall in percentage share from 1991 had been to the tune of 36, 23, 23 and 14 percentage points, respectively. On the other hand, 13 major states out of 21 had registered a rise in the share, which, barring a few with medium to moderate rise, can be described as sharp to spectacular.

3.5 Agency wise credit flow to agriculture

The most remarkable performance was that of the commercial banks while the share of co-operative societies in the outstanding cash dues of cultivator households increased from 20.1 per cent in 1971 to 28.6 per cent in 1981, therefore dropping to 27.3 per cent in 2002, that of commercial banks rose to 29 per cent in 1991, after rising sharply to 28 per cent in 1981 from a meager 2 per cent in 1971. It appears that the large number of branches that was set up by various commercial banks in 1970s and the subsequent introduction of rural banking schemes have driven the commercial banks to assume the role of principal credit agency in rural areas.

Institutions or agencies played a pivotal role in providing financial assistance to the farmers. A perusal of Table (3.3) reveals that the institutional sources of agricultural credit flow have undergone structural changes during few decades. In spite of their wide network, co-operative banks, particularly since 1990s have lost their dominant position to commercial banks. Prior to nationalization, the commercial banks were virtually not lending credit to the agricultural sector. The share of RRBs in institutional credit disbursement increased from about 3 per cent during 1991-92 to 12 per cent during 2009-10. In terms of total credit to agriculture, the share of cooperative banks (22 per cent) during 2005-06 was less than half of what it was in 1992-93 (62 per cent), while the share of commercial banks (33 to 68 per cent) including RRBs (3 to 10 per cent) almost doubled during the above period. From 2001-02 to 2011-12, it is evident from table (3.3), that the cooperative bank's credit to agriculture is declining and credit from commercial banks shows an increasing trend. When we look at the average size of the credit, per hectare credit from the commercial bank has decreased. The same happened in the case of per branch also. The co-operative banks which were the primary sources of institutional credit to agriculture have witnessed a sharp decline in their share in agricultural credit, which has consistently declined from 86.5 per cent in 1972-73 to 24 per cent in 2009- 10. The co-operatives are withering away from their principles.

The gradual increase in the share of formal institutional credit in agriculture witnessed some reversal during 1991-2002 mainly because of a pull back by commercial banks. This disquieting trend is, in part, due to a contraction in rural branch network in the 1990s, and in part due to the general rigidities in procedures and systems of institutional sources of credit (Subbarao, 2013).

The growing tendency among the farmers to replace the traditional farming practices with scientific and modern practices has necessitated the increased use of capital both for making permanent improvements in terms of building, farm infra-structure and for meeting the operational costs.

Consequently, cash needs in agriculture has increased manifold. But majority of the cultivators cannot meet such increased cash needs out of their own savings. As it has been rightly pointed out, 'the farmers in under-developed countries cannot expect their capital needs to come from savings, because their income from farm operations is barely sufficient to provide minimum necessities of life (F.A.O. Documentation prepared for the centre on Land Problems in the Asia and Far East, 1955, P.P 10.). The widening gap between the own and required capital has called for borrowing. As these expanding credit needs can no longer be adequately met by the traditional money-lenders and traders, it has necessitated the institutional agencies like co-operatives and commercial banks to take a major role in providing credit.

Table 3.3
Percent share of institutional credit to agriculture

Year	Institutions							
	Co-operative banks	Share (in percent)	RRBs	Share (in percent)	Commercial Banks	Share (in percent)	Total	Percent increase
1985-86	3874	55	-	-	3131	45	7005	-
1991-92	4403	39	336	3	2341	21	11202	-
1993-94	8,567	60	749	16	4,897	35	14213	27
1995-96	10,479	48	1,381	6	10,172	46	22,032	18
1997-98	14085	44	2,040	6	15,831	50	31,956	45
1999-00	18,363	40	3,172	7	24,733	53	46,268	45
2001-02	23,604	38	4,854	8	33,587	54	62,045	17
2003-04	26,959	31	7,581	9	52,441	60	86,981	25
2005-06	39,404	22	15,223	8	1,25,859	70	1,80,486	44
2007-08	35,875	20	17,987	10	1,28,876	70	1,82,738	51
2009-10	46,871	24	23,984	12	1,21,879	63	1,92,734	51

2010-11	78,121	17	44,293	9	3,45,877	74	4,68,291	42
2011-12	87,963	17	54,450	11	3,68,616	72	5,11,029	65
2012-13	1,11,203	18	63,681	11	4,32,490	71	6,07,375	78
2013-14	1,19,963	17	82,652	12	5,09,004	71	7,11,621	83
2014-15	1,38,469	17	1,02,482	12	5,99,690	71	8,40,643	83

Source: Government of India (GOI), Ministry of Finance, Department of Economic Affairs, Economic Division (various years)

Table 3.4

Percent share of indebtedness and average amount of debt in India

Year/NSSO Rounds	Percent share of Debt	Average Amount of Debt (Rs)
1951-52	69.2	363.70
1961-62	66.7	473
1971-72 (26^{th})	72.4	605
1981-82 (37^{th})	76.3	3757
1991-92 (48^{th})	66.1	10636
2002-2003 (59^{th})	59.7	39294
2013-14 (70^{th})	53	48169

Source: NSSO, Ministry of Statistics and Programme implementation (various years)

The latest NSSO (70th round) has made the observation that, at all India level, 49 percent of the farmer households are indebted and an Indian farmer's household has an average debt of Rs.12585. The average loan per indebted household is Rs.25891. However, the median loan per indebted household is Rs. 10,000. At the state level, the average outstanding loan per farmer household is the highest in Punjab (Rs 41,576), followed by Kerala (Rs

33,907), Haryana (Rs 26,007), Andhra Pradesh (Rs 23,965) and Tamil Nadu (Rs 23,963). Andhra Pradesh, Tamil Nadu, Punjab, Kerala are the States which have higher incidence of indebtedness. Haryana takes the top position with median loan outstanding being Rs. 24,357 followed by Kerala (Rs. 22,150) and Punjab (Rs. 20,000). Average debt per household is Rs 47,000, while average income is Rs 36,973 per annum. In 2002-03, India had 148 million rural households, which increased to 156 million by 2012-13, 5.4 per cent increase in a decade, approximating to 0.5 per cent per annum, an alarming state of affairs. The following tables elucidate the trend of debt of cultivators from institutional and non-institutional based on the rural credit surveys.

3.6 Average asset holdings

There is a significant relation between asset holding and the extent of debt of the farmers. It is usually negative and most often statistically significant also. The study also proved this negative relation in table (3.5), that shows at a higher value of asset holdings, the amount of debt is lower and vice versa. AIDIS have collected Information on both physical and financial assets owned by the households in 2013 in the 70^{th} round survey on Debt and Investment. Assets like land, buildings, livestock, agricultural implements & machinery, non-farm business equipment, transport equipment were considered under physical assets, while cash and kind dues receivable and shares, deposits, etc., were considered under financial assets. All these assets owned by the households constitute the asset holdings of the households.

3.6.1 Composition of household asset holdings

It may be mentioned that in the survey, information on value of assets, physical or financial, was collected in respect of various items constituting the assets. Land and building together, in the rural areas, clearly form the predominant component of assets – jointly holding 94 percent share in the total value of assets at the national level – with land having 73 percent share and buildings 21 percent share. The share of other items of assets exceeds 2

percent whether the occupational categories are considered separately or clubbed together.

In the urban areas, about 92 percent share in the total value of assets is held in the form of land and building together for the self-employed households, the share of land is 77 percent and that of buildings, 18 percent. For other households, the share of land is only 39 percent and that of buildings is 52 percent. For all households, shares and deposits contribute about 4.5 percent. The share of all transport equipment is about 2.5 percent compared to about 2 percent in the rural areas. The shares of other items are less than 1 percent each (mostly, less than 0.5 percent). It is shown in the following table (3.5).

Table 3.5
Percentage share of assets for each occupational category of households- All India-2013-14

Items of assets	Rural			Urban		
	Cultivator	Non-cultivator	All	Self-employed	Others	All
Land	83.14	64.60	72.60	76.77	38.95	46.95
Building	11.57	28.39	21.13	18.11	52.03	44.86
Livestock and poultry	1.46	1.72	1.61	0.34	0.04	0.10
Agriculture machinery and equipments	0.62	0.30	0.44	0.14	0.01	0.04
Non-farm business equipment	0.14	0.33	0.25	0.62	0.80	0.76
All transport equipment	2.09	2.14	2.12	1.67	2.71	2.49
Shares	0.02	0.12	0.07	0.18	0.17	0.17
Deposits *	0.90	2.23	1.65	1.98	4.98	4.35
Amount receivable	0.07	0.17	0.13	0.19	0.31	0.29
all	100	100	100	100	100	100

Source: NSSO, Ministry of Statistics and Programme Implementation (various years)

*** i**nclude government deposits, NSC, KVP, saving bonds, post office deposits, other small savings schemes, etc., deposits with bank, non-banking companies, MFI, SHG, PF etc., insurance excl. bullion and ornaments

3.6.2 Average asset holdings in different occupational categories

The average assets holdings (AVAs) per household, i.e. average value of total physical and financial assets per household are presented in table (3.6) separately for each occupational category for rural and urban areas of India. All the estimates of assets and liabilities are presented by AIDIS for different occupational categories of households.

Table 3.6
Percentage of households owning assets and average value of assets (AVA) owned: all India (2013-14)

Occupational category		Percentage of households owning assets	AVA (Rs) per household
Rural	Cultivator	100	2872956
	Non-cultivator	98	674527
	All	98.3	1006985
Urban	Self-employed	100	5079429
	Others	92.8	1991505
	All	93.5	2285135

Source: NSSO, Ministry of Statistics and Programme Implementation (various years)

Table (3.6) gives along with Average Value of Assets (AVAs), the percentage of households reporting ownership of some assets. It is seen that 98.3 percent of rural households and 93.5 percent of urban households reported owning some kind of physical or financial assets. Wide variation in Average Value of Assets (AVA) is observed between the occupational categories in both rural and urban areas. A rural cultivator household, on an average, owned assets

of Rs28.73 lakhs, which was more than four times than the value of assets owned by the average non-cultivator household (Rs6.75 lakhs). The variation in the urban areas in this respect was also wide, with the Average Value of Asset (AVA) of self-employed household at Rs50.79 lakhs, being two and a half times the Average Value of Asset (AVA) of other urban households, which was Rs19.92 lakhs.

Table 3.7

IOI and AOD for different occupational categories of rural and urban households: 2013

Occupational categories	IOI (in percent)	AOD per house hold (Rs)	AOD per indebted house hold (Rs)
Cultivator	45.94	70580	153640
Non-cultivator	28.85	25741	89221
All	31.44	32522	103457
Self-employed	35.85	108714	303221
Others	20.96	82094	391724
All	22.37	84625	378238

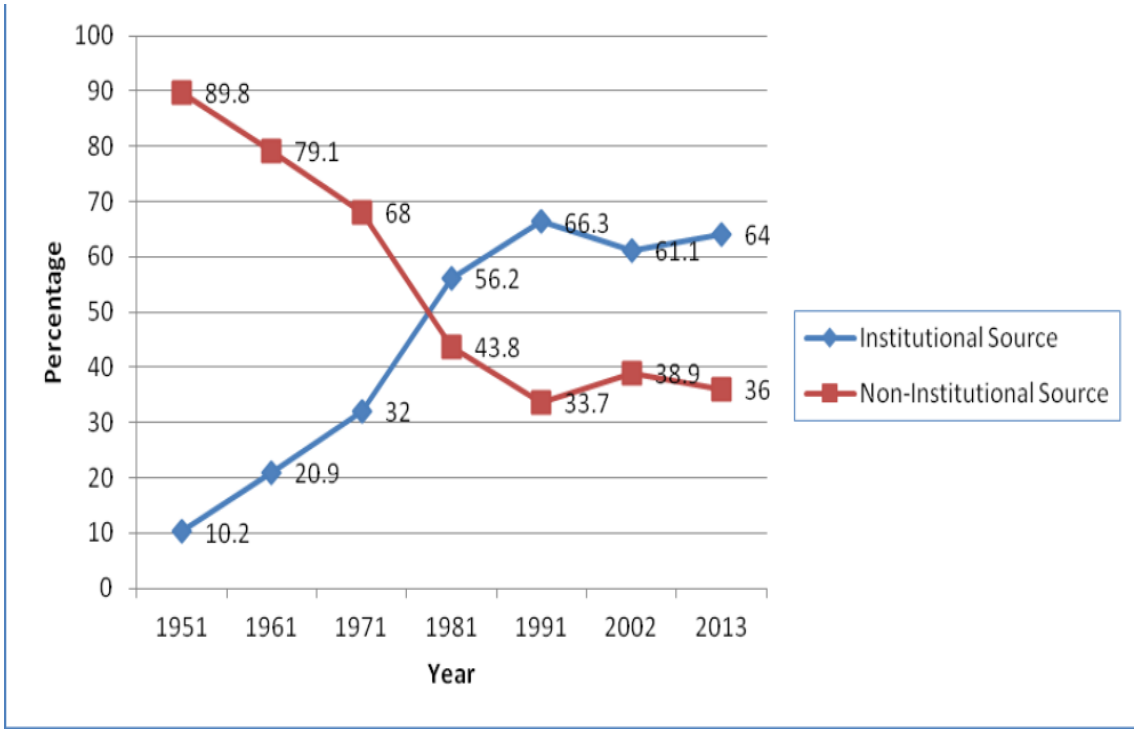
Source: NSSO, NSSO, Ministry of Statistics and Programme Implementation (various years)

IOI and AOD across occupational categories of households reveal that, in rural India, indebtedness is found to be more widespread among the cultivator households than among their non-cultivator counterparts. At the all India level, 46 percent and 29 percent of the cultivator and non-cultivator households, respectively, were indebted. Also, compared to the cultivator households, the AOD is observed to be much less (little more than one third) among the non-cultivators. The AOD for cultivator households was found to be Rs. 70580. In urban India, however, at the all-India level, 36 percent and 21

percent of the self-employed and others households, respectively, were indebted. The AOD for self employed households was found to be Rs108714, and for the 'others' it was around 25 percent lower (tables 3.7 and figure 3.2).

Figure 3.2

Share of outstanding debt of cultivator household from institutional and non-institutional sources



Source: NSSO, Ministry of Statistics and Programme Implementation (various years)

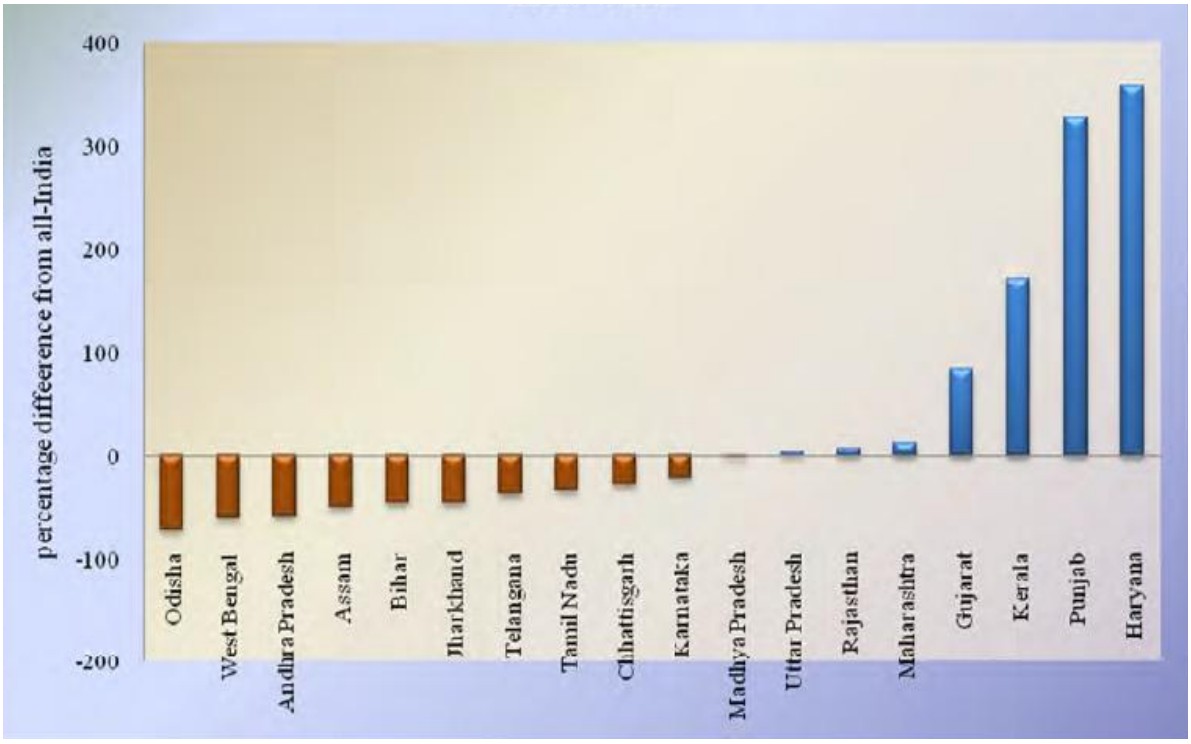
3.6.3 Inter-state comparison of average value of assets

The AVA of self-employed households was higher than that of other urban households in all the states. Figure (3.3) depicts the percentage difference of AVAs from the all-India average in the major states. 13 states have AVA below all-India average whereas 5 states show higher AVA. AVA of 11 states (Karnataka, Bihar, Chhattisgarh, Tamil Nadu, Gujarat, Telangana, West

Bengal, Uttar Pradesh, Rajasthan, Madhya Pradesh, Punjab, and Assam) falls within 50 percent range with respect to AVA at all- India.

Figure 3.3

Percentage difference of AVA for selected States from all India-2013



Source: NSSO, Ministry of Statistics and Programme Implementation 2013

3.7 IOI and AOD across social groups

Social-group-wise, the average debt burden per farmer household is Rs 5,500 among scheduled tribes, Rs 7,200 among scheduled castes, Rs 13,500 among other backward castes and Rs 18,100 for other castes. The report found that degree of indebtedness is relatively high among other backward castes, while farmers belonging to scheduled castes and scheduled tribes are

relatively better off than those in other categories. The percentages of indebted households and average amount of debt per household are shown for each social group separately in the following table for rural and urban India.

The percentage of indebted households, representing incidence of indebtedness (IOI) and average amount of debt (AOD) per household as per the AIDIS 2013 for rural and urban areas of India. The results show that the IOI was about 31.4 percent among the rural households and 22.4 percent among the urban households. In 2002, these were 26.5 percent and 17.8 percent respectively. The AOD per household is seen to be less in the rural areas than in the urban, the values being Rs. 32522 and Rs.84625, respectively. Compared to this, the AOD per indebted household was Rs. 103457 and Rs. 378238 in the rural and urban sectors respectively.

Table (3.8) shows the percentage of indebted households, by asset holding class for institutional (Government, Banks, Insurance companies, PFs, Financial companies, Self-Help groups, etc.) as well as non-institutional credit agencies as obtained from the AIDIS survey.

Table 3.8
Incidence of indebtedness (IOI) to institutional and non-institutional credit agencies by household asset holding class: all-India 2013

Deciles class of hh asset holding	Incidence of indebtedness (in percent)					
	Rural			Urban		
	Institutional	Non-institutional	All	Institutional	Non-institutional	All
1	7.9	14.0	19.6	3.4	6.5	9.3
2	7.4	17.1	22.3	6.2	10.1	14.6
3	10.8	19.1	27.1	10.2	11.9	20.2
4	12.4	18.2	27.5	12.5	14.4	24.2
5	13.0	21.9	30.9	12.1	12.6	21.7
6	16.9	21.6	33.0	14.0	12.7	23.4
7	19.1	19.3	32.7	15.7	11.6	23.8

8	22.2	21.6	37.3	18.9	10.1	25.4
9	29.2	22.1	42.6	25.6	7.1	29.4
10	32.6	15.3	41.3	29.1	5.7	31.7
All	17.2	19.0	31.4	14.8	10.3	22.4

Source: NSSO, Ministry of Statistics and Programme Implementation, 2013.

The results of the survey show that non-institutional agencies played a major role in advancing credit to the households, particularly in rural India. The non-institutional agencies had advanced credit to 19 percent of rural households, while the institutional agencies had advanced credit to 17 percent households. In urban India, the picture is different; the institutional agencies appear to have played a greater role, advancing credit to 15 percent of households against 10 percent by non-institutional agencies, which shows that, households of the bottom deciles class incurred a relatively small part of their debt for productive purposes. In the rural area, the percentage share of debt for productive purposes is seen to vary from 11 percent to 56 percent among the deciles classes. The corresponding increase in urban area was from 1.2 percent in the lowest class to 24 percent in the top class. Further, the percentage share of debt against 'non-business expenditure' is seen to decrease from about 85 percent in the bottom class to about 44.5 percent in the top class in the rural and from 99 percent in bottom class to 76 percent in the top class.

Figure 3.4

IOI to institutional and non-institutional credit agencies by household asset holding class

Source: NSSO, Ministry of Statistics and Programme Implementation, 2013.

Figure 3.4 Shows pattern of incidence of indebtedness of households to institutional and non-institutional credit agencies by asset holding class in India during 2013-14.

It clearly shows that, in both rural and urban areas, the percentage of household's indebted to institutional agencies increases with increase in assets holding (except in 2nd deciles in rural and 5th deciles in urban). For the rural area, about 4 times as many households in the top deciles class (32.6 percent) are indebted to institutional agencies compared to the bottom deciles class (7.9 percent), while in the urban sector about 8 times as many households in the top deciles class (29.1 percent) were indebted to institutional agencies compared to the bottom deciles class (3.4 percent). Non-institutional agencies: In the case of non-institutional agencies, however, no such definite rising or declining pattern in IOI across deciles classes is noticed. For urban households, the IOI to non-institutional agencies in the higher deciles classes declines from about 12-13 percent for the 5th and 6th classes to under 6 percent for the top deciles class.

Table 3.9

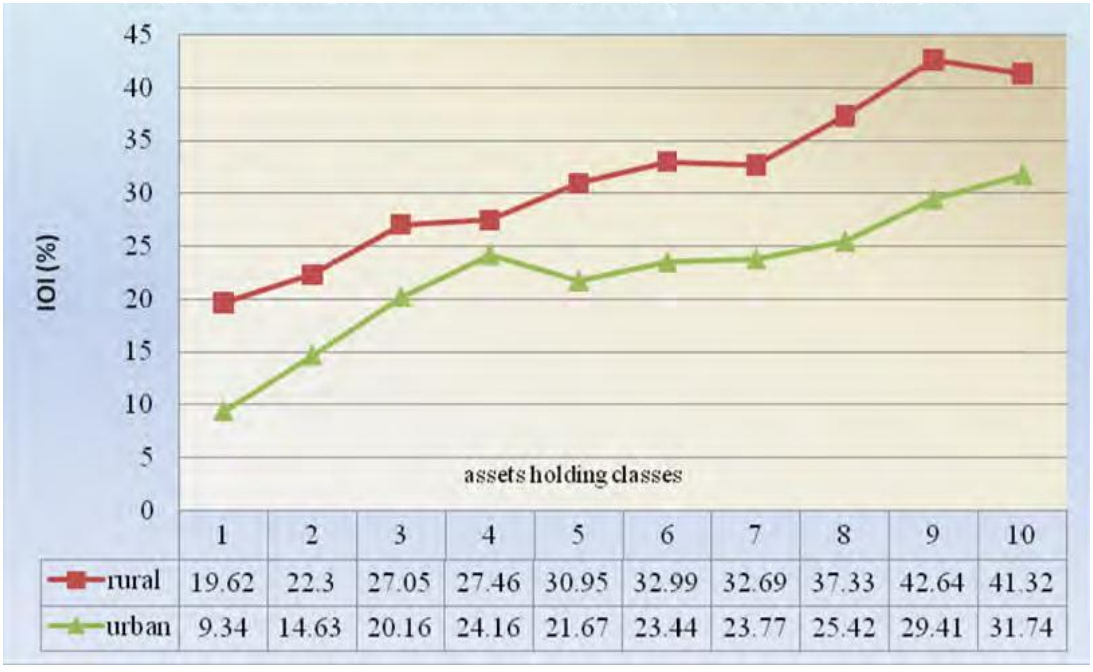
Incidence of indebtedness (IOI) and average debt per household (AOD) in India 2013

Indebted level	Rural	Urban
IOI (in percent)	31.44	22.37
AOD per hh (Rs)	32522	84625
AOD per indebted hh (Rs)	103457	378238

Source: NSSO, Ministry of Statistics and Programme Implementation 2013

Figure 3.5

Incidence of Indebtedness (IOI) by asset holding class

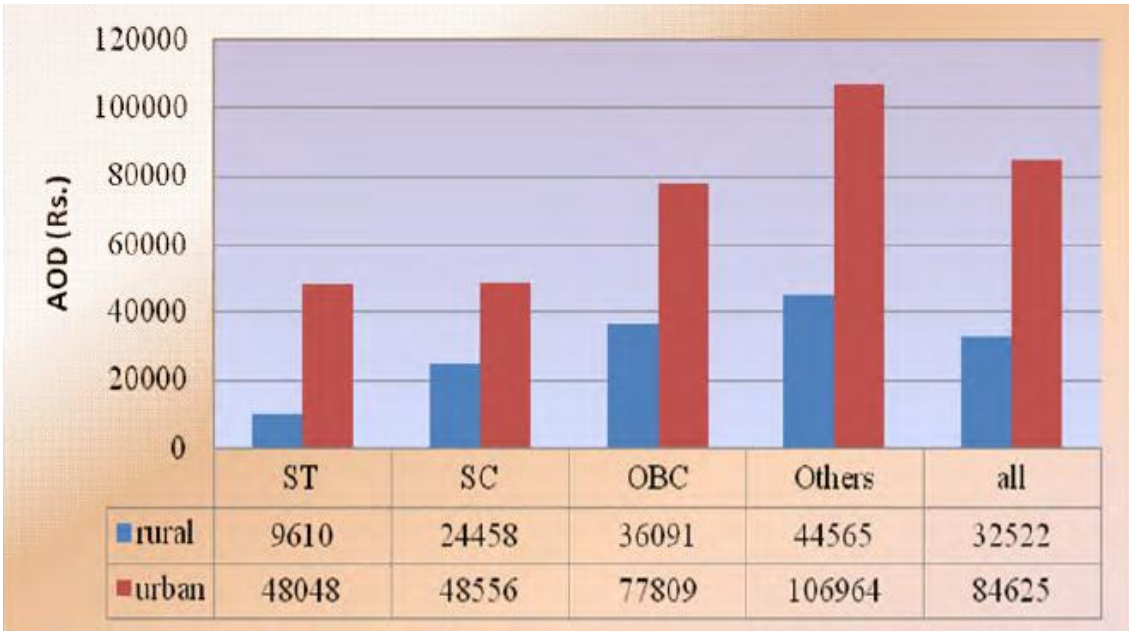


Source: NSSO, Ministry of Statistics and Programme Implementation 2013

The percentage of indebted households, and average amount of debt per household are shown for each social group separately in above Fig. 3. In rural India, among the social groups, IOI (16.9 percent) was lowest for ST households and highest (35.7 percent) for OBC households. On the other hand, AOD was lowest for ST households (Rs. 9610) and highest for 'Others' households (Rs. 44565). In urban India, the lowest IOI was again that of the ST households (16.4 percent) and the highest that of OBC (26.0 percent). But the IOI for 'others' was only 19 percent, lower than that of SC. The relative position of the four social groups, in terms of AOD, was found to be the same as in the rural areas.

Figure 3.6

Average debt per household (AOD) by different Social group



	ST	SC	OBC	Others	all
rural	9610	24458	36091	44565	32522
urban	48048	48556	77809	106964	84625

Source: NSSO, Ministry of Statistics and Programme Implementation 2013

Table 3.10

Incidence of rural and urban indebtedness by social group – 2013

Social group	Rural IOI (in percent)	AOD per house hold (Rs)	Urban IOI (in percent)	AOD per indebted house hold (Rs)
ST	16.9	9610	16.4	48048
SC	30.9	24458	23.5	48556
OBC	35.7	36091	26.0	77809
Others	31.4	44565	18.9	106964
All	31.4	32522	22.4	84625

Source: NSSO, Ministry of Statistics and Programme Implementation 2013

In rural India, among the social groups, IOI (16.9 percent) was lowest for ST households and highest (35.7 percent) for OBC households. On the other hand, AOD was lowest for ST households (Rs. 9610) and highest for 'Others' households (Rs. 44565). In urban India, the lowest IOI was again that of the ST households (16.4 percent) and the highest that of OBC (26.0 percent). But the IOI for 'others' was only 19 percent lower than that of SC. The relative position of the four social groups, in terms of AOD, was found to be the same as in the rural areas.

Table 3.11

Agriculture and Non-agricultural Debt in India

Year	Professional		Total	Agriculture professional Debt (Ratio in percentage)	
	Agricultural	Non-agricultural		Ratio in debt	No of family
1971	3374	475	3848	87.70	72.40
1981	5337	456	6193	92.60	76.30
1991	17668	453	22211	79.50	66.90
2002	81709	29759	1111468	73.30	59.70

Source: computed from NSSO, Ministry of Statistics and Programme Implementation (various years)

Table (3.11) shows the percentage of indebted households, by asset holding class for institutional (Government, Banks, Insurance companies, PFs, Financial companies, Self-Help groups, etc.) as well as non-institutional credit agencies as obtained from the All India Debt Investment Survey. The results of the survey show that non-institutional agencies played a major role in advancing credit to the households, particularly in rural India. The non-institutional agencies had advanced credit to 19 percent of rural households, while the institutional agencies had advanced credit to 17 percent households. In urban India, the picture is different; the institutional agencies appear to have played a greater role, advancing credit to 15 percent of households against 10 percent by non-institutional agencies.

3.8 Purpose of incurring debt vis-a-vis household asset holding

In order to identify the pattern of purpose of incurring debt for households with less value of assets vis-à-vis the households with higher valued assets is presented in table (3.12) and (3.13). With the objective of condensing the results and focusing on the major features, purposes relating to capital and current expenditures on farm or non-farm business have been clubbed together under the term 'business purposes' while financial investment expenditure, expenditure on education, expenditure on medical treatment, expenditure on housing, expenditure on litigation**,** repayment of debt, etc. have been grouped under 'non-business expenditure'.

Table 3.12

Percentage share of debt by broad purpose of loan all india-2013

Debt		**Rural**	**Urban**
Percent share of debt in business	Farm	28.6	2.2
	Non-farm	11.4	16.1
	All	40.0	18.3

Percent share of debt in non-business	60.0	81.7

Source: NSSO, Ministry of Statistics and Programme Implementation 2013

3.9 Purpose of Borrowing

Examining activity-wise use of loan, one observed that the indebtedness for income generating activities is quite high, i.e., as high as 78 percent. Within income generating activities, current expenditure in farm business forms the major category and nearly 3/4th of the loan for this category is financed by formal agencies and the average interest rate is 12 percent. The next important category is capital expenditure in farm business and than 3/4th of the loan is financed by formal agencies. Table (3.13) elicits the purpose wise distribution of debt amount the rural cultivator in India.

Table 3.13

Distribution of Debt by Purpose among Rural Cultivator Households: 1961-2013 (In Percentages)

Purpose	**1961**	**1971**	**1981**	**1991**	**2002**	**2013**
Productive	40.1	54.0	71.6	70	68	70
Farm-Business	36.6	49.7	63.8	65.04	73	75
Capital Expenditure	26.8	34.7	45.3	58	56	55
Current Expenditure	9.8	15.0	18.5	32	59	60
Non-Farm Business	3.5	4.3	7.8	10.5	15	18.5
Capital Expenditure	1.4	3.2	6.3	5.6	7.2	9.3
Current Expenditure	2.1	1.1	1.5	2.06	2.0	3.3
Non-Productive	60.0	46.0	28.4	25.8	38.1	39.2
Household Expenditure	49.2	37.8	20.0	25	27.7	30
Other Purposes	10.8	7.2	8.4	7.9	10.4	11.2
Repayment of Debt	5.0	1.5	0.1	1.00	1.5	1.9
Expenditure on	1.8	0.7	0.8	0.6	0.3	0.8

Litigation						
Financial Investment	0.2	0.2	1.0	1.06	0.6	1.3
All Purposes	100.0	100.0	100.0	100.0	100	100

Source: computed from NSSO, Ministry of Statistics and Programme Implementation 2013 (various years)

3.10 Incidence of indebtedness (IOI) to institutional and non-institutional credit agencies

Many times, farmers fail to repay the full amount or a part of loans and major chunk remains outstanding. Apart from these outstanding loans, farmers borrow money for next crop operation but farmers are not able to repay their loans mainly due to widening the gap between the price of farm inputs and farm produce. Excessive expenditure on domestic consumption, social ceremonies and frequent crop failures are the other reasons of non-repayment of crop loans. Hence farmers are becoming indebted. Now the condition of most of the farmers is worsening.

It shows the IOI in terms of interest and also, that recorded from the earlier surveys of AIDIS i.e. 59th Round. It shows that, indebtedness with simple interest is predominant for both rural (20.3 percent) and urban (13.4 percent) households. The relative position, of 'terms of interest', was found to be the same as that was in 2002. The category 'concessional' (as in the round) is the least - 1.3 percent in rural and 0.5 percent in urban. On the other hand, IOI for 'interest-free loans' (mainly taken from friends and relatives) was quite significant - with 6.5 percent in the rural and 4.4 percent in the urban.

Table 3.14

Incidence of indebtedness (IOI) of households by terms of interest: 2013 (In percent)

Terms of interest	Rural		Urban	
	2002	2013	2002	2013

Interest-free	4.6	6.5	4.7	4.4
Simple	17.7	20.3	11.3	13.4
Compound	5.2	6.3	2.4	5.9
Concessional	0.6	1.3	0.4	0.5

Source: NSSO, Ministry of Statistics and Programme Implementation (various years)

The institutional agencies played a significant role in providing credit to the households with a moderate rate of interest (6 percent to 15 percent) for both rural and urban areas. It is observed that a fairly high amount of TCD (Total Amount of Cash Debt)funded by the institutional agencies, about 89 percent in the rural and 92 percent in the urban, were provided less than 15 percent interest rate. On the other hand, the non-institutional agencies provided a significant amount of its total loans to households at an interest as high as 20 percent or above, the share of such loans to total was 69 percent in the rural and 58 percent in the urban. In rural India, about 60 percent of the amount of outstanding loans taken by the agricultural households was taken from the institutional sources, which included Government (2.1 percent), Co-operative society (14.8 percent) and banks (42.9 percent). The following table (3.15) gives the percentage distribution of total amount of cash debt (TCD) outstanding in 2013 by rate of interest separately for institutional and non-institutional agencies.

Table 3.15

Percentage distribution of outstanding cash debt: all-India 2013

Rate of interest	**Rural**			**Urban**		
	Institutional	**Non-institutional**	**All**	**institutional**	**Non-institutional**	**all**
Nil	0.8	18.3	8.5	0.4	27.0	4.5
< 6	7.1	2.3	5.0	1.5	1.1	1.4
6 – 10	26.0	0.4	14.7	14.5	0.9	12.4
10 – 12	12.9	0.7	7.5	41.6	1.2	35.3

12 – 15	42.6	4.1	25.7	34.1	7.7	30.0
15-20	7.3	5.6	6.6	6.2	4.3	5.9
20-25	2.1	33.9	16.1	1.2	27.3	5.3
25-30	0.1	0.6	0.3	0.2	0.3	0.2
>30	1.0	34.1	15.6	0.4	30.2	5.0
All	100	100	100	100	100	100

Source: NSSO, Ministry of Statistics and Programme Implementation 2013

It is revealed from the statement that about 8.5 percent of the rural TCD outstanding in 2013 was interest-free and in urban India the share was 4.5 percent. In the case of TCD from non-institutional agencies, the interest-free shares were comparatively higher – being 18 percent and 27 percent in rural and urban sector respectively. Compared to this, the shares of TCD were only 0.8 percent and 0.4 percent for institutional agencies in rural and urban sector respectively.

The institutional agencies played a significant role in providing credit to the households with a moderate rate of interest (6 percent to 15 percent) for both rural and urban areas. It is observed that a fairly high amount of TCD funded by the institutional agencies, about 89 percent in the rural and 92 percent in the urban, were provided at less than 15 percent interest rates. On the other hand, the non-institutional agencies provided a significant amount of its total loans to households at an interest as high as 20 percent or above, the share of such loans to total was 69 percent in the rural and 58 percent in the urban

3.11 Size of debt

Size Distribution of outstanding cash dues reveals that the average cash dues outstanding per household which was estimated as Rs. 32522 and Rs. 84625 respectively for the rural and urban areas at the all-India level indicate the general level of indebtedness in the household sector. But the percentage distribution of indebted households and of amounts of cash dues outstanding by the size group of such dues reflects the debt borne by different groups of households.

Table (3.16) shows the per 1000 number of households reporting outstanding debt on 30.06.2012 as well as the share of debt over the size group of outstanding dues. This indicates that the households reporting debt of small size (up to Rs.10000) accounted for about 1.1 percent and 0.2 percent of the total cash dues in the rural and urban areas respectively. It may be commented in addition that, the numerically small percentage of households, mainly in rural India, incurred large-sized debts which accounted for a substantial share of the total cash dues.

Table 3.16

Per 1000 number of household reporting outstanding cash loans and amount of Cash loan per Rs. 1000 of total outstanding loan by size class of outstanding loan 2013

Size class of loan outstanding (rs 000)	Rural			Urban		
	Per 1000 no of hhs with cash loan outstanding	Rs 1000 distribution of total outstanding loan	Number of sample household	Per 1000 no of hhs with cash loan outstanding	Rs 1000 distribution of total outstanding loan	Number of sample households
<4	17	1	1387	6	0	573
4-7	27	5	2125	12	1	957
7-10	20	5	1416	8	1	713
10-20	76	38	5690	31	6	2786
20-35	80	74	6132	39	14	3254
35-60	65	107	5203	39	24	3212

60-100	46	118	3461	32	32	2741
100-200	40	187	3332	44	79	3783
200-400	24	212	1952	36	131	3405
>400	9	253	1000	42	713	3444
All	314	1000	25432	224	1000	20246

Source: NSSO, Ministry of Statistics and Programme Implementation 2013

3.12 Debt-asset ratio (DAR)

At any point of time, the outstanding debt of a household is potentially a charge upon its assets - whether or not these are mortgaged or hypothecated to a person or an agency. The 'debt-asset' ratio is defined as the average amount of debt outstanding on a given date for a group of households expressed as a percentage of the average value of assets owned by them on the given date. Thus, this ratio reflects the burden of debt on any particular group of households on a given date. It is seen from AIDIS, the 'debt-asset' ratio at the all-India level is found to be 3.7 percent for the urban areas and 3.23 percent for the rural India.

Table 3.17

Average amount of debt (AOD) and debt-asset ratio (DAR) by Household asset holding class: all-India 2013

Deciles class of hh asset holding	Rural			Urban		
	AVA (Rs)	AOD (Rs)	Debt-asset ratio (percent)	AVA (Rs)	AOD (Rs)	Debt-asset ratio (percent)
1	25071	9705	38.71	291	5587	1920.28
2	89593	8819	9.84	9565	11934	124.77
3	151460	13811	9.12	67428	20075	29.77
4	227415	15673	6.89	224760	28430	12.65
5	325385	18800	5.78	447719	29915	6.68

6	454192	23441	5.16	777591	36751	4.73
7	635506	28770	4.53	1248347	55519	4.45
8	922870	37662	4.08	2001390	91069	4.55
9	1548889	56658	3.66	3513327	168470	4.80
10	5689385	111884	1.97	14559978	398457	2.74
All	1006985	32522	3.23	2285135	84625	3.70

Source: NSSO, Ministry of Statistics and Programme Implementation 2013

The 'debt-asset' ratio decreased almost monotonically with the increase in assets in rural India. The ratio is seen to be 39 percent for the lowest deciles class and reduces to 2 percent for the top deciles class and above' in the rural sector. In urban sector 'debt-asset ratio' for the bottom deciles class is as high as 19.20 percent implying the fact that in urban area debt burden for the lowest class is extremely high. The 'debt-asset' ratio for the second lowest class is also high (12.5 percent) but it is more than 93 percent drop from the earlier deciles class. From the third deciles class onwards, decrease in DAR is regular with the increase in deciles class (except 9th deciles class, which shows a minor increase over 8th deciles class); finally dipping at 2.74 for the top deciles class.

Table 3.18

Percentage distribution of cash dues outstanding by duration of debt

Duration of debt (in yrs)	**Rural**				**Urban**			
	1981	**1991**	**2002**	**2013**	**1981**	**1991**	**2002**	**2013**
Below 1	36	37	26	45	36	38	36	26
1-2	20	23	23	20	20	22	24	26
2-3	12	14	15	14	11	10	13	15
3-4	7	8	8	6	6	7	8	10
4-5	4	5	6	5	3	5	5	7
5-10	18	9	9	8	21	11	11	14
10 and above	2	3	4	2	2	3	3	2

All	100	100	100	100	100	100	100	100

Source: NSSO, Ministry of Statistics and Programme Implementation (various years)

An analysis of the cash dues reported as outstanding for varying periods of time for the previous rounds and the present one is attempted here. It exhibits changes in the percentage distribution of cash dues by the duration of debt, which took place during the last four decades. About 65 percent of total amount of cash debt outstanding as on 30.06.2012 among rural households and 52 percent of the same among urban households had been contracted for a relatively shorter duration of less than 2 years and meager 2 percent for a period of 10 years or more for both the sectors. The distribution reveals similarity between earlier three rounds as regards the duration-specific percentage shares of cash dues. Between 1981 and 1991, the share of the cash dues outstanding for a long period of 5 years and above had declined from 20 percent to 12 percent in rural and from 23 percent to 14 percent in urban. Thereafter the pattern is somewhat similar.

From the above discussions it is clear that, the share of institutional agencies to total credit has increased. Among them, co-operatives supplied about 35 percent of the total agricultural credit needs. At the same time, money lenders continued dominance in the rural credit scenario in India. Kerala placed 4th position among the states where the incidence of indebtedness is very high and higher than the national average of 47.30 percent. The following section (B) discussed about the indebtedness scenario in Kerala.

SECTION B

3.13 Agricultural Indebtedness in Kerala

The growth performance of the agriculture and allied sector has been fluctuating during the last few decades. It witnessed a negative growth rate of 1.3 percent in XIth Five Year Plan while, a positive growth of 1.8 percent in Xth plan period. Although the share has fallen to 8.95 percent of GSDP, the

robust performance of the sector in line with others is a matter to cheer considering the agrarian nature of the state and the role that it plays in providing livelihood to the people (Economic Review 2013). The annual growth rate of agricultural income and share of agricultural GSDP is shown in table (3.19).

Table 3.19

Annual growth rate of agricultural income and share of agricultural GSDP in Kerala

Year	Rate of change over previous year	Share of agriculture and allied sectors in GSDP
2008-09	2.08	12.7
2009-10	-3.01	11.5
2010-11	-7.28	10.1
2011-12	-0.15	9.1
2013-14	5.62	8.95

Source: Economic Review (various years), State Planning Board, Trivandrum.

The indebtedness of the peasantry had been a serious issue since long. The NSSO, one of the most reliable and exhausted survey in the country surveyed the extent of indebtedness among farmers in its 59th round. The survey indicated that nearly half of (48.6 percent) farmer households were indebted and 61 percent of them were small farmer holding less than one hectare. It is noteworthy to remember that cropping pattern is a matter of concern of indebtedness of the peasantry in the Indian context. Cropping pattern in India is highly skewed in favour of cash crops in recent years which necessitate more investment in agriculture. For cash crops, there is a need for long term loans. But at the same time, the short term credit dominates the farm credit in India. It is more than 75 percent of the total credit. The committee on Expert Group on agriculture indebtedness in 2007 observes that public sector investment in agriculture which accounts for about one third of the total investment has been

declining in recent years and it is the private investment which is playing a major role. It observes that co-operatives are a major source of capital formation and it has large amount of unutilized resources. These can be used more effectively, given better policy environment in the context of decentralized planning and Panchayati Raj or Local Government (Mani KP).

It is slowly being recognized that short term credit needs of a farmer differs from the long term one (Economic Survey 2007-08). These requirements include maintenance of tractor or farm implements, allied activities like dairy, poultry, cost of feed, annual repairs etc. very often these two lines of credit; short term and long term are needed simultaneously. Since money lenders give credit to the farmers directly and it is informal in nature; farmers easily approach them even at high rates of interest. The long term nature of agriculture production makes farmers to extent these loans without any terms and conditions. Another side, instead of clearing the loan, farmers are renewing their loans before the maturity period. This way they are trapped in vicious circle of debt. It is clearly obvious from the primary survey analysis in chapter 4. In 1950-52 the National Sample Survey Organization conducted a survey on rural indebtedness, which revealed that 63 to 78 per cent farmers were indebted (NSSO, 1956). In 2013, about 52 percent of the agricultural households in the country were estimated to be indebted. The institutional loans gave a good fillip during 1970s and 1980s, but the decade of 1990s showed a slowdown, not only in institutional credit but also in the growth rate of agriculture (Singh, 2009). The agrarian distress reached a climax by early 2000, when the Government of India sponsored an all-India independent NSSO study (2003), which reported that 40 per cent of the Indian farmers and 37 per cent of the Punjab farmers have expressed their desire to leave farming, being not a profitable occupation (NSSO, 2005).

Table 3.20

Debt and asset position of farmers in Kerala-2013

Category	Rural	Urban
Average value of asset	25,73,035	55,63,353
Indebtedness	49.10 (Percent)	52.99 (Percent)
Average debt	1,41,029	1,88,343
Average debt and overdue	2,87,212	3,55,450
Debt to asset ratio	5.48	3.39

Source: NSSO, Ministry of Statistics and Programme Implementation 2013

The Average Amount of Debt (AOD) per household is seen to be less in the rural area than in the urban, the values being Rs32522 and Rs84625, respectively. Compared to this, the Average Amount of Debt (AOD) per indebted household was Rs103457 and Rs378238 in the rural and urban areas, respectively.

In rural India, indebtedness is found to be more widespread among the cultivator households than among their non-cultivator counterparts. At the all-India level, 46 percent and 29 percent of the cultivator and non-cultivator households, respectively, were indebted. Also, compared to the cultivator households, the Average Amount of Debt (AOD) is observed to be much less (little more than one third) among the non cultivators. The Average Amount of Debt (AOD) for cultivator household was found to be Rs70580. In urban India, however, at the all-India level, 36 percent and 21 percent of the self-employed and others households, respectively, were indebted. The AOD for self employed households was found to be Rs108714, and for the ‘others’ it was around 25 percent lower.

From the above analysis we can justify that the majority of India farmers are depending on different sources of credit institutions; whether institutional or not for their farming activities. This is because of different reasons. Either their farm income is not sufficient to meet their future production, or it may be of changes in cropping pattern, price fluctuations, lack

of remunerative prices, and other determinants like size of the family, value addition, etc. These are analyzed in the forthcoming chapters in detail. Before that, let us make a synoptic review on indebtedness in Kerala.

Indebtedness of households in India has been reviewed periodically by Government of India. The demand side of financial services of Indian households has been analysed from National Sample Survey Organization (NSSO) reports. Debt and investment survey of NSSO, 59th round has estimated Incidence of Indebtedness (IOI) that is defined as percentage of indebted households. It was observed that in 2002 every fourth household in rural India was indebted, while it was 18 per cent among the urban households in comparison with 23 per cent for rural and 19 per cent for urban in 1991. Figures corresponding to rural scenario in Kerala report an IOI of 39.4 per cent while that of urban transects is lower at 37.3 per cent. The other side of the coin is that about 75 per cent of households in rural India and 60 per cent of households in rural Kerala do not have access to either institutional/non-institutional sources of credit. In urban areas, the situation is grim with respective rates pegged at 62 per cent (Kerala) and 82 per cent (India) (GOI, 2003(Report 501).

Table 3.21

Indebtedness of households in India and average amount of borrowings

Year		**Households reporting borrowing (percent share)**		**Average amount of borrowing per household (Rs)**	
		Rural	**Urban**	**Rural**	**Urban**
1971-72	**India**	27.7	NA	174	NA
	Kerala	23.8	NA	136	NA
1981-82	**India**	19.7	19	446	674
	Kerala	33.7	32.7	919	2598
1991-92	**India**	19.9	18.5	1160	1892

	Kerala	25.8	19.6	2171	2175
2002-03	**India**	20.8	15.3	3726	6162
	Kerala	35.9	33.4	11066	17620
2013-14	**India**	31.4	22.4	NA	NA

Source: computed from NSSO, Ministry of Statistics and Programme Implementation (various years)

It was observed that the share of indebted households in the total population has been decreasing over the years (AIDIS-70th round). The share of rural indebted households came down to 20.8 per cent in 2002-03 from 27.7 per cent in 1971-72 (GOI, 2003). This trend was found true in the case of urban households also. Lower share in spite of increase in absolute number of indebted households can be explained as a consequence of increase in population. In spite of wide expansion and calibration of the institutional financial setup to fine tune with the objective of financial inclusion, it is established that there is a wide majority who are out of coverage. However in the case of Kerala, it can be observed that share of rural population reporting borrowing has increased from 27.7 per cent in 1971-72 to 35.9 per cent in 2002-03, though an intermittent decline was noted in 1991-92. In urban areas, share of population reporting borrowings declined in 1991-92, but picked up later to attain 33.4 per cent in 2002-03. The average amount of borrowings increased 21 times for rural and 9 times for urban households. However, the borrowings of the urban counterpart was higher (average by 1.5 times) than that of the rural households. Average amount of borrowing per household in Kerala stood at more than double in the case of rural areas and almost thrice in the case of urban areas compared to national figures.

At the all India level, among the institutional credit agencies, the co-operative societies and the commercial banks were the two most important agencies in the rural sector. These two agencies together shared 91 per cent of the entire amount of debt advanced by the institutional agencies, accounted for

52 per cent of the outstanding cash debt, with co-operative societies (27.3 per cent) accounting for a greater share than the banks (24.5 per cent). Of the 20 major states in 2002, as many as 15 have shown a fall in the share of institutional agencies, notable among them are Bihar, Punjab, Haryana and West Bengal. The above facts indicate that the cooperatives, commercial banks, and other formal financial sector programs in rural areas have not displaced informal sources of credit altogether as 43 per cent of rural households continue to rely on informal finance in 2002.

The most important reason for continuation of informal rural credit market is that the existing financial institutions tend to restrict their lending activities to more risky field of lending to the agricultural sector. Those in the rural credit market prefer to use informal sources of credit despite the fact that the interest rates are much higher. Informal sources do not insist on punctual repayment as banks or cooperative societies do. Usually, it is possible to obtain loans for such purposes as marriage and litigation only from informal sources. There are generally no intricate and complicated rules governing the granting of loans by the village moneylenders. Informal sources are willing to lend money more freely without collateral and on the borrower's mere promise to repay (S S Acharya). In the present liberalized trade market, farmers are exposed to price volatility because of fluctuations in domestic production and international prices of agricultural commodities. The most serious aspect of this crisis is deceleration in agricultural growth with distress state of farmers in general and that of small and medium in particular.

This chapter summarized about the agricultural credit system and indebtedness in India and Kerala. Sate level analysis showed that the average loan per indebted farm household is highest in the state of Kerala. It is reported as Rs38, 939 in 20013-2014 against Rs13,472 in 1999-2000 which showed an increase of about 189 percent (NSSO). It can be seen from the Situational Assessment Survey of farmers (SAS, NSSO 2004-05), the highest proportion of

debt among the rural labour households was for household consumption (29.4 percent) followed by debt for productive purpose (22 percent). Among the households with cultivated land, the highest proportion of loan was for productive purpose (27.2 percent) where as among the household without cultivated land the highest proportion loan was for household consumption (34.5 percent). Since AIDIS is the only single agency to work out the debt position of farmers in India, it covers indebtedness of farmers in Kerala at an aggregate level. Therefore, it is essential to study the extent of indebtedness in Kerala in a micro aspect. Coming chapter illustrates the sources and utilization pattern of agricultural credit in Kerala with 300 sample farmers.

CHAPTER IV

SOURCES AND UTILIZATION PATTERN OF AGRICULTURAL CREDIT

4.1 Introduction

This chapter starts with a brief overview of the sample area, total asset holdings, cropping pattern and socio-economic status of the sample households. Then it proceeds to discusses in depth the problem of agricultural indebtedness; its nature, extent and pattern of rate of interest of each loan of the sample farmers. The chapter also gives details regarding the average asset position of the farmers, level of farm income, gross farm output, farm expenditure, borrowing and amount of outstanding of each loan etc. of the sample farmers of three districts. Details regarding the average resource position, cropping pattern, gross farm income, cost of farming, level of indebtedness etc of the sample farmers of three districts across the agricultural category are described in the analysis. A brief profile of the sample district is presented in the following table (4.1).

Table 4.1

A Brief Profile of Sample Districts (2011 census)

Particulars	Palakkad	Wayanad	Thrissur	Kerala
Total area (hectare)	447584	212966	186944	3886287
Number of Taluks	5	3	5	63
Total number of Blocks	13	4	16	152
Panchayats	91	25	88	978
Latitude	10.7867	11.7094	10.5231	10
Longitude	76.6548	76.0955	76.2222	76.25
Population	2809934	817420	3121200	33406061
Male	1359478	401684	1480763	16027412
Female	1450456	415736	1640437	17378649
Density of population (per sq. km)	627	383	1026	859
Literacy rate	88.49	89.32	95.32	93.91
Total workers	875540	263445	929506	9329747
Cultivators	59194	46410	34791	544932
Agricultural labours	195394	69133	54538	919136
Industrial workers	19975	29117	21883	198281
Other workers	600977	144985	818294	7667398
Total geographical area	447584	212966	302919	3886287
Forest (in hectare)	136257	78787	103619	1081509
Non-agricultural use	41410	11070	36707	384174
Uncultivable land	2756	171	247	19573
Miscellaneous tree crops	1023	106	350	3690
Cultivable waste	24033	1195	6766	91665
Fallow other than current fallow	12837	833	6364	51943
Current fallow	17048	1750	13139	76028
Net area sown	196818	114966	127185	2071507
Area sown more than once	106643	60334	34031	575954
Total cropped area	303461	175300	161216	2647461
Major crops	paddy, Areca nut, ginger, vegetables, tapioca,	Coffee, paddy, pepper, arecanut,	Paddy, coconut, banana, pepper,	Paddy, Areca nut, coconut, ginger,

	coconut, banana, rubber, arecanut etc.	ginger, vegetables, tapioca, coconut, banana, rubber etc.	vegetables, arecanut etc	pepper, cardamom etc

Source: Panchayat level statistics, Department of Economics and statistics, Trivandrum, Government of Kerala (2011 census).

4.1.2 Location profile

Palakkad district is situated in the South West Coast of India. The district is bounded on the North by Malappuram District, in the East by Coimbatore district of Tamilnadu, in the south by Trichur district and in the west by Trichur and Malappuram districts. The district is between 10’ 21 and 11’ 14 North latitude and 76’ 02 and 76’ 54 East longitude. The total Geographical Area of Palakkad district is 4480 sq.k.ms. representing 11.53 percent of the State’s Geographical area. The Forest land of the district covers an area of 136257 hectares. Palakkad is a part of the erstwhile Malabar district of Madras Presidency. The district accounts for about 11.5 percent of the total land area of the state of Kerala; with the share of population is 8.22 percent (2011 census).

The total geographical area of Palakkad district is 4480 sq.k.ms. Out of this, the area under forest is 1363 sq.k.ms. Palakkad, Chittur and Alathur taluks are more or less plain except for Nelliampathy Area of Chittur Taluk. But Ottappalam and Mannarkkad taluks are undulating. The district falls in the midland region except Attappady block which is an Integrated Tribal Development Block and lies in the high land region. There are three types of soil (1) laterite soil seen in Ottappalam, Alathur, Chittur and Palakkad taluks (2) Virgin forest soil of Mannarkkad Taluk and (3) Black soil in Chittur and Attappady Valley which issued for the cultivation of Cotton.

The literacy rate of the district is lower than the state. The district has got two types of climates. Ottappalam, Alathur and Mannarkkad are having a climate similar to that of other districts of Kerala, whereas Palakkad and Chittur are having rather a dry climate similar to Tamilnadu. However the average rainfall is good for cultivation. There are five Taluks and 163 villages in the district. There are four Municipal towns and Ninety one Panchayaths in the district. The district is divided into 13 Community Development Blocks for the effective implementation of various developmental activities. Nestled among the mountains of the Western Ghats, lies Wayanad which can be considered as the biggest hill station in Kerala State. This Green paradise located at a distance of 76 kms from the coast of Kozhikode lies at a height of 700-2100 m above the sea level.

Thrissur district located in the Central part of Kerala lies between latitude 10 D 10’ and 10 D 46’ and longitude 76 D 0’ and 76 D 55’. The District is bounded by Malappuram and Palakkad Districts in the North, Ernakulam and Idukki Districts in the South, Arabian Sea in the West and Coimbatore District of Tamilnadu and palakkad District of Kerala in the East. The District has an area of 302919 Ha, which constitute 7.8 percent of the total area of the State. Thrissur District is not rich in Mineral resources except for clay and sand. Preliminary investigation has been conducted to assess the availability of tile/bricks clay in various parts of the District. The preliminary investigation reveals that the thickness of the clay deposit is 0.75 meters to 2 meters and quantity of clay available will be several million tones. It is also stated that the deposits of river sands are seen at the important rivers in the District. Other mineral deposits seen in the District include Lime shell at Kodungallur and Chavakkad area, Lateritic and Granite (Building stone) deposits are found in the regions other than the coastal taluks, Chavakad and Kodungallur. It is also observed that ordinary sand deposits are found under the paddy fields of Mukundapuram Taluks

Wayanad District is situated on the eastern portion of Kerala. It lies between the north latitudes 110 27' and 11058'35" and the east longitudes 75047'50"and 76026'35".The District is bounded on the North by Kodagu District of Karnataka State, on the East by Mysore District of Karnataka State and Nilgiri District of Tamilnadu State, on the South by Ernad Taluk of Malappuram District and Kozhikode Taluk of Kozhikode District on the West by Koyilandi and Vadakara Taluk of Kozhikode District and Thalassery Taluk of Kannur District. The district has an area of 2131 square kilometers with a total population of 8165.58. As per 2011 census sex ratio is 995 per 1000 males. The density of population is 383 per sq.kms. The decadal census shows an increasing tendency in the density of population. One important characteristic feature of this district is the large Tribal population, consisting mainly of Paniyar, Adiyar, Kattunayakan and Kurichiyans communities. SC and ST population comes 4 percent and 17 percent respectively to the total District population. Wayanad offers a panorama of undulating hills and dales. The Vavumala (Camel Hill) is the highest peak (2339 m.) in the District. The main river of the District is the Kabani River, one of the east flowing rivers of Kerala. Almost the entire Wayanad District is drained by the Kabani River and its three tributaries viz. Panamaram, Mananthavady and Thirunelly. The other important rivers are the Mahe and the Chaliyar Pookode Lake is situated in the Kunnathidavaka Village. The mean annual temperature is 23.8*0*C.During December- January temperature lowers to 15oC and experiencing severe cold and during summer season the temperature will go up to 35oC. The mean average rainfall in the district is 2322 mm. Wayanad is a land of forest, which account for about 40 percent of the total area of the district. The important crops are coffee, tea, paddy and cardamom. Agriculture is the principal occupation of this District. The most important crops which are cultivated in the District are pepper and paddy. The major plantation crops are Coffee and Tea. Wayanad contributes 9 percent of pepper production in the state which is second largest producer in the State. Similarly Wayanad district stands first position in the

production of coffee and ginger. Its contribution is about 79 percent and 44 percent respectively. Major irrigation projects in this district are Karapuzha Irrigation project. It is the first irrigation project taken up in Wayanad which was commissioned in 2005. Wayanad is mainly drained by Kabani River and its tributaries namely Panamaram, Mananthavady and Thirunelli. Bhanasura Sagar hydro- electric project and Mananthavady hydro-electric project are two hydro-electric projects in Wayanad district. There are no major industrial units except tea processing factories and timber mills in the Districts. 2839 industrial units registered under SSI/MSME and out of these 67 units promoted by scheduled caste, 134 scheduled tribe and 2638 units by general category.

4.1.3 Topography

Topographically Palakkad district can be divided into two regions, the low land comprising the midland and the high land formed by the hilly portion. The soil is laterite in the hill and mid regions. Midland is thick with Coconut, Areca nut, Cashew, Pepper, Rubber and Paddy cultivation.

Based on the topographical pattern, Thrissur District is divided into three natural regions, viz., Low Land, Mid-Land and Highland region. Kodungallur, Thalikkulam, Mathilakam and Chavakkad Blocks belong to the low land region, Irinjalakuda, Cherpu, Anthikkad, Thrissur, Puzhakkal, Mullassery, Kunnamkulam, Chowannur Blocks belong to mid-land region and Chalakudy, Ollukkara, Kodakara and Pazhayannur Blocks belong to High Land regions.

Wayanad district has a varying topography which includes hilly areas,valleys as well as mea dons. The climate also changes drastically depending on the Geography and altitude.

4.1.4 Rivers

The most important river in Palakkad district is the Bharathapuzha. The tributaries of Bharathapuzha are Malampuzha, Walayar, Mangalam, Meenkara, Ayalure, Pothundy and Kanjirapuzha. There are also two tributaries of the Cauvery in Attappady hill range.viz. Bhavani and Siruvani.

The other important river flows through the district is Korapuzha,. Kunthipuzha and Nellipuzha are two tributaries from Attappady and join the Bharathapuzha at Kuttippuram.

The main rivers of Thrissur district are Bharathapuzha, Kecheri puzha, Karuvannur puzha and Chalakkudy River. The Bharathapuzha (209 Km) originates from Anaimalai Hills. The 5 tributaries of this river are Gayathripuzha, Kannadipuzha, Kalpathi puzha, Cheerankuzhy (Gayathri River) and Thuthupuzha. It flows as northern boundary of Thrissur for about 40 Km. The Kechery River otherwise known as Wadakkanchery River originates from the Machad hills flowing West wards and joins the backwaters of Chettuvai. It has a length of 51 Km and Vazhani Dam is constructed on this river basis. The Manali River and Karumali River combines near Arattupuzha and assumes the name Karuvannur River. This river has a length of 65 Km. Peechi Dam constructed cross Manali River and Chimmoni Dam across Karumali River help to control floods and to irrigate land. The longest river of Thrissur district is Chalakkudy River. It has 4 main tributaries. It joins the Periyar River about 10 Km east of Kodungallur. The hydro electric projects at Peringalkuthu and Sholayar are the two main projects of the river. This river has drainage area of about 1704 sq.Km.

Kabani River in Wayanad, is one of the three east flowing rivers of Kerala, is an important tributary of the river Cavery. Kabani and its tributaries constitute a powerful river system in the landscape of Wayanad. Panamaram rivulet takes its origin from the perennial lake called ‘Pookode Lake’. It flows swiftly through mountain gorges and joined by other streams, tumbles down into Panamaram valley. Six kilometres further from Panamaram, this river joins with the Mananathavady rivulet, originating from the lower regions of the peak ‘Thondarmudi’. From this confluence onwards, the river is known as Kabani, a mightily, perennial river which after entering Karnataka state, joins with the river Cavery. Almost entire Wayanad is drained by the

Kabani River and its tributaries, namely, Panamaram River, Manathavady River and Thirunelli River.

4.1.5 Rainfall and Climate

Palakkad district has a humid climate with a very hot season extending from March to June in the Western Part of the district, whereas it is less humid in the Eastern sector. The rainy season is during South West Monsoon, which sets in the 2nd week of June and extends up to September. About 75 percent of the annual rain is received during the south west monsoon period. During the period December to May, practically no rain is received. The temperature of the district ranges from 20' C to 45' C. The maximum temperature recorded at Palakkad was 43'C.

The Thrissur district is characterised by wet type of climate and four types of seasons identified. The hot summer season starts from March to May, the south west monsoon season from June to September, the north east monsoon from October to December and a general cool and salubrious climate period during January and February. The average annual rainfall ranges between 2310.1 and 3955.3 in the district with mean annual rainfall of 3198.133 mm. The maximum rainfall occurs during the period June to September (SW monsoon) and nearly 71.24 percent of the total rainfall is received during the season. 16.27 percent of the total rainfall is received during North East monsoon between October and December, 12.1 percent of the total rainfall is received during March to May and the balance 0.37 percent is accounted for during January and February months. The month of July experiences abundant rainfall and is the wettest month. The months of June, August, September and October also receive heavy rainfall.

Wayanad has a salubrious climate. The mean average rainfall in this district is 2322 mm. Lakkidi, Vythiri and Meppadi are the high rainfall areas in Wayanad. Annual rainfall in these high rainfall areas ranges from 3000-4000 mm. High velocity winds are common during the South West monsoon and dry winds blow in March-April. High altitude regions experience severe

cold. In Wayanad (Ambalawayal) the mean maximum and minimum temperature for the last five years were 29^0 C and 18^0 C respectively. This place experiences a high relative humidity which goes even up to 95 percent during the south west monsoon period. Generally, the year is classified into four seasons, namely, cold weather (December-February), south west monsoon (June-September) and north east monsoon (October-November). The dale, 'Lakkidi' nestled among the hills of Vythiri taluk has the highest average rainfall in Kerala. The average rainfall in Wayanad is 300 m.m. per year. There is a decreasing trend in rainfall in this area. The average rainfall data shows that the lowest rainfall received from north east monsoon is in wayanad district.

4.1.6 Area under crops

Palakkad district is called the "Granary of Kerala". The net cultivated area of the district is 198474 hectares i.e. 44 percent of the total geographical area. Major portion of the cultivable area is used for raising food crops. About 80 percent of the rural population of this district is agriculturists or agricultural labourers. The total paddy cropped area comes to 111029 hectares (totals of three seasons). Palakkad is the only district in the state where Cotton and Groundnut are cultivated. Area under Fibre Cotton cultivation is 1472 hectare and Groundnut is 1346 hectares. Coconut and other oil seeds occupy a prominent position among the crops covering 57991 hectares and it is one of the major sources of income to the cultivators. Paddy, Cereals and Millete is cultivated in 115697 hectares and it is the major agricultural activity of the district. Fibre, drugs etc. are cultivated in vast areas of the district covering 29991 hect. which is about 65 percent of the corresponding area of the state. The climate in the district is suitable for the cultivation of horticultural crops such as Mango. Jack fruit, Pappaya etc. and the area under cultivation of fresh fruits is 41105 hectares. Plantation crops such as Rubber, Tea, Coffee etc. are planted in a big way in midland and highland regions. The area under plantation crops is 35475 hectares in which rubber occupies more than 70 percent. More and more area is brought under plantation crops. Cultivation of Cotton in the

state is concentrated in Palakkad district which occupies an area of 1472 hectares.

There is a go down of Food Corporation of India at Olavacode with a capacity of 50,000 Metric Tonnes. There are four Ware Housing Godowns owned by the State Government. They are located at Palakkad, Kozhinjampara, Alathur and Muthalamada. The other institutions supporting Agriculture are Soil Testing Laboratory at Pattambi, Agricultural Information Unit, Farmers Training Centres of Pattembi and Alathur, Orange and Vegitable Farm at Nelliampathy, Central Orchard Pattambi, Horticultural Development Farms at Malampuzha and Agricultural; Farms at Muthalamada, Kunnanur, Alathur, Ananganadi, Eruthempathy and Kongad.

The high altitude district is characterised by the cultivation of perennial plantation crops and spices in Wayand. The major plantation crops include coffee, tea, pepper, cardamom and rubber. Coffee based farming system is a notable feature of Wayanad. Coffee is grown both as pure crop and mixed crop along with pepper. Pepper is grown largely along with coffee in the north eastern parts of the district, especially in Pulpally and Mullankolly areas. Coffee in wayanad (66999 ha.) shares 33.65 percent of the total cropped area in the district and 78 percent of the coffee area in the state. Other major crops are rubber (63015 ha.) coconut (59452 ha.), cardamom (38348 ha.) tea (31792 ha.), cassava and ginger. Paddy is cultivated in 22772 hectares of land. The rice fields of Wayanad are in the valleys formed by hillocks and in majority of paddy lands, only a single crop is harvested. Ginger cultivation in Wayanad has also substantially increased in recent times and the ginger produced is mainly marketed in the form of green ginger. Homestead farming assumes importance in Wayand district. The average sizes of holdings are 0.68 ha. A variety of crops including annuals and perennials are grown in these small holdings. The crops include coconut, areca nut, pepper, vegetables. Tuber crops, drumstick, papaya etc. and fruits trees like mango and jack. The crop patterns/crop combinations

prevalent in this district are not based on any scientific cropping pattern suitable for the agro-ecological situation is to be recommended.

4.2 Brief profile of Sample Panchayats

We have to look into a brief idea about the sample Panchayats from Thrissur, Palakkad and Wayanad district. It is presented in tables (4.2), (4.3) and (4.4) respectively.

Table 4.2
Sample Area from Thrissur district

Particulars	**Panchayats**		
	Adat	**Venkitangu**	**Anthikkad**
Area	23.22	20.47	12.99
No.of wards	18	17	15
Total population	29336	25660	25426
Males	14614	11845	12105
Females	14722	13815	13321
Taluk	Thrissur	Chavakkad	Thrissur
Village	Puranattukara	Venkitangu	Anthikkad, padiyam
Major crops	Paddy, coconut, banana, pepper, vegetables, arecanut etc	Paddy, coconut, banana, pepper, vegetables, arecanut etc	Paddy, coconut, banana, pepper, vegetables, arecanut etc

Source: Development Report of Panchayat (2011 census).

Table (4.2) gives an idea of sample area (panchayat) in Thrissur district. Three Panchayats have been selected and surveyed 100 farmers. Adat, Venkitsngu and Anthikkad are the three Panchayats selected where the indebtedness is high. Major crops cultivated in the district are Paddy, coconut, banana, pepper, vegetables and areca nut.

Table 4.3

Sample Area from Wayanad district

Particulars	**Panchayats**		
	Muttil	**Pulpally**	**Amabalawayal**

Area	47.37	77.78	60.65
No.of wards	19	20	20
Total population	31227	35153	34156
Males	15881	16412	17363
Females	15346	18741	16793
SCs	1069	548	1022
ST	4523	6781	5940
Taluk	Vythiri	Sulthan Bathery	Sulthan Bathery
Village	Muttil North and Muttil South	Pulpally	Ambalawayal
Major crops	Coffee, paddy, pepper, arecanut, ginger, vegetables, tapioca, coconut, banana, rubber etc.	Coffee, paddy, pepper, arecanut, ginger, vegetables, tapioca, coconut, banana, rubber etc.	Coffee, paddy, pepper, arecanut, ginger, vegetables, tapioca, coconut, banana, rubber etc.

Source: Development Report of Panchayat (2011census)

Compared to the other two districts under study (Thrissur and Palakkad), Wayanad district have some unique features with respect to its climate, type of crops cultivated etc. Major crops cultivated in the district are plantation crops like rubber, coffee, ginger etc (table 4.3). The Panchayats surveyed from the district are Muttil, Pulpally and Ambalawayal.

Table 4.4

Sample Area from Palakkad district

Particulars	**Panchayats**		
	Kuzhalmannam	**Puthunagaram**	**Nalleppilly**
Area	30.62	9.24	28.00
No.of wards	17	13	19
Total population	26680	17930	44200
Males	12938	8910	24040
Females	13742	9020	20160

Taluk	Alathur	Chittur	Chittur
Village	Kuthanur	Puthunagaram	Nalleppilly
Major crops	paddy, Arecanut, ginger, vegetables, tapioca, coconut, banana, rubber, arecanut etc.	paddy, Arecanut, ginger, vegetables, tapioca, coconut, banana, rubber, arecanut etc.	paddy, Arecanut, ginger, vegetables, tapioca, coconut, banana, rubber, arecanut etc.

Source: Development Report of Panchayat (2011census)

Table (4.4) represents the details of Panchayats surveyed from Palakkad district based on high incidence of indebtedness among the farmers. Kuzhalmannam, Puthunagaram and Nalleppilly are the three Panchayats surveyed. Like Thrissur, the major crops cultivated in the district are paddy, Arecanut, ginger, vegetables, tapioca, coconut, banana, rubber and arecanut.

The analysis and interpretation of the primary data collected from these three districts (300 farmers) are arranged in the following discussions.

4.3 Socio-economic profile of the sample farm households

Here an attempt is made to describe the socio-economic characteristics of the sample farmer households; namely total sample households, land size, gender, religion, education, cropping pattern, family size, asset holdings etc. It is very useful for the justification of the objectives of the study. Table (4.5) represents the percent share of sample farmers according to gender. It is clear from the table that the majority of farm households (79.67 percent) are males from each district while, a limited number of farmers (20.33 percent) are females. Across districts, a large proportion of male farmers (84 percent) constitute in Wayanad. It is 78 percent in Palakkad and 77 percent in Thrissur district. The forthcoming tables elicit a detailed socio-economic profile of sample farmers across the districts and across the agricultural category.

Table 4. 5

Gender wise distribution of Total sample respondents

Gender	District			Total
	Palakkad	Thrissur	Wayanad	
Male	78 (32.6)	77 (32.2)	84 (35.1)	239 (100)
Female	22 (36.1)	23 (37.7)	16 (26.2)	61 (100)
Total	100	100	100	300

Source: Primary Survey, Note: values in brackets are percentages to total.

4.3.1 Family size

Family size included the number of male, female and children in the family. The sample farmers were classified on their family size in different districts and the average number and range of family members are presented in table (4.6).

Table 4.6

Average number of family members in the sample households

District	Frequency of family members				Mean number of family member
	1-3	3-5	5-7	>7	
Palakkad	30 (33.7)	48 (33.3)	17 (32.7)	5 (33.3)	4.46
Thrissur	27 (30.3)	46 (31.9)	20 (38.5)	7 (46.7)	4.59
Wayanad	32 (36)	50 (34.7)	15 (28.8)	3 (20)	4.26
Total	89 (100)	144 (100)	52 (100)	15 (100)	4.44

Source: Primary Survey, Note: values in brackets are percentage of the total.

The average number of family members in the sample households is five. But, majority of the sample households belong the members between 3 to 5. It is more in Wayanad (35 percent) across the districts.

4.3.2 Age

Age is categorized into five groups, below 25 years, 25-40 years, and 40-50 years, 50-60 years and above 60 years. The average age of indebted farmers is 59. Distribution of sample households based on age is given in table (4.7). It reveals that majority (50.33 percent) of the farmers belong to upper age group (above 60). Only 1 percent of the farmers were in the age group below 25. All the other farmers belongs to age group between 25- 60.

4.3.3 Religion and caste

Religion and caste wise distribution of farmers is given in table (4.7) and in figure (4.1). Most of the sample farmers are from Hindu religion (79.33 percent). The next is from Christian (16 percent). A few (5 percent) farmers belong to Muslim community.

Table 4.7

Age group of the sample farmer households

Age group	**Palakkad**	**Thrissur**	**Wayanad**	**Total**
Below 25	0	1 (100)	0	1 (100)
25-40 years	8 (40)	3 (15)	9 (45)	20 (100)
40-50 years	13 (25.5)	17 (33.3)	21 (41.2)	51 (100)
50-60 years	28 (36.4)	19 (24.7)	30 (39)	77 (100)
Above 60	51 (33.8)	60 (39.7)	40 (26.5)	151 (100)
Total	100	100	100	300
Religion wise distribution of sample farmers				
Hindu	96 (40.3)	76 (31.9)	66 (27.7)	238 (100)
Christian	2 (4.2)	20 (41.7)	26 (54.2)	48 (100)
Muslim	2 (14.3)	4 (28.6)	8 (57.1)	14 (100)
Total	100	100	100	300

Caste wise distribution of sample farmers				
General	11 (12.5)	44 (50)	33 (37.5)	88 (100)
OBC	75 (47.5)	45 (28.5)	38 (24.1)	158 (100)
SC	2 (11.1)	11 (61.1)	5 (27.8)	18 (100)
ST	0	0	23 (100)	23 (100)
Others	12 (92.3)	0	1 (7.7)	13 (100)
Total	100	100	100	300 (100)

Source: Primary Survey, Note: values in brackets are percentages to total.

Figure 4.1

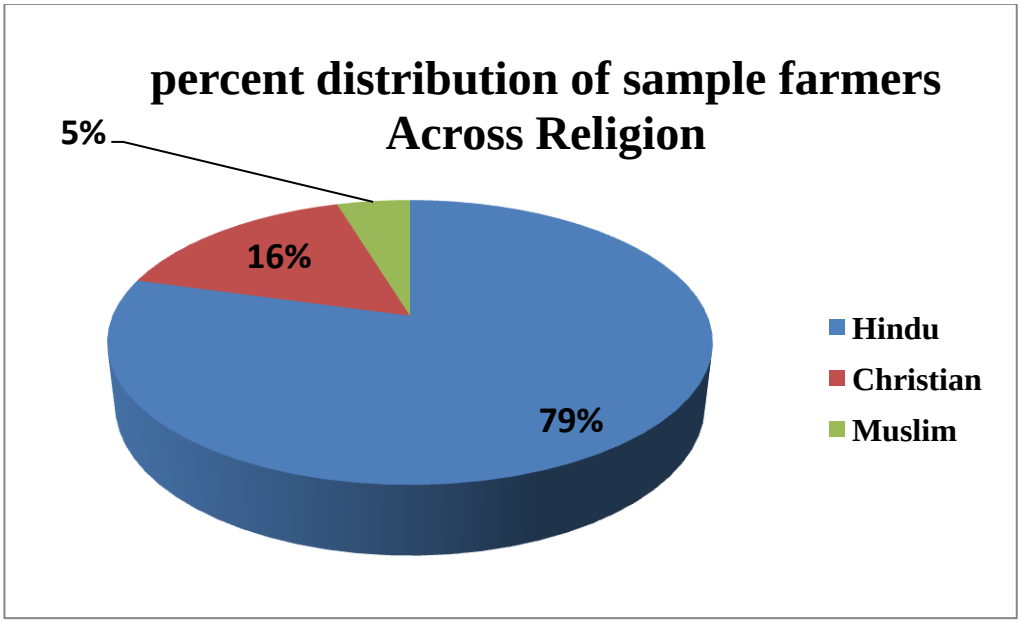


Table (4.7) gives a clear picture of the sample farmer based on their social group. Majority of the farmers belongs to OBC category across the districts and across the social group. But, it is noted that, even large farmers come under Hindu religion (79 percent), the share of SC and ST is negligible except in Wayanad district; where 0.42 percent (28/66) belongs to SC/ST categories.

Table 4.8

Gender wise Classification of sample farmers across agricultural category

District	Gender	Agricultural category			Total
		LF	SF	MF	
Palakkad	Male	1 (1.3)	63 (80.8)	14 (17.9)	78 (100)
	Female	0	19 (86.4)	3 (13.6)	22 (100)
	Total	1 (1)	82 (82)	17 (17.0)	100 (100)
Thrissur	Male	3 (3.9)	60 (77.9)	14 (18.2)	77 (100)
	Female	0	22 (95.7)	1 (4.3)	23 (100)

	Total	3 (3)	82 (82)	15 (15)	100 (100)
Wayanad	Male	7 (8.3)	47 (56)	30 (35.7)	84 (100)
	Female	1 (6.3)	12 (75)	3 (18.8)	16 (100)
	Total	8 (8)	59 (59)	33 (33)	100 (100)
Total	Male	11 (4.6)	170 (71.1)	58 (24.3)	239 (100)
	Female	1 (1.6)	53 (86.9)	7 (11.5)	61 (100)
	Total	12 (4.0)	223 (74.3)	65 (21.7)	300 (100)

Source: Primary Survey. Note: values in brackets are percentages.

Table (4.8) shows classification of sample farmers by agricultural category. Of all sample farmers surveyed across the districts, majority (74.3 percent) belongs to small farmers. Considering the gender wise distribution of sample farmers, contribution of females in the agricultural activities is very less among large farmers in all the districts (see table 4.5).

4.3.4 Education

The level of farm technology, borrowing habits of the farmers, sources of borrowing, utilization pattern of debt, repaying capacity etc primarily depend on education standards of the farmers. On indebtedness perspective, it is a general believe that, the level of default is very less among well educated farmers than others. To analyze these aspects, the education level of sample farmers has categorized into five groups as illiterate, primary, secondary, higher secondary and other degree. The relation between level of education and the amount of indebtedness is shown in chapter five; table (5.16). We have to look also into a general outlook of the education status of the sample farmers. The education profile of the sample households across the agricultural category is presented in table (4.9).

Table 4.9

Educational status of the farm households across the agricultural category

Education	District												Total			
	Palakkad				Thrissur				Wayanad							
	LF	SF	MF	Total	LF	SF	MF	Total	LF	SF	MF	Total	LF	SF	MF	Total
Illiterate	0 (0)	9 (100)	0 (0)	9 (100)	0 (0)	5 (100)	0 (0)	5 (100)	0 (0)	14 (77.8)	4 (22.2)	18 (100)	0	28 (87.5)	4 (12.5)	32 (10.67)
Primary	0 (0)	20 (87)	3 (13)	23 (100)	1 (3.3)	28 (93.3)	1 (3.3)	30 (100)	1 (3.4)	18 (62.1)	10 (34.5)	29 (100)	2 (2.44)	66 (80.49)	14 (17.07)	82 (27.33)
Secondary	1 (2)	39 (78)	10 (20)	50 (100)	2 (4.7)	36 (86)	4 (9.3)	42 (100)	6 (15)	24 (58)	11 (27)	41 (100)	9 (6.77)	99 (74.44)	25 (18.79)	133 (44.33)
Higher secondary	0 (0)	7 (63.6)	4 (36.4)	11 (100)	0 (0)	8 (57.1)	6 (42.9)	14 (100)	0 (0)	1 (20)	4 (80)	5 (100)	0	16 (53.33)	14 (46.67)	30 (10)
Degree/Diploma	0 (0)	7 (100)	0 (0)	7 (100)	0 (0)	5 (56)	4 (44)	9 (100)	1 (14)	2 (29)	4 (57)	7 (100)	1 (4.35)	14(60.87)	8 (34.78)	23 (7.67)
Total	1 (1)	82 (82)	17 (17)	100	3 (3)	82 (82)	15 (15)	100	8 (8)	59 (59)	33 (33)	100	12 (4)	223 (74.33)	65 (21.67)	300 (100)

Source: Primary Survey. Note: values in brackets are percentages.

Table (4.9) clearly shows that, a very few of the Large Farmer (LF) were illiterate and the remaining sample farmers were literates across the agricultural category. Across the districts, the number of illiterates is high (18 percent) in Wayanad district and only 5 percent of the farmers has acquired higher education. Also, majority of the old-age people from the survey were illiterates. From the survey it is clear that these illiterate farmers are from SC and STs. Even if the government provides free and compulsory education to all the children below the age 14, some of the ST families are not bothered about the education, their socio-economic conditions and even the future of their children. A notable feature observed from the survey is that, many of the ST population; especially from 'Paniya' and 'Cholanaikkan' communities are not interested to go to schools and other economic activities which are known to the larger society. They are engaged in jobs which are directly appended on forest like, collecting honey, medicinal plants etc.

4.3.5 Occupation

The surveyed farmers were categorized based on occupational status into five different groups constituting farming, MNREGA workers, government employees and others. The survey noticed that majority of the farmers were engaged in both farming and other activities table (4.10). It is very interesting to notice from the survey that, even if the respondents had white color jobs or other business, their principal income source was farming. They have given their cultivable land to agricultural labours on lease. Therefore, in addition to their permanent income, they earn additional income from farming. Meanwhile, 7.67 percent of the surveyed ST population follows a different trend. Farming is the main occupation of the ST population especially of the 'Kurumans'. STs other than 'Kurumans' ('Paniyan' and 'Cholanaikkan') are engaged in other forest related activities. The main occupation of these groups was collecting minor forest produces and forest protection works. They are living in the interior forests. A special feature found during the survey that, government help them by contracting houses to them and also provides 1-2

accres of agricultural land for agricultural purposes. In fact, many of them still practice the customs and conventions, which are unknown to the larger society.

Table 4.10

Occupational status of sample farmers across the agricultural category

District	Agriculture category	Occupation				
		Farming	Farming other than cultivation	Government employee	Others including MNRFGA worker	Total
Palakkad	LF	1 (100)	0	0	0	1 (100)
	SF	50 (60.98)	1 (1.22)	17 (20.73)	14 (17.07)	82 (100)
	MF	12 (70.59)	0	2 (11.76)	3 (17.64)	17 (100)
	Total	63 (63)	1 (1)	19 (19)	17 (17)	100 (100)
Thrissur	LF	2 (66.67)	0	0	1 (33.33)	3 (100)
	SF	46 (56.09)	7 (8.55)	5 (6.09)	24 (29.27)	82 (100)
	MF	10 (66.67)	0	0	5 (33.33)	15 (100)
	Total	58 (58)	7 (7)	5 (5)	30 (30)	100 (100)
Wayanad	LF	6 (75)	0	2 (25)	0	8 (100)
	SF	45 (76.27)	3 (5.08)	4 (6.78)	7 (11.86)	59 (100)
	MF	25 (75.76)	0	5 (15.15)	3 (9.09)	33 (100)
	Total	76 (76)	3 (3)	11 (11)	10 (10)	100 (100)
Total	LF	9 (75)	0	2 (16.67)	1 (8.33)	12 (100)
	SF	141 (63.23)	11 (4.93)	26 (11.66)	45 (20.18)	223 (100)
	MF	47 (72.31)	0	7 (10.77)	11 (16.92)	65 (100)
	Total	197 (197)	11 (11)	35 (35)	57 (57)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

Table (4.10) illustrates occupational status of the sample farmers across the agricultural category and across the districts. Occupational status categorized in to five categories. They are; farming, farming other than cultivation, government employees, and others. From the survey it is found that, across the agricultural category, 75 percent of the Large Farmers (LF)

occupation is farming alone. It is 72.31 percent among the Medium Farmers (MF). It is different among the other two categories of SF and MF. They are engaged in both farming and other jobs. A few of them are MNREGA workers. It includes the other category. Other than that, some of them are government employees, retired employees, engaged in farming other than cultivation and other workers. Only 4.93 percent of the farmers engaged in farming other than cultivation while, 35 percent farmers has government job. Meanwhile; they also cultivate in their land by agricultural labours or give on lease.

4.3.6 Occupational Pattern

The pattern of occupation of the sample farmers with respect to their land holdings is presented in table (4.11). It reveals that, majority of the farmers depend on agriculture for their livelihood (69.33 percent). Only 2.7 percent was engaged in MNREGA and 11.7 percent was government employees. Remaining 16.3 percent was engaged in other supplementary businesses. Here, one fact to be noticed is that; majority of the household's principal occupation is farming. They considered other occupations as subsidiary. It is mainly due to the nature of financial risks and vulnerability of the farming activity.

Table 4.11

Occupational status and size of holding of sample respondents (in acres)

Size of holding (in acres)	Occupation					
	Farming	Farming other than cultivation	MNREGA worker	Government employee	others	Total
<2	45 (52.9)	4 (4.7)	6 (7.1)	7 (8.2)	23 (27.1)	85 (100)
2-3	39 (68.4)	3 (5.3)	2 (3.5)	7 (12.3)	6 (10.5)	57 (100)
3-4	25 (69.4)	2 (5.6)	0	5 (13.9)	4 (11.1)	36 (100)
4-5	28 (70)	1 (2.5)	0	4 (10)	7 (17.5)	40 (100)
>5	60 (73.2)	1 (1.2)	0	12 (14.6)	9 (11)	82 (100)

Total	197 (65.7)	11 (3.7)	8 (2.7)	35 (11.7)	49 (16.3)	300 (100)

Source: Primary Survey, Note: values in brackets are percentage to total.

4.3.7 Farm asset

The discussion on asset holdings is relevant in the context of agriculture indebtedness where the ratio of the amount of debt to the value of asset influence the intensity of debt of the farmers. Number of farmers having different types of assets including agricultural inputs across agricultural category is given in table (4.12). Assets of sample farmers were classified into farm asset and non-farm asset. All the agricultural implements and purchase of land are included under farm asset. Details on household expenditure, durables, etc are included under non-farm asset category. Although some mechanization of farming has taken place in some parts of the economy, most of the farmers were poor in the surveyed districts. Therefore they do not have enough resources to purchase modern farm implements and tools. However, some of the farmers purchased agricultural implements not by using additional income from farming; but by taking loans from different sources.

Table 4.12

Distribution of assets per farm households across agricultural category

Durables	LF	SF	MF	Total
Television	12 (100)	217 (98.31)	63 (96.92)	292 (97.33)
Fridge	12 (100)	190 (85.2)	58 (89.23)	260 (86.67)
AC	2 (16.67)	22 (9.87)	9 (13.85)	33 (11)
Computer	6 (50)	44 (19.73)	10 (15.38)	60 (20)
Vehicles	7 (58.33)	124 (55.61)	41 (63.08)	172 (57.33)
Others	12 (100)	207 (92.83)	63 (96.92)	282 (94)
Agricultural implements				
Plumpest	1 (8.33)	24 (10.76)	12 (18.46)	37 (12.33)
Sprayer	2 (16.67)	13 (5.83)	11 (16.92)	26 (8.67)
Tractor	0	4 (1.79)	3 (4.62)	7 (2.33)
Others	2 (16.67)	11 (4.93)	2 (3.08)	15 (5)

Livestock	6 (50)	64 (28.69)	16 (24.62)	86 (28.67)

Source: Primary Survey, Note: values in brackets are percentages.

Since durable assets are considered as the physical asset of the farmers; this study gives more focus on agricultural assets. Table (4.12) gives a clear picture on asset holdings among the sample farmers across the agricultural categories. The frequency of farmers having different types of assets including agriculture implements can be seen from table (4.12). Majority of the farmers have many of the consumer durables. At the same time, a different trend can be seen in the case of agricultural implements. Only 37 farmers (12.33 percent) have pump set; among this, 24 are from Small Farmers (SF). The money value of all assets owned by the farmer is also worked out and it is presented in table 4.12. Since economies of scale is subject to the use of modern technology. Farmers have to buy agricultural implements by spending some amount of money. It is also presented in table (4.12).

The extent of indebtedness can be analyzed by taking the debt to asset ratio of the farmers. It compares farmer's debt obligation to the value of farm assets. Greater debt to asset ratio implies greater level of financial leverages. The discussion on debt in relation to the value of assets is arranged in next chapter.

4.3.8 Livestock

Like agricultural implements and consumer durables, livestock is also considered as an important asset for farmers because; it is also an income generating sources. Therefore, a detailed discussion on livestock of the sample respondents is presented in table (4.13). Regarding livestock, the major observation from the survey is the very low share of livestock (28.67 percent) in total assets.

Table 4.13

Number of livestock in the sample area across the agricultural category

Number of livestock	Agriculture Category			Total
	LF	SF	MF	
Below 3	5 (7.5)	49 (73.1)	13 (19.4)	67 (100)
3-6	0	7 (77.8)	2 (22.2)	9 (100)
6-9	1 (16.7)	5 (83.3)	0	6 (100)
Above 9	0	3 (75)	1 (25)	4 (100)
No livestock	6 (2.8)	159 (74.3)	49 (22.9)	214 (100)
Total farmers have livestock	6 (6.98)	64 (74.42)	16 (18.60)	86 (100)
Total	12 (4)	223 (74.3)	65 (21.7)	300 (100)

Source: primary survey note:

Table (4.14) elicits amount of cost incurred for livestock per month. It is categorised from below Rs1000 to above Rs3000. Apart from cost of farming, farmers have to spend some amount of money for their livestock. Out of 86 farmers having livestock, 39 farmers (45.35percent) spent between Rs1000 to Rs2000 per month.

Table 4.14

Cost of livestock among the sample respondents across the agricultural category

Amount of cost	Agriculture category			Total
	LF	SF	MF	
Below 1000	2 (10)	14 (70)	4 (20)	20 (100)
1000-2000	3 (7.7)	29 (74.4)	7 (17.9)	39 (100)
2000-3000	0	4 (66.7)	2 (33.3)	6 (100)
above 3000	1(4.8)	17 (81)	3 (14.3)	21 (100)
No livestock income	6 (2.8)	159 (74.3)	49 (22.9)	214 (100)
Total	12 (4)	223 (74.3)	65 (21.7)	300 (100)

Source: Primary survey

The maximum number of livestock is 12. Out of this, only one or two earn income. It includes cow, goat, chicken, bullock etc. It indicated that only a small percent of the farmers earn income from this source. Total income earned by the sample farmers from livestock is explained with the help of table (4.15)

Table 4.15

Livestock income per month of the sample respondents

Income	Agricultural category			Total
	LF	SF	MF	
Below 1000	0	0	1 (100)	1 (100)
1000-2000	1 (16.7)	5 (83.3)	0	6 (100)
2000-3000	1 (7.7)	7 (53.8)	5 (38.5)	13 (100)
above 3000	3 (5.5)	42 (76.4)	10 (18.2)	55 (100)
No livestock income	7 (3.1)	169 (75.1)	49 (21.8)	225 (100)
Total income	5 (6.67)	54 (72)	16 (21.33)	75 (100)
Total	12 (4)	223 (74.3)	65(21.7)	300 (100)

Source: Primary Survey

Even if the farmers do not get any income from livestock, it is an asset to the farmers when we look into the asset value. In this study, asset value of livestock is the money value of each livestock possessed by a farmer household. It is presented in table (4.16).

Table 4.16

Livestock asset value possessed by sample respondents across the agricultural category

Asset value (in Rs)	Agricultural category			Total
	LF	SF	MF	
Below 10000	0	6 (100)	0	6 (100)
10000-20000	1 (14.29)	6 (85.71)	0	7 (100)
Above 20000	5 (6.67)	54 (72)	16 (21.33)	75 (100)
no live stock	6 (2.8)	157 (74.1)	51 (23.1)	214 (100)

Source: primary survey

4.3.9 Size of holding

Apart from the asset holding size of land holdings also influences the indebtedness of the peasantry. One of the major features of Indian agriculture is small and fragmented land holdings. The pressure of increasing population and the practice of dividing land equally among the heirs has caused excessive subdivision of farm holdings. Consequently, the holdings are small and fragmented. The small size of holdings makes farming activity uneconomic and leads to social tension, violence and discontentment (K. Bharadwaraj 1974). Mechanization is viewed as a package of technology in order to ensure productivity, reduce crop loss, increase in land utilization and input use efficiency, increase in labour productivity etc. Size of land holding plays an important role in this context. Appropriate machinery has been adapted by the farmers for ensuring economies of scale in their production process. Therefore, farmers depend on other sources for their farm expenditure. The land holding pattern of sample population across the districts and across the agricultural category can be seen from table (4.18) and figure (4.2). In this context it is necessary to find out the total cultivated area of land holdings. In order to make the analysis more coherent total land holdings of the farmers are categorized into four groups; less than 2 acres, between 2-3 acres, between 3-4 acres, between 4-5 acres and above 5 acres (table 4.18). Details of total and average

area of land owned and cultivated by the sample farmers is presented in table (4.17).

Table 4.17

Total size of holdings of the sample respondents (in acres)

Size of land	Districts			Total
	Palakkad	Thrissur	Wayanad	
Total land (cultivated)	276 (28.02)	275 (27.92)	434 (44.06)	985 (100)
Average land (cultivated)	2.76	2.75	4.34	3.28

Source: Primary Survey.

Total area of land is 985 acres. The average land possessed by each farmer household is 3.28 acres table (4.17). Total land cultivated in Palakkkad district is 276 acres which worked out to 28.02 percent. In Thrissur district, it is 275 acres (27.92 percent). Compared with these two districts, size of land holdings is very high in Wayanad (434 acres). The average size of holding in Wayanad district is 4.34 acres. Average area of the cultivated land is 3.28 acres for the sample as a whole. The survey found that, the average size of cultivable land is lowest in Thrissur district (2.75 acres). Another important observation from the survey is that, most of the farms were small and medium in size and large farms were very few. That means dominance of small and medium farms was the unique feature in the study area. Therefore, all the problems of small scale farming might be expected to prevail in the sample farms which would lend good support to a study of the problem of indebtedness of the peasantry.

The percentage distribution of land holdings across the districts is set out in table (4.18). Of all the sample farm households surveyed, quite a large proportion of the sample holdings were concentrated in the size-group of less than 2 acres and more than 5 acres. The holding in the size-group of between 2 to 3 acres were also found to be a sizeable proportion being 19 percent. Thus the

distribution of holdings across districts shows the predominance of small farmers in all the districts under study.

Table 4.18

Sample Farm households according to size of land holdings (in percent)

Size of land possessed (in acres)	District			Total
	Palakkad	Thrissur	Wayanad	
<2	38 (12.66)	35 (11.66)	12 (4)	85 (28.33)
2-3	21 (7)	22 (7.33)	14 (4.66)	57 (19)
3-4	13 (4.33)	12 (4)	11 (3.66)	36 (12)
4-5	9 (3)	12 (4)	19 (6.33)	40 (13.33)
>5	19 (6.33)	19 (6.33)	44 (14.66)	82 (27.33)
Total	100.0	100.0	100.0	300

Source: Primary Survey, Note: values in brackets are percentages.

Table (4.18) represents the per cent share of sample households according to the size of land possessed by the farm households. It is clear from table that the majority of farm households have land size below 2 acres in each district. To make the analysis simpler, all sizes of land holdings have been categorized into three categories [i.e., Small Farmers (≤ 2 acres), Medium Farmers (between >2 to ≤ 5 acres) and Large Farmers (> 5 acres)]. The details about category of farmers according to the land ownership are presented in figure (4.3).

Figure 4.2

Broad category of farm households according to size of land holdings

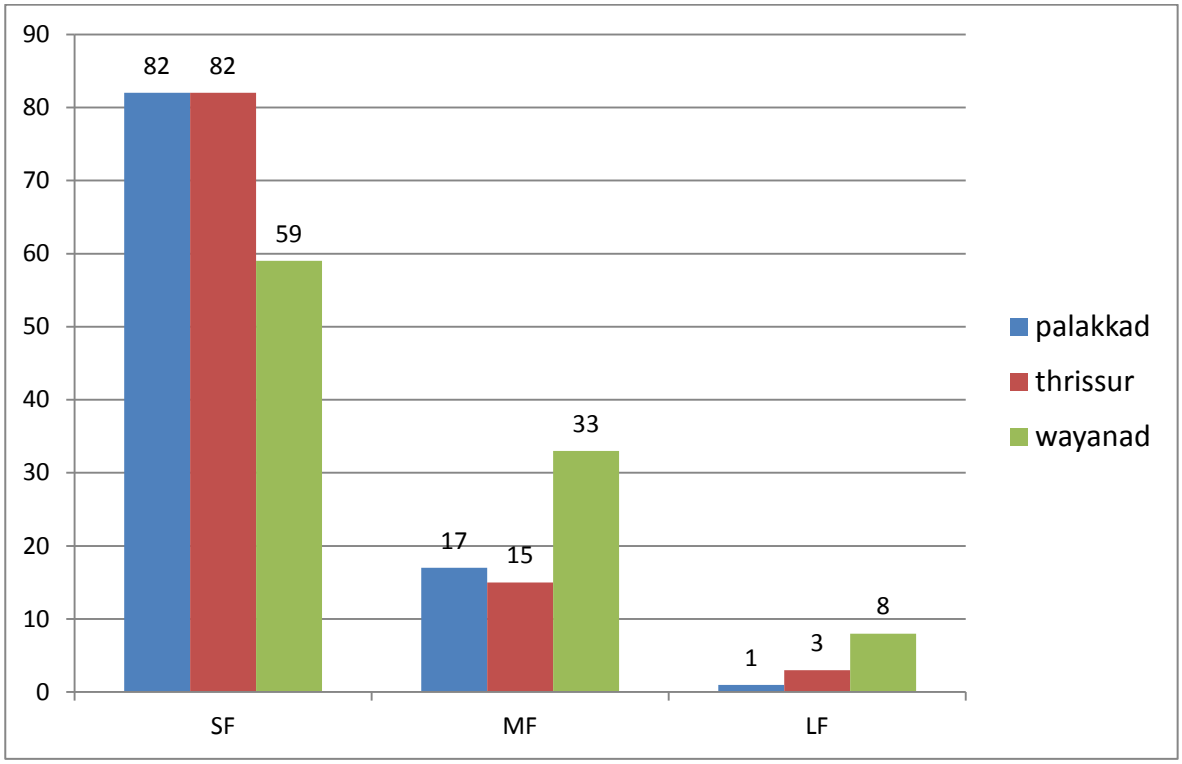


Figure (4.2) depicts that in Palakkad, the small, medium and large farm households are 82, 17 and 1 per cent respectively. In the case of Thrissur, these ratios of farm households are 82, 15 and 3 per cent respectively. It is 59, 33 and 8 percent in Wayanad. It is clear from figure (4.2) that the small farm households are relatively high in three districts. The percentage distribution of land holdings in different size groups under different farm size is set out in table (4.19) and figure (4.2). Of the total 300 farmers surveyed, quite a large proportion of the sample holdings were concentrated in the size groups Small Farmer (SF) and Medium Farmer (MF). Almost Thrissur and Palakkad districts show similar trend that 12 percent of the farmers have the land size below 2 acres. At the same time, in Wayanad district, 15 percent of the farmers have land more than 5 acres.

4.3.10 Cropped Area

Total cropped area of sample respondents is presented in table (4.19). Total cropped area in Wayanad is higher than the other two districts surveyed.

Table 4.19

Total cropped area of sample respondents across districts

Cropped Area (in acres)	District												Total			Total
	Palakkad				Thrissur				Wayanad							
	LF	SF	MF	Total	LF	SF	MF	Total	LF	SF	MF	Total	LF	SF	MF	
Below 2	0 (0)	56 (96.6)	2 (3.4)	58 (100)	0 (0)	48 (90.6)	5 (9.4)	53 (100)	0 (0)	21 (95.5)	1 (4.5)	22 (100)	0 (0)	125 (93.98)	8 (6.02)	133 (100)
2-4	0 (0)	21 (84)	4 (16)	25 (100)	0 (0)	28 (96.6)	1 (3.4)	29 (100)	0 (0)	22 (81.5)	5 (18.5)	27 (100)	0 (0)	71 (87.65)	10 (12.35)	8 (100)
4-6	0 (0)	3 (25)	9 (75)	12 (100)	1 (7.7)	5 (38.5)	7 (53.8)	13 (100)	0 (0)	13 (38.2)	21 (61.8)	34 (100)	1 (1.69)	21 (35.59)	37 (62.71)	59 (100)
> 6	1 (20)	2 (40)	2 (40)	5 (100)	2 (40)	1 (20)	2 (40)	5 (100)	8 (47.1)	3 (17.6)	6 (35.3)	17 (100)	11 (40.74)	6 (22.22)	10 (37.04)	27 (100)
Total	1 (1)	82 (82)	17 (17)	100	3 (3)	82 (82)	15 (15)	100	8 (8)	59 (59)	33 (33)	100	12 (4)	223 (74.33)	65 (21.67)	300 (100)

Source: Primary Survey, Note: values in brackets are percentage

Table (4.19) explains total cropped area of the sample households. An important feature of the sample population is the predominance of small holdings of land. There were variations in respect of percentages of cropped area to total land owned among the sample households. More than 50 percent of farmers from Palakkad and Thrissur districts constitute cropped area below 2 acres. While majority of the farmers in Wayanad had the cropped land in between 4-6 acres. The survey also found crop diversity as the dominance of food crops in each district. If paddy is the principal crop in Palakkad and Thrissur, coffee is the principal crop cultivated in Wayanad. The other crops cultivated in Palakkad and Thrissur are areca nut, coconut, banana etc. At the same time, the other important crops cultivated in wayanad are ginger, pepper, paddy etc. Therefore we can see a diversified cropping pattern in the study area with respect to their size of land holdings. Since the problem of agricultural indebtedness is closely related to the area, production, cost of cultivation and income of the farmers etc, it is also necessary to examine the variation in cropping pattern among the agricultural category. Before that, let us see the average income earned from each crop by the farmers. (See table 4.28). The actual area of land holdings and major crops cultivated across the agricultural category and the expenditure incurred for cultivation are presented in the forthcoming discussion.

4.4 Cropping pattern

Growth in production of agricultural crops depends on the area under each crop and yield from each crop. All the major crops cultivated in the sample area are discussed in the forthcoming analysis. The average size of cultivated holdings across the agricultural category and the gross land holdings are presented in table (4.20), (4.21) and (4.22).

Analysis of cropping pattern is necessary for the identification of major crops that are cultivated in region and changes in their shares over time. Changes in cropping pattern reflect changes in the relative profit expectations of the alternative crops at different points of time. Ten crops were cultivated across the study area. Cropping pattern in the study area is very different from each district surveyed. Mean while, paddy, coconut, areca nut, banana, pepper and tapioca are the major crops cultivated in all the three districts. Paddy, coconut, areca nut, tapioca and banana are the common crops cultivated in all the districts while Coffee is cultivated only in Wayanad. The nature of crops grown provides a correct index of the character of the agricultural economy and economic standard of the farmers who are striving to economize on their living. It is therefore necessary to examine the variation in cropping pattern among the agricultural category. From the sample area, it can find variety of crops under cultivation. But the survey clearly shows the district wise difference in cropping pattern. The characteristic features of cropping pattern followed by the sample farmers in three districts are given in tables (4.20), (4.21) and (4.22) respectively.

Table 4.20

Crops cultivated by the sample households in Palakkad

Crops	Agricultural category			Total
	LF	SF	MF	
Paddy	1 (1.0)	82 (82.0)	17 (17.0)	100 (100)
Coconut	1 (1.5)	49 (75.4)	15 (23.1)	65 (100)
Areca nut	0	2 (66.7)	1 (33.3)	3 (100)
Banana	0	2 (66.7)	1 (33.3)	3 (100)
Pepper	0	0	3 (100)	3 (100)
Rubber	0	0	3 (100)	3 (100)
Tapioca	0	1 (100)	0	1 (100)
Others	0	2 (100)	0	2 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (4.20) shows the cropping pattern of the sample profile of Palakkad district. The major crops cultivated in Palakkad district are paddy and coconut. It is also noticed that all the farmers cultivate paddy and 65 farmers cultivate coconut. Among the different category of farmers, majority are SF. This is a typical behavior of Kerala farming. Many factors contribute for this trend, particularly sub division and fragmentation. The sub divided and fragmented holdings restrict the use of modern agricultural practices and thus enjoying economies of scale. From the survey it is also noticed that certain crops cultivate as mixed crops in these farms. The cropping pattern will influence the cost of cultivation, credit requirement, income generation and the extent of agricultural debt. A special feature found in the survey is that, coconut is also cultivated on the boundaries of paddy field.

The survey found that all farmers from Palakkad district cultivate paddy as their basic crop and 65 percent farmers cultivate coconut as their major crop. Among this, 82 percent farmers were from Small Farmers (SF) and 17 percent from Medium Farmers (MF). Only one percent of the Large Farmer (LF) cultivates paddy and coconut as their major crops. 75.4 percent of the SF also cultivates coconut and the share of MF producing coconut is 23.1 percent. Paddy is cultivated in two seasons during a year. They are Virippu and Mundakan. The initial phase of the Virippu crop starts during the months April-May and harvesting is done in September-October. The initial phase of Mundakan crop starts during the month of September and October and harvesting is done in February and March.

Table 4.21

Crops cultivated by the sample households in Thrissur

Crops	Agricultural category			Total
	LF	SF	MF	
Paddy	3 (3)	82 (82)	15 (15)	100 (100)
Coconut	3 (6.7)	31 (68.9)	11 (24.4)	45 (100)
Areca nut	2 (9.5)	13 (61.9)	6 (28.6)	21 (100)
Banana	2 (8.3)	15 (62.5)	7 (29.2)	24 (100)
Pepper	1 (14.3)	4 (57.1)	2 (28.6)	7 (100)
Vegetables	0	1 (100)	0	1 (100)
Tapioca	1 (100)	0	0	1 (100)
Others	0	0	1 (100)	1 (100)

Source: Primary Survey, Note: values in brackets are percentages

Compared to cropping pattern followed by Palakkad district (table 4.21) Thrissur also facilitates the same trend for the production of paddy and coconut. It can be seen from the table that all the farmers cultivate paddy. On the other hand, harvesting is done in Thrissur in only one season. It is known as Puncha crop. The initial phase of Puncha crop starts during August-September and harvesting is done in January – February. Instead of cultivating coconut on the boundaries of paddy field, vegetables were cultivated in Thrissur district. Areca nut, coconut and pepper are the important mixed crops in Thrissur. The survey found that 82 percent of the farmers were cultivating paddy and they are from SF. 15 percent was from MF and 3 percent of the LF was cultivating paddy. 45 percent of the farmers from Thrissur district cultivating coconut. Among this, 68.9 percent was from SF, 28.6 percent from MF and 6.7 was from LF. Areca nut and banana are other major crops in Thrissur district. Here also, SF contributing more from the agricultural category.

Table 4.22

Crops cultivated by the sample households in Wayanad

Crops	Agricultural category			Total
	LF	SF	MF	
Paddy	2 (3.4)	37 (63.8)	19 (32.8)	58 (100)
Coconut	7 (14.3)	28 (57.1)	14 (28.6)	49 (100)
Areca nut	8 (16.7)	23 (47.9)	17 (35.4)	48 (100)
Banana	5 (15.6)	16 (50)	11 (34.4)	32 (100)
Pepper	4 (16.7)	5 (20.8)	15 (62.5)	24 (100)
Rubber	4 (33.3)	5 (41.7)	3 (25)	12 (100)
Vegetables	5 (20)	12 (48)	8 (32)	25 (100)
Ginger	1 (6.7)	9 (60)	5 (33.3)	15 (100)
Coffee	8 (13.1)	27 (44.3)	26 (42.6)	61 (100)
Tapioca	1 (7.7)	11 (84.6)	1 (7.7)	13 (100)
Others	0	10 (66.7)	5 (33.3)	15 (100)

Source: Primary Survey, Note: values in brackets are percentages

A different cropping pattern can be seen in Wayanad district (table 4.22) compared with other two districts. Here also 100 farmers were surveyed. The major crops cultivated in Wayanad are coffee (61 percent). Paddy is another major crop. Coffee, rubber, coconut, Areca nut and banana are the important mixed crops. We can see varieties of crops in Wayanad compared to other two districts surveyed. 48 percent of the farmers were cultivating Areca nut. Within the crop, 47.9 percent is cultivated by the SF, 35.4 percent by MF and 16.7 percent by LF. Despite minor changes in some areas under different crops, it has been observed that the area under paddy has remained more or less similar.

All these tables (4.20), (4.21) and (4.22) revealed that, the cultivation of paddy, formed the first order of importance in three districts, followed by pepper, Banana, Areca nut and Vegetables. Coffee and ginger have importance Wayanad compared to Thrissur and Palakkad.

4.4.1 Cropping intensity

Size of cropped area shows the potential for raising crops. However, utilization of this potential would depend up on several factors such as rainfall, its distribution, irrigation, crop practices like rotations, mixtures, availability of labour and investment. Therefore, the extent of use of land resources on farm could better be studied by the cropping intensity. These details of the sample farmers are presented in table (23).

Table 4.23

Cropping intensity of sample farmers across the districts

Crops	Districts			Total	Percentage to total surveyed farmers
	Palakkad	Thrissur	Wayanad		
Paddy	100 (38.76)	100 (38.76)	58 (22.48)	258 (100)	86
Coconut	65 (40.88)	45 (28.30)	49 (30.82)	159 (100)	53
Areca nut	3 (4.17)	21 (29.17)	48 (66.67)	72 (100)	24
Banana	3 (5.08)	24(40.68)	32 (54.24)	59 (100)	19.67
Pepper	3 (8.82)	7 (20.58)	24 (70.59)	34 (100)	11.33
Rubber	3 (20)	0 (0)	12 (80)	15 (100)	5
Tapioca	1 (6.67)	1 (6.67)	13 (86.67)	15 (100)	5
Vegetables	0 (0)	1 (3.85)	25 (96.15)	26 (100)	8.67
Ginger	0 (0)	0 (0)	15 (100)	15 (100)	5
Coffee	0 (0)	0 (0)	61 (100)	61 (100)	20.33
Others	2 (11.11)	1 (5.56)	15 (83.33)	18 (100)	6

Source: Primary survey

Table (4.23) illustrates the number of farmers cultivating different types of crops in each district. Of the total farmers surveyed, 86 percent cultivate paddy; while rubber, tapioca and ginger occupies lowest share. Across the districts all farmers surveyed from Palakkad and Thrissur cultivate paddy. Meanwhile; a different type of cropping pattern followed in Wayanad, by cultivating major plantation crops. Coffee based farming system is a notable

feature in Wayanad district. At the same time, almost similar cropping pattern was followed by Palakkad and Thrissur. During the survey, it is observed that, indebtedness is very high among the farmers from Wayanad. It is mainly because of cropping pattern differences especially plantation crops. One of the interesting findings from the survey is that, among the crops, indebtedness is very high for some crops like coffee, ginger, banana and pepper. Again it revealed that indebtedness is very high among the farmers those who are cultivating plantation crops. Volatile nature of price is a major reason behind this. Price of these crops is always fluctuating and a fluctuating price never gives a reasonable return to the farmers. In this context, 'mixed cropping strategy' is the only possible method for getting profit to the farmers. Many of the farmers tried to cultivate more than one crop in a single land. It is evident from Wayanad district.

With small size of farms and cropped area, small scale farming was the rule in the sample area. Low level of cropping intensity further indicated that the land was mostly single cropped. Therefore, farmer's scope for increasing farm income would depend up on the choice of appropriate crop mix that might be possible within the agro-climatic conditions. Cropping pattern, total and average cropped area are presented in table (4.24).

Cropping pattern would significantly influence the demand for credit. Careful selection of plantation crops and other crops suitable to the area along with adoption of farm technology and crop rotation method would enhance productivity and farm income. The crop mix followed by the farmers in Palakkad is paddy with coconut, paddy with vegetables, areca nut and pepper, areca nut and banana. In Wayanad, it can be seen that the farmers followed a crop mix with coffee and areca nut, areca nut and banana, pepper, coffee and areca nut etc.

Table 4.24

Total and average cropped area by agricultural category (in acres)

Crops	Average cropped area			Total area
	Agriculture category			
	LF	SF	MF	
Paddy	263	14.19	48	3164
Coconut	10	0.58	1	129
Areca nut	4	0.24	0.84	54
Banana	4	0.22	0.76	49
Pepper	1918	103.22	354	23018
Rubber	224	12	41	2694
Vegetables	1.65	0.08	0.30	19
Ginger	1.58	0.08	0.29	19
Coffee	10	0.54	1	121
Tea	0.16	0	0.03	2
Tapioca	0.40	0.02	0.07	4
Others	0.83	0.04	0.15	10
Total	2440	131	450	29289

Source: Primary Survey

Crop-wise analysis of average land area cultivated across the agricultural category is calculated in table (4.24). The total cultivated area is 29289 acres; cultivating 11 major crops including plantation crops. From this table the average cropped area can be calculated by dividing the total area of each crop with the number of each agricultural category. Following method is used for the calculation of average cropped area.

Average size of cropped area (SF) = total area ÷ number of SF

Average size of cropped area (MF) = total area ÷ number of MF

Average size of cropped area (LF) = total area ÷ number of LF

It can be observed that the average area of land is highest for crops like pepper, paddy, rubber, areca nut etc. This result is justified in Kerala context also. One of the major changes that have been taking place in Kerala is the gradual shift of area from food crop to plantation crops like coconut, rubber, coffee etc (Lakshmi KR and Pal TK, 1988). The reduction in area under food crops in Kerala from 40.43 percent in 1970-71 to 18.74 percent in 1992-93 and 16.52 percent in 2002-03 is a phenomenon happened very rarely in any state (Mani KP 2009). The study clearly stated that cropping pattern is in favour of pepper, rubber, coconut, coffee and paddy. It has a close relation with indebtedness. That means, cropping pattern or nature and type of crop is an important determinant of indebtedness. Incidence of debt is very high among the farmers those who are cultivating plantation crops.

As seen in table (4.24), the overall cropped area of the sample farmers was 29289 acres. A general review of cropping pattern in the districts would show that, crops paddy, coconut, areca nut, coffee, rubber, ginger, tea, pepper, vegetables etc. are the main common crops cultivated. An attempt was also made to estimate Entropy index of crop diversification and it is seen that the Entropy index is high for Thrissur district (0.45) while it is only 0.21 for Palakkad district and 0.14 for Wayanad district. This indicates that crop diversification is more in Thrissur district, probably due to the geographical nature of the district. From the behavior of Entropy index it is also felt that the shift in cropping pattern is not so severe in the sample; a thought against the conventional belief that there is severe shift in cropping pattern in Kerala in recent years.

4.5 Cost of cultivation

Like the area of cultivation, cost of cultivation for each crop also has an equal importance in the context of analyzing the extent and determinants

of agricultural indebtedness (table 4.25). It is different across districts and across the agricultural category. Let us see the difference from the tables (4.25 and 4.27). The table shows that 44 percent of sample farmers had incurred cost above Rs 10000. Out of this more belong to Wayanad district (26 percent) because, farmers in this district cultivate variety of crops especially plantation crops.

Table 4.25

Cost incurred by the sample farmer by District

Total cost (in Rs)	Districts			Total
	Palakkad	Thrissur	Wayanad	
Below 25000	17 (5.7)	10 (3.3)	6 (2)	33 (11)
25000-50000	26 (8.7)	27 (9)	11 (3.7)	64 (21.4)
50000-75000	9 (3)	19 (6.33)	4 (1.33)	32 (10.66)
75000-100000	24 (8)	13 (4.33)	1 (0.33)	38 (12.66)
Above 100000	24 (8)	31 (10.33)	78 (26)	133 (44.33)
Total	100	100	100	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Production involves the use of certain inputs either in physical or in financial terms. The magnitude of these types of costs will determine the nature and intensity of indebtedness. There are two types of expenditure incurred by the farmers as current expenditure and capital expenditure. The current expenditure further includes cash expenditure like purchase of seeds, fertilizers, manures, hiring machines, human and bullocks, plant protection materials etc. and non cash expenditure constitutes family labour wages, owned bullock labour etc. There is a substantial difference in the price of owned labour either in human or bullock with a hired one. It has a decisive role in the situation of agricultural indebtedness. In this context, information was gathered on the cost incurred in cash by farmers for cultivation purposes during the year 2014-15. Here, the cost incurred in cash means, actual amount spent by the farmer in

cash other than the cost incurred in kind, family labour, charges on capital, interest on capital etc.

The survey found that the cost incurred in cash for cultivation was above Rs 100000 in three districts for majority of the farmers (table 4.25). It is 24 percent in Palakkad, 31 percent in Thrissur, and 78 percent in Wayanad. Wayanad district shows a higher percent because of the various types of crops for same farmers.

Table 4.26

Average amount of input cost for major crops of the sample farmers (Per acre in Rs)

Input	Major crops					
	Paddy	**Areca nut**	**Banana**	**Pepper**	**Ginger**	**Coffee**
Land preparation	1238	2526	12857	350	28973	5703
Seeds	512	4614	8571	332	21736	27256
Fertilizer	4112	1263	1547	208	15947	5686
Pesticides and insecticides	1727	0	3500	0	2458	500
Weeding	500	0	112	0	6686	2841
Transportation	100	758	550	250	4657	454
Agriculture implements	1267	808	560	0	1285	300
Irrigation	851	0	0	0	0	0
Harvesting	2381	6514	1120	208	29111	10597
Post harvesting	686	0	1000	0	800	350
Other cost	225	374	1096	250	295	1702
Total Labour cost	9224	32624	15925	1500	6328	35994
Number of labour	10	7	7	4	8	16
Males	2	5	5	3	3	4
Females	8	2	2	1	5	12

Male wage	650	500	600	350	450	450
Female wage	450	300	350	250	300	250
Total cost of production	23292	45387	171902	2318	213875	78021

Source: Primary survey

Table (4.26) illustrates the average amount of input cost for major crops of the sample area. It is evident from the table that, the initial cost incurred by the farmers for cultivating any crop is land preparation. The purpose of land preparation is to provide the necessary soil conditions which will enhance the production process. Land preparation covers a wide range of practices from zero-tillage or minimum tillage which minimizes soil disturbances through a totally 'budded' soil which actually destroys soil structure. Initial land preparation begins after the last harvest or during fallow period. This is important for effective weed control and for enriching the soil. Generally, it will take 3-4 weeks to prepare the field before planting. Seed is the basic input for enhancing agriculture production and productivity. Efficacy of all other agricultural inputs such as fertilizers, pesticides and irrigation as well as impact of agro climatic conditions is largely determined by the quality of seed used. It is estimated that the quality of seed used accounts for 20-25 percent of agricultural productivity (economic Survey 2014-15 p. 80). It is observed during the survey that, the average cost for land preparation is very high for ginger (Rs 28973 per acre), for banana (Rs 12857 per acre), coffee (Rs 5703 per acre) and so on. Another cost for cultivation is cost of seed. Seed is considered to be a catalyst of change in agriculture. It is also very high for coffee and ginger. The average cost of seed for ginger is Rs 21736 per acre and Rs 27256 per acre for coffee. Even if the cost of cultivation for these plantation crops is very high, farmers cultivate more plantation crops in Wayanad by expecting a higher profit as higher prices.

Since harvesting is an income generating activity in production process farmers have to spend some amount of money as harvesting cost. Agricultural mechanization increases productivity of land and labour by meeting

timeliness of farm operations and increases work output per unit time. Besides its paramount contribution to the multiple cropping and diversification of agriculture, mechanization also enables efficient utilization of inputs such as seeds, fertilizers and irrigation water. It is also higher for ginger, coffee, banana, and paddy. Cost for labour given by the farmers in the name of wage is the most important component of cultivation. This is the way in which a farmer faces more expenses apart from his own work. Cost on labour increases with the increasing number of labours. The average number of labour needed to cultivate coffee is 16; (4 males and 12 females per acre) which is higher than paddy 10 (2 males and 8 females). Significant difference in wages is found during the survey across the districts and across gender. Wage is very high in Thrissur district; (650 for meals and 450 for females per day) while it is very low in Wayanad district (400 for males and 250 for females per day). In this way, the average cost of production is very high for producing ginger (Rs 213875 per acre), banana (Rs 171902 per acre), and coffee (Rs 78021).

4.5.1 Cost and returns (crop wise per acre)

The survival of farmer depends up on the level of farm production which would have its impact on both cost and return of each crop produced by a farm. This would, in return, increases the demand for credit and enhances the repaying capacity of the farmers. Estimates of cost and returns per acre for different crops in the sample farmers are presented in tables (4.27 and 4.28). The returns were worked out by taking into account the actual price at which the sample farmers sold them produce. Cost of farming were worked out by taking into account the actual cost incurred by the farmers to each factor of production with respect to their crops (table 4.27). A return from each crop is illustrated in table (4.28). It is worked out by taking into account the actual price at which sample farmers sold their produce.

Table 4.27

Total and average cost of farming across agricultural category (in Rs)

Crops	Total cost (per acre)	Average cost			Total cost (per cents)
		Agricultural category			
		LF	SF	MF	
Paddy	20344	1695	91	312	203
Coconut	6271	522	28	96	62
Areca nut	167727	13977	752	2580	1677
Banana	170060	14171	762	2616	1700
Pepper	30	2.50	0.13	0.46	0.30
Rubber	101	8.42	0.45	1.55	1.01
Vegetables	3428	285	15	52	34.28
Ginger	134203	11183	601	2064	1342
Coffee	145896	12158	654	2244	1458
Tea	138700	11558	621	2133	1387
Tapioca	5450	454	24	83	54
Others	3670	305	16	56	36
Total	795880	66323	3568	12244	7958

Total and average cost of production per crop across agricultural category is explained in table (4.27). It can be seen from the table that the average cost of producing paddy, areca nut, banana, ginger and coffee are high compared to other crops for each agricultural category. It is because of the nature of increasing high cost in the case of plantation crops. Also, as the land size is higher, there is a chance to increase the number of crops and thus cost of production also especially in the case of plantation crops (See tables 4.25 and 4.26). We have seen that the average area of land cultivated high across the agricultural categories. It was very high for pepper and rubber. It definitely affects the level of income of the farmer's especially small farmers (table 4.28).

Therefore, the magnitude of the problem of indebtedness can be better assessed when it is compared on size of land holdings with the borrowings.

4.6 Income

In this study farm income refers to the sum of all receipts from the sale of crops except livestock. Even though livestock is a part of farm income, livestock income is not included because, no farmer were reported that, livestock has give an additional income for their means of living. It is clear from the table (4.15) that, the share of income from livestock to total income is very low. Table (4.28) gives a general picture on total and average income earned by the farmers from farming across the agricultural category and across the crops.

Table 4.28

Total and average income earned by the farmers across agricultural category (in Rs)

Crops	Total income (per acre)	Average income			Total Income (in cents)
		Agricultural category			
		LF	SF	MF	
Paddy	36015	3001	161	554	360
Coconut	19706	1642	88	303	197
Areca nut	700329	58360	3140	10774	7003
Banana	676575	56381	3033	10408	6765
Pepper	183	15	0.82	2082	1083
Rubber	720	60	3.23	11.08	7
Vegetables	3163	263	14	48	31
Ginger	248789	20732	115	3827	2487
Coffee	704231	58685	3157	10834	7042
Tea	720000	60000	3228	11076	7200
Tapioca	9575	797	42	147	95
Others	5260	438	23	80	52
Total	3124546	260378	14011	48069	31245

Source: primary survey

Total income earned by the surveyed farmers is Rs 31,245 per acre (table 4.28). Total and average cropped area of each crop is already mentioned in table (4.24). The average income earned by the farmers across the agricultural category is high among Large Farmers (LF) (Rs 260378). It is very low for Small Farmers (SF) (Rs 14011). Medium Farmers (MF) earned average income of Rs 48069. Tea, coffee, ginger, areca nut, paddy and banana are the major crops reported more yield and therefore a higher income also. It is noticed from the survey that, agricultural losses due to different reasons were also played an important determinant of indebtedness by crop failure. Especially for banana, wind and unexpected rain influences the production. Price is the most influencing factor for the production of any crop, especially for ginger, pepper, coffee, rubber etc. Price of these crops is always subject to volatility. During the survey, majority of the farmers who cultivate ginger reported that, harvesting is done during March-April. Unfortunately, the price of ginger declines beyond their expectation (cost of production) during these times. Thus farmers have to postpone harvesting process for next 3 months and preserve their ginger by adding additional soil by expecting higher prices between these three months. In fact, this makes farmers an additional cost and heavy burden occasionally. Therefore, they didn't get even their cost of production. The amount of agricultural loss due to different reasons like, climate, labour, price etc is presented in tables (4.33 and 4.34).

The income distribution of the sample farmer households with respect to their size of holdings across agricultural category is presented in table (4.29). It is observed from the table that majority of the farmers from each district have earned income more than Rs 50000 only from agricultural activities. A slight difference is observed in wayanad district that; some of the farmers earned income between Rs10000 and Rs 50000. Income variation among the farmers across districts is clearly depicted in table (4.29). Farmers hold less land earns less income and more income from more land. Now, let us

see how the income is varied and to what extent the variation among the agricultural category.

Table 4.29

Income status and size of holding across agricultural category

Agricultural category	Income	Size of holding (in acres)			Total
		<2	2-5	>5	
LF	>50000	0	0	12 (100)	12 (100)
	Total	0	0	12 (100)	12 (100)
SF	Below 10000	1 (33.3)	1 (33.3)	1 (33.3)	3 (100)
	10000-20000	3 (100)	0	0	3 (100)
	20000-30000	7 (87.5)	0	1 (12.5)	8 (100)
	30000-40000	13 (100)	0	0	13 (100)
	40000-50000	21 (100)	0	0	21 (100)
	>50000	38 (21.7)	115 (65.71)	22 (12.6)	175 (100)
	Total	83 (37.2)	116 (52.02)	24 (10.8)	223 (100)
MF	40000-50000	2 (50)	1 (25)	1 (25)	4 (100)
	>50000	0	16 (26.23)	45 (73.8)	61 (100)
	Total	2 (3.1)	17 (26.15)	46 (70.8)	65 (100)
Total	Below 10000	1 (33.33)	1 (33.33)	1 (33.33)	3 (100)
	10000-20000	3 (100)	0	0	3 (100)
	20000-30000	7 (87.5)	0	1(12.5)	8 (100)
	30000-40000	13 (100)	0	0	13 (100)
	40000-50000	23 (92)	1 (4)	1 (4)	25 (100)
	>50000	38 (15.32)	131 (52.82)	79 (31.85)	248 (100)
	Total	85 (28.33)	133 (44.33)	82 (27.33)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

Table (4.29) elicits the degree of income variation across the agricultural category. Large size of land holding (>5 acres) occupies with high income and farmers having less land earns lower income. The table also shows

that more income is occupied by less number of farmers and the majority of farmers possessed less amount of income. It clearly gives the picture of income variation among the farmers. Therefore the larger proportion of the farmers (SF and MF) has to find out other income sources for their farming operation and also for other purposes. Since farming is the main occupation (see table 4.10) of the majority of sample farmers they confined in farming activity even by borrowing money from other sources. In this context, which sources they are depending, what type of security they have given, the nature and duration of debt, pattern of rate of interest, the actual amount of borrowing and the outstanding debt are a matter of concern. It is very clearly presented and analyzed in next chapter (5). Many times, farmers face a situation where the first loan is not sufficient to meet their farming requirements; they are compelled to take another loan from other sources. In this way they are seized into more than one loan. It may also due to improper utilization of the first loan.

Since cropping pattern and size of holdings are the prime determinants of agricultural production and therefore indebtedness also; changes in cropping pattern and land holdings definitely influence the output. The survey observed these changes across the districts. Crops like ginger and coffee were cultivated only in Wayanad, while, paddy is the similar crop cultivated in three districts. It shows that, a different cropping pattern is followed by each district (see tables (4.21), (4.22) and (4.23). It is assumed that cropping pattern will influence income of farmers. Therefore there exists an income variation among the farmers across the agricultural category and across the size of land holdings.

Here an attempt is made to estimate the income received from the agricultural production of the farm household in tables (4.30). It reveals the exact amount of income earned by the sample farmers. 82.67 percent of the farmers earned income of more than Rs 50000 from the agricultural activity in a year. Only 2 percent of the farmers get a low income compared to other farmers. It is because, they are not taking agriculture as their main source of income and also they possess only a small size of land.

Table 4.30

Total income earned by the sample farmers across districts

Total income	Districts			Total
	Palakkad	Thrissur	Wayanad	
Below 10000	3 (1)	0 (0)	0 (0)	3 (1)
10000-20000	1 (0.33)	1 (0.33)	1 (0.33)	3 (1)
20000-30000	2 (0.66)	1 (0.33)	5 (1.66)	8 (2.7)
30000-40000	7 (2.33)	6 (2)	0 (0)	13 (4.33)
40000-50000	14 (4.66)	5 (1.66)	6 (2)	25 (8.33)
Above 50000	73 (24.33)	87 (29)	88 (29.33)	248 (82.66)
Total	100	100	100	300

Source: Primary Survey, Note: values in brackets are percentages to total.

Table (4.30) shows that majority of the farm households had produced an agricultural output having a value of rupees above 50000. Taking the agricultural category we can understand the fact that SF earns more income from the agricultural production. Palakkad reveals that all the SF earned income of rupees 10000 to 50000. Almost the similar trend can be seen from Thrissur and only a slight difference can be observed from Wayanad. Out of the total sample surveyed, 82.66 percent farmers earn income above Rs 50000. Out of this, 29 percent is from Palakkad district. A similar trend can be seen from the table (4.30) that, no farmer from Thrissur and Wayanad reported income below Rs10000. At the same time Palakkad district follows a different trend.

4.6.1 Cost and Returns

The cost incurred for the cultivation of all crops in the sample area and the return from each crop is calculated and presented in tables (4.31) and (4.32) across the agricultural category.

Table 4.31

Cost incurred and income earned by the sample respondents across the agricultural category (in Rs)

Items	Agricultural category			Total
	LF	SF	MF	
Total cost of production	66323	3568	12244	795880
Total income	260378	14011	48069	3124546
Difference (R-C)	194055	10443	35825	2328666

Cost return ratio 0.25

Regarding the cost and return, Large Farmer (LF) category earns more income than the other two categories. Because, majority of the Large Farmer (LF) always enjoys economies of scale by using high yielding varieties o seeds, new machines etc. At the same time, Small Farmers (SF) and Medium Farmers (MF) can earn only a less amount of profit from cultivation. Table (4.31) gives an average picture on cost and return earned by the sample respondents. Since cropping pattern is an important determinant of indebtedness it is varied across crops (table 4.32).

Cost and return of sample farmers across crops is presented in table (4.32). In order to make the analysis more clear, it is presented in cents. A negative return was reported from crops, coconut and vegetables. Because, these two crops are subject to high cost of inputs especially fertilizers and also subject to unstable prices.

Table 4.32

Cost and returns (in rupees) of the sample respondents across the crops cultivated (per cents)

Crops	Cost	Income	Difference
Paddy	203	360	157
Coconut	602	197	-405
Areca nut	1677	7003	5326
Banana	1700	6765	5065
Pepper	0.30	1083	1.53
Rubber	1.01	7	5.99
Vegetables	34.28	31	-3
Ginger	1342	2487	1145
Coffee	1458	7042	5584
Tea	1387	7200	5813
Tapioca	54	95	41
Others	36	52	16
Total	7958	31245	23287

Source: Primary Survey

There is a close association with the total cropped area per crop with the size of land holdings. Total cropped area across crops and across the agricultural category is clear from tables (4.18) and (4.19). From both tables we can observe that, among the size group, smaller the size of holding, the higher the percentage of land devoted to paddy. But at the same time, the trend is different in the case of other crops especially rubber, pepper and ginger. At a certain point coconut also. This can be explained by the fact that gives first concern on their consumption needs by cultivating paddy on their small portion of land. At the same time, large farmers give considerable importance to other crops especially for plantation crops along with paddy. There is a close association between type of crop and indebtedness. Since agricultural

production is subject to climatic conditions, any change in climatic conditions also influences the level of output of the farmers. In this way, there are different types of constraints faced by the farmers such as heavy rain, wind, price constraints, labour constraints etc. Thus they have to spend an additional expenditure for farming. The amount of loss incurred by the farmers across the agricultural category is illustrated in table (4.33).

4.7 Agricultural loss

Amount of agricultural loss is also an important factor that led to the problem of agricultural indebtedness. It may be due to factors like unexpected rain, disease, strong wind, price falls etc. The survey found that, crops like ginger, banana, vegetables, paddy and coffee are incurred more loss to the farmers. The amount of loss is categorized between below Rs10000 and more than Rs50000. Table (4.33) and figure (4.3) clearly shows the amount of money incurred by the farmers due to crop failure.

Table 4.33

Amount of loss incurred by the sample farmers across the agricultural category

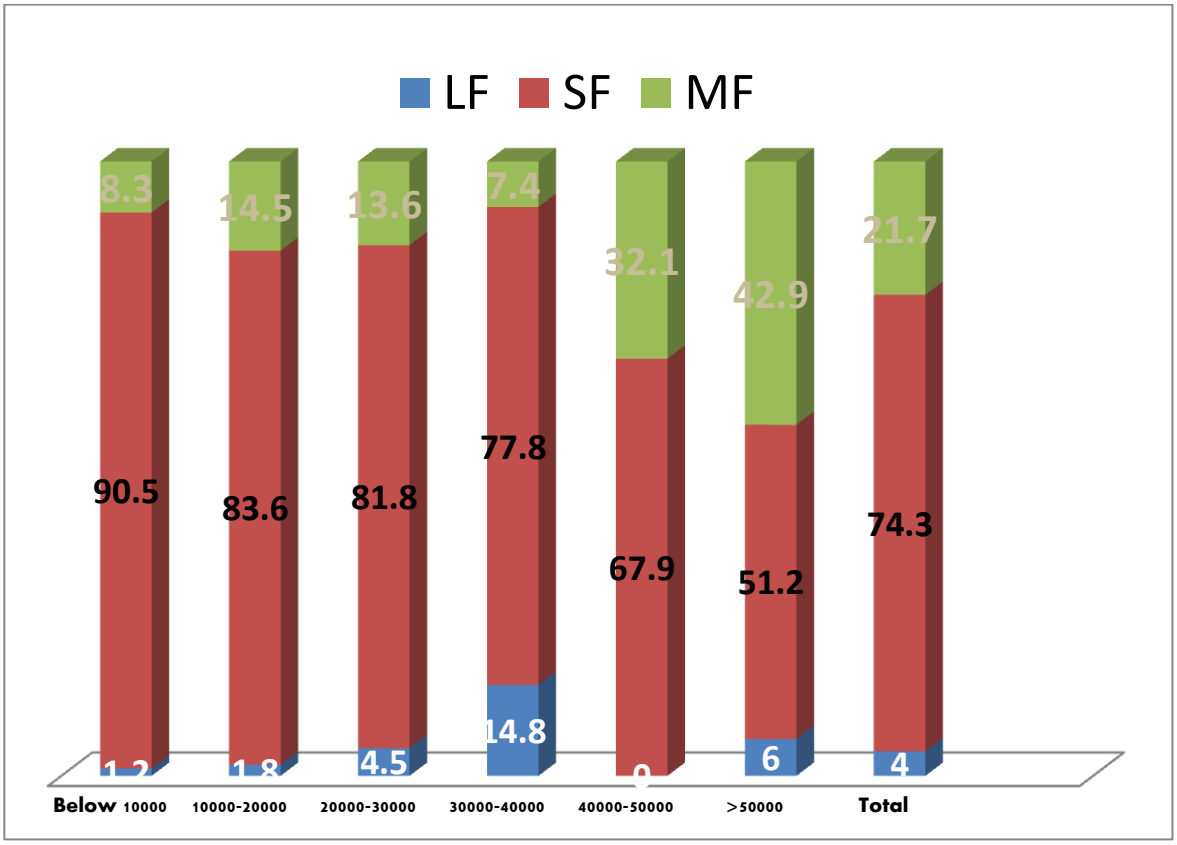
Amount of loss	Agricultural Category			Total
	LF	SF	MF	
Below 10000	1 (1.2)	76 (90.5)	7 (8.3)	84 (100)
10000-20000	1 (1.8)	46 (83.6)	8 (14.5)	55 (100)
20000-30000	1 (4.5)	18 (81.8)	3 (13.6)	22 (100)
30000-40000	4 (14.8)	21 (77.8)	2 (7.4)	27 (100)
40000-50000	0	19 (67.9)	9 (32.1)	28 (100)
>50000	5 (6)	43 (51.2)	36 (42.9)	84 (100)
Total	12 (4)	223 (74.3)	65 (21.7)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

There are various reasons for agricultural indebtedness. Table (4.34) elicits the major reasons for agricultural indebtedness of the farmers. The most predominant reasons are climate change and prices. Farmers were to face agricultural losses due to climatic changes. And also, the prices of many of the crops have volatile in nature. It results in the farming activity becomes uneconomic. Farmers produce more by investing high amount of money for agriculture operation expecting higher prices and returns for their crops. Unfortunately, volatile prices lead to lower price beyond their expectations. This time, they compelled to depend on other sources (institutional and non-institutional) for their survival.

Figure 4.3

Total amount of loss across agricultural category



Source: Primary Survey

Table 4.34

Reason for Loss incurred by the sample respondents

Amount of Debt	Reason for Loss				Total
	Climate Factors	Price Factors	Labour Factors	Other Factors	
<50000	60 (61.9)	15 (15.5)	1 (1)	21 (21.6)	97 (100)
50000-100000	40 (76.9)	5 (9.6)	3 (5.8)	4 (7.7)	52 (100)
100000-150000	15 (55.6)	5 (18.5)	1 (3.7)	6 (22.2)	27 (100)
150000-200000	14 (63.6)	4 (18.2)	1 (4.5)	3 (13.6)	22 (100)
>200000	41 (69.5)	12 (20.3)	1 (1.7)	5 (8.5)	59 (100)
Total indebted	170 (66.15)	41 (15.95)	7 (2.72)	39 (15.18)	257 (100)
No debt	31 (72.1)	9 (20.9)	0	3 (7)	43 (100)
Total	201 (67)	50 (16.7)	7 (2.3)	42 (14)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Labour factors include two problems; higher wages and shortage of labour. Other factors include unforeseen expenditures, education, expenditure on medical treatment, marriage or other ceremonies in family etc. The details on the purpose and pattern of utilization of borrowed amount are analyzed in the forthcoming paragraph.

We have classified the sample households on the basis of the amount borrowed from all sources. Due to the reason that the majority of the farmers had more than one loan; the study classified the loans into four types. The first loan can be called as agricultural loan because this loan can be availed only for the farmers or those persons for agricultural purpose only. Then second loan, third loan, and the other loan. In this section we can see the nature, amount, tenure, overdue etc of each loan taken by the sample farmers. The nature of debt can be classified into four types such as hereditary loan, loan

contracted in cash, loan contracted in kind, and loan contracted partly in cash and partly in kind. The nature of agricultural loan can be illustrated in the following analysis.

We have seen the total cost and total income earned by the sample farmers across the districts for each crop. it is clear from the whole analysis that, even if farm activity is profitable the income received from each crop is very low. While, for coconut and vegetables it is negative (table 4.32). Crops like ginger, banana, coffee and rubber have higher cost of production. Together with the constraints like price, climate, labour etc farmers are forced to borrow money from different financial institutions, money lenders, traders, friends and relatives etc. They borrow farming activity or even their consumption expenditure in the name of farming. Usually farmers borrow money by expecting to repay the amount after harvesting. In fact, they renew the loan or sometimes they avail more number of loans from different agencies rather to repay the existing borrowed amount. Different sources of borrowing and the utilization pattern is analyzed in the following discussions.

4.8 SOURCES AND UTILIZATION PATTERN OF AGRICULTURAL CREDIT

The major sources supplying agriculture credit to the farmers were commercial banks, co-operatives, RRBs, money lenders, traders, friends and relatives etc. All the institutional sources give agricultural loans at very lower rates of interest. Banks give loans without any security. Even though it is very suitable to farmers, they depend on other sources for financial assistance because of the inadequacy of first loan amount. The extent in which the farmers depend on all these sources for different institutional and non-institutional source are shown in the following table (4.35).

Table 4.35

Total borrowing of sample farmers according to sources across districts

Sources	Palakkad	Thrissur	Wayanad	Total
Co-operative society	70 (40.69)	32 (18.60)	70 (40.69)	172 (100)
Bank	41 (26.62)	55 (35.71)	58 (37.66)	154 (100)
Money lender	3 (6.38)	10 (21.28)	34 (72.34)	47 (100)
Others (Traders, landlords, employer etc)	2 (11.11)	6 (33.33)	10 (55.56)	18 (100)

Source: Primary Survey.

There are wide variations across agricultural category in the share of institutional and non- institutional sources. In a majority of SF, the outstanding debt was financed more by the co-operative society than the money lenders or others. However, the sample shows that, some of the MF (Medium Farmers) depends on non-institutional sources as the number of loans increases. For instance, the trend among the LF (Large Farmers) depends on institutional sources for their credit requirements.

Regarding the sources of loan, there was greater reliance on formal sources like banks. But at the same time informal sources like money lenders and traders also played a crucial role. This does not prevent the reliance on moneylenders. About 28 percent of the loans were taken from moneylenders, and these loans bear exorbitant rates of interest. Some of the loans have been utilized by the farmers for other purposes like business, marriage, education, construction of house, repayment of existing loans etc. So it can be inferred that the indebtedness of the farmers were not completely due to agricultural problems.

Total 4.36

Total debt of sample respondents across agricultural category

Amount of Debt	Agricultural category			Total
	LF	SF	MF	
<50000	1 (2.6)	24 (61.5)	14 (35.9)	39 (100)
50000-100000	3 (7.5)	26 (65)	11 (27.5)	40 (100)
100000-150000	3 (50)	2 (33.3)	1 (16.7)	6 (100)
150000-200000	1 (33.3)	1 (33.3)	1 (33.3)	3 (100)
>200000	2 (11.8)	7 (41.2)	8 (47.1)	17 (100)
Total indebted	10 (9.52)	60 (57.14)	35 (33.33)	105 (100)
No debt	2 (1)	163 (83.6)	30 (15.4)	195 (100)
Total	12 (4)	223 (74.3)	65 (21.7)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

4.8.1 Source wise supply of credit

Source wise supply of credit would show the extent of dependence of each farmer up on different sources of credit for agricultural activities during the survey as presented in tables (4.38) and (4.39). As could be seen in table (4.36); out of 300 farmers surveyed, 257 (85.6 percent) farmers are indebted. This table illustrates the sources of first loan, taken by the farmer for agricultural activities. 3rd and 4th column together constitutes institutional sources where as 5th and 6th column together represents non-institutional sources. Among the institutional sources, co-operative society plays a major role by giving loans to 52.15 percent of sample (134) farmers. The non-institutional sources constitute only 9.75 percent. Therefore, 73.18 percent of the sample farmers depended up on institutional sources for their credit needs. Also, most of the loans are for the time period greater than one year. This is the case of first

loan taken by the farmers. Since majority of the sample farmers had more than one loan, we have to look into the sources of other loans by the following table (4.37).

Table 4.37

Formal and informal sources of borrowing of the sample households across the agricultural category

District	Sources	Agricultural category			Total
		LF	SF	MF	
Palakkad	Institutional	0	85 (76.58)	26 (23.42)	111 (100)
	Non-institutional	0	4 (80)	1 (20)	5 (100)
	Total	0	89 (76.72)	27 (23.28)	116 (100)
Thrissur	Institutional	6 (6.89)	65 (74.71)	16 (18.39)	87 (100)
	Non-institutional	0	16 (100)	0	16 (100)
	Total	6 (5.83)	81 (78.64)	16 (15.53)	103 (100)
Wayand	Institutional	17 (9.04)	71 (37.77)	40 (21.28)	188 (100)
	Non-institutional	5 (11.36)	24 (54.55)	15 (34.09)	44 (100)
	Total	22 (9.48)	95 (40.95)	55 (23.71)	232 (100)
Total	Institutional	23 (5.96)	221 (57.25)	82 (21.24)	386 (100)
	Non-institutional	5 (7.69)	44 (67.69)	16 (24.62)	65 (100)
	Total	28 (6.21)	265 (58.76)	98 (21.73)	451 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (4.37) clearly indicates the dominance of formal sources of credit than the informal sources. Here the informal sources of credit include traders, shopkeepers, money lenders etc. Altogether majority of the total credit are of short term duration and is used for productive and non productive purposes. Farmers borrowed loans predominantly for non agricultural purposes. It mainly comprised of repairing of house buildings, health care and marriage etc. It is well known that a bulk of the institutional or formal credit goes to the SF.

Table 4.38

Source of single loan (first loan) of the sample farmers

Amount of Debt	**No loan**	**Institutional Sources**		**Non-institutional Sources**		**Total**
		Co-operative society	**Other Banks**	**Money lender**	**Traders**	
1	**2**	**3**	**4**	**5**	**6**	7
<50000	16 (17.5)	48 (46.4)	23 (23.7)	15 (11.3)	1 (1)	97 (100)
50000-100000	8 (15.4)	27 (51.9)	14 (26.9)	2 (3.8)	1 (1.9)	52 (100)
100000-150000	5 (18.5)	16 (59.3)	4 (14.8)	2 (7.4)	0	27 (100)
150000-200000	2 (9.1)	17 (77.3)	1 (94.5)	2 (9.1)	0	22 (100)
>200000	12 (20.3)	29 (49.2)	12 (20.3)	6 (10.2)	0	59 (100)
Total indebted	43 (16.75)	134 (52.16)	54 (21.03)	23 (8.97)	2 (0.79)	257 (100)
No debt	10 (23.3)	18 (41.9)	9 (20.9)	6 (14)	0	43 (100)
Total	53 (18)	152 (50.7)	63 (21)	29 (9.7)	2 (0.7)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

Since farmers have different types of loans, it is needed to specify the sources of each loan and its utilization pattern. Table (4.38) gives a clear

picture on sources of first loan taken by the sample farmers. 3rd column represents loan taken from institutional sources while 4th, 5th and 6th columns represent non-institutional sources of credit. Majority of the farmers depend on co-operative societies for availing first loan (52.16 percent). 21.03 percent depends on other commercial banks. Only 73 percent farmers depend on non-institutional sources comprised of money lenders and traders.

Table 4.39

Source of second Loan (two loans) taken by the sample respondents

Amount of Debt	Institutional Sources		Non-institutional Sources		Total
	Co-operative society	Bank	Money lender	Others	
<50000	5 (12.8)	22 (56.4)	12	0	39 (100)
50000-100000	5 (12.8)	34 (87.2)	0	0	39 (100)
100000-150000	3 (50)	0	3	1	7 (100)
150000-200000	1 (33.3)	2 (66.7)	0	0	3 (100)
>200000	0	8 (47.1)	9	0	17 (100)
Total-no debt	14 (13.33)	66 (62.86)	24 (22.86)	1 (0.95)	105 (100)
No debt	2 (1)	0	0	193 (99)	195 (100)
Total	16 (5.4)	66 (22.1)	24	193 (64.5)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

Regarding second loan (table 4.39), Out of 257 indebted farmers, 105 (40.85 percent) farmers had taken two loans. Among this, institutional sources constitute 76.19 percent and 23.81 percent depends on non-institutional sources out of the 105 farmers. This brought out that still non-institutional agencies have some hold over rural masses in the supply of credit. This could be attributed generally to the existence of traders and money lenders. Tables (4.39), (4.40), (4.41) and (4.42) show the details of two loans taken by the farmers in same time periods (it is referred as second loan in the study). Since majority of

farmers availed and utilized two loans, the study gave special emphasize and discussed more about these loans.

Total 4.40

Period of second loan (two loans) availed by the sample respondents

Amount of Debt	Period of loan				Total
	1-3 months	3-6 months	6-one year	1-2 years	
<50000	0	0	21 (55.3)	17 (44.7)	38 (100)
50000-100000	0	1	8 (20)	31 (77.5)	40 (100)
100000-150000	0	(2.5)	3 (50)	3 (50)	6 (100)
150000-200000	1 (33.3)	0	0	2 (66.7)	3 (100)
>200000	0	0	3 (17.6)	14 (82.4)	17 (100)
Total indebted	1 (0.95)	1 (0.95)	35 (33.33)	67 (63.81)	105 (100)
No debt	2 (1)	0	0	193 (99)	195 (100)
Total	3 (1)	1 (0.3)	35 (11.7)	260 (86.9)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

Many of the loans are of short period in nature (table 4.40). Regarding second loan, majority of farmers (63.81 percent) holds loan for the period below 2 years. 33.33 percent farmers hold loan for six months to one year.

Total 4.41

Nature of second loan (two loans) availed by the sample respondents

Amount of Debt	Nature of loan				Total
	Hereditary loan	Loan contracted in cash	Loan contracted on collateral	Others	
<50000	0	10 (25.6)	29 (74.4)	0	39 (100)
50000-100000	1 (2.5)	3 (7.5)	36 (90)	0	40 (100)
100000-150000	3 (50)	0	3 (50)	0	6 (100)
150000-200000	0	0	3 (100)	0	3 (100)
>200000	0	9 (52.9)	7 (41.2)	1 (5.9)	17 (100)
Total indebted	4 (3.81)	22 (20.95)	77 (73.33)	1 (0.95)	105 (100)
No loan	1 (0.5)	0	3 (1.5)	191 (97.9)	195 (100)
Total	5 (1.7)	22 (7.3)	80 (27)	192 (64)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

When we look into the nature of second loan, it is observed that, most of the loans were borrowed on collateral securities (table 4.42). Among these collateral securities, most of the loans are drawn on the basis of gold and land (61.62 percent) and most of the loans are for the period between 1-2 years (table 4.40).

Total 4.42

Type of security for second loan (two loans) availed by the sample respondents

Amount of Debt	Type of security						Total
	Without security	Land	Tax bill	Gold	Financial instruments	Others	
<50000	9 (23.1)	10 (25.6)	5 (12.8)	15 (38.5)	0		39 (100)
50000-100000	0	10 (25)	7 (17.5)	23 (57.5)	0	0	40 (100)
100000-150000	3 (50)	3 (50)	0	0	0	0	6 (100)
150000-200000	0	1 (33.3)	0	1 (33.3)	1 (33.3)	0	3 (100)
>200000	9 (52.9)	4 (23.5)	0	4 (23.5)	0	0	17 (100)
Total indebted	21 (20)	28 (26.67)	12 (11.43)	43 (40.95)	1 (0.95)	0	105 (100)
No debt	0	0	0	0	2 (1)	193 (99)	195 (100)
Total	21 (7)	28 (9.3)	12 (4)	43 (14.3)	3 (1)	193 (64.4)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

Table 4.43

Type of security for all loans availed by the sample respondents across districts

Security	Palakkad	Thrissur	Wayanad	Total
Without security	15 (25.42)	10 (16.95)	34 (57.63)	59 (100)
Land	35 (34.65)	18 (17.82)	48 (47.52)	101 (100)
Tax bill	39 (26.17)	49 (32.89)	61 (40.94)	149 (100)
Gold	19 (26.03)	26 (35.62)	28 (38.36)	73 (100)

Others (traders, financial instruments etc)	11 (73.33)	3 (20)	1 (6.67)	15 (100)

Source: Primary Survey, Note: values in brackets are percentages

The type of security against each loan advances from the formal source of credit is an important constraint that often forces the farmers to raise loans carrying high interest rates from non- institutional sources, which, sometimes leads to alienation of land or such securities from the poor farmers. It is mentioned in table (4.43) that the highest number of loans is given to the farmers against land, gold etc. The survey also observed that some of the farmers from Wayanad and Palakkad lost their land. Only a few numbers of loans has been by the farmers against personal security.

Table 4.44

Duration / nature of debt of sample respondents

District	Agricultural category	Type of loan		
		Short term	Medium term	Long term
Palakkad	LF	0	0	0
	SF	71 (81.61)	11 (78.57)	10 (55.56)
	MF	16 (18.39)	3 (21.43)	8 (44.44)
	Total	87 (100)	14 (100)	18 (100)
Thrissur	LF	6 (5.77)	0	0
	SF	78 (75)	1 (100)	2 (100)
	MF	16 (15.38)	0	0
	Total	104	1 (100)	2 (100)
Wayanad	LF	8 (10)	3 (6)	11 (26.19)
	SF	54 (67.5)	22 (44)	19 (45.24)
	MF	18 (22.5)	25(50)	12 (28.57)
	Total	80 (100)	50 (100)	42 (100)
Total	LF	14 (5.24)	3 (4.62)	11 (17.74)
	SF	203 (76.03)	34 (52.31)	31 (50)
	MF	50 (18.73)	28 (43.08)	20 (32.26)
	Total	267 (100)	65 (100)	62 (100)

Source: Primary survey

It is clear from table (4.44) that regarding the nature of debt, all farmers from three districts shows similar trend among the agricultural category. Since majority of the sample farmers are small, the number of loan is also high among them and its nature also. ie. The share of long term loan is negligible compared to short term and medium term loans except in Wayanad district. The determinants of agricultural indebtedness are explained in the next chapter.

4.9 Pattern of interest rate

The pattern of interest rate gives an idea regarding the cost to be borne by the indebted sample households. In the sample, a substantial amount of loan was received for an interest rate below 5 percent (table 4.45). A few of which were usurious loans; and delay in clearance of debt which leads to outstanding obligations. The survey found that, a few households reported to have received loan without any interest rate in Palakkad and Wayanad districts, but to have mortgage of their land. Some borrowed money from their friends and relatives without any interest rate and mortgage. To study the pattern of interest rate is very significant to know about the depth of pattern of debt of the farmers. A higher rate of interest (usurious interest) retards development and accentuates the burden of the loaners even if such loans are taken for productive purposes. Usurious interest burden often pushes the farmers to convert short duration debt into long term loans. It leads the farming community into economic distress and thus come under the influence of debt trap.

Table 4.45

Pattern of rate of interest and number of loans possessed by sample respondents

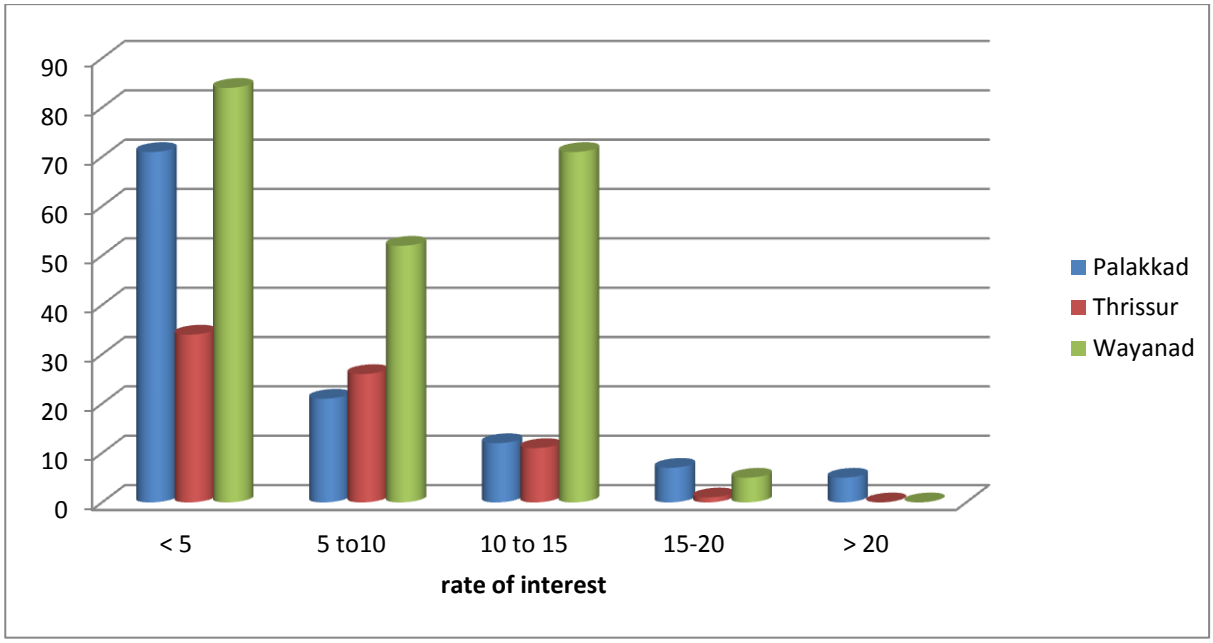
District	Rate of Interest	Number of loan			
		1 (single loan)	2 (two loans)	3 (three loans)	>3 loans (others)
Palakkad	Below 5	62 (42.18)	54 (40.29)	66 (33.50)	71 (33.33)
	5-10	9 (17.65)	11 (30.56)	0	1 (8.33)
	10-15	3 (10.34)	6 (12.5)	2 (15.38)	1 (25)
	15-20	3 (60)	1 (33.33)	0	3 (75)
	Above 20	1 (100)	2 (100)	2 (100)	0
Thrissur	Below 5	35 (23.81)	34 (25.37)	62 (31.47)	61 (28.64)
	5-10	16 (31.37)	10 (27.77)	0	0
	10-15	3 (10.34)	6 (12.5)	2 (15.38)	0
	15-20	0	1 (33.33)	0	0
	Above 20	0	0	0	0
Wayanad	Below 5	50 (34.01)	46 (34.32)	69 (35.03)	81 (38.03)
	5-10	26 (50.98)	15 (41.67)	10 (100)	11 (91.67)
	10-15	23 (79.31)	36 (75)	9 (69.23)	3 (75)
	15-20	2 (40)	1 (33.33)	1 (100)	1 (25)
	Above 20	0	0	0	0
Total	Below 5	147 (57.19)	134 (52.14)	197 (76.65)	213 (82.88)
	5-10	51 (19.84)	36 (14)	10 (3.89)	12 (4.67)
	10-15	29 (11.28)	48 (18.68)	13 (5.06)	4 (1.56)
	15-20	5 (1.95)	3 (1.17)	1 (0.39)	4 (1.56)
	Above 20	1 (0.39)	2 (0.78)	2 (0.78)	0

Source: Primary Survey

Table (4.45) and figure (4.4) presents data regarding the pattern of distribution of loans according to various ranges of interest rates. Table clearly explains that, more than 50 percent of the loans are distributed at below 5 percent of interest. A few loans were given to the farmers above 20 percent interest rate. It is widely believed that it is the small farmers who default most because they are severely poor to repay the loans.

Figure 4.4

Rate of interest given by the farmers for every loan



Source: Primary Survey

4.10 Utilization pattern of borrowed amount

The household debt can be classified according to the purpose of borrowing in table (4.46). This would enable us to assess the end use of debt of household for productive purposes or unproductive purposes. The purpose wise or utilization pattern of debt is classified capital expenditure in farm and non-farm business, current expenditure in farm and non-farm business, household's consumption expenditure, repayment of debt and other purposes. All farm

expenditure can strictly be termed as expenditure for productive purposes. The other expenditures like consumption expenditure, repayment of debt, expenditure on marriage or other ceremonies etc are considered as unproductive expenditure. It may be seen from the tables (4.46) and (4.47) that, there is a perceptible shift in the pattern of expenditure in different types of loans.

Even if the farmers take loan for agricultural purposes; because of many constraints, they have diversified the loan amount from agricultural purpose to other purposes. Thus, farmer seeks other loans either from same source of the first loan or from other non institutional sources at high rates of interest. This indicates that the share of debt for non-farm businesses or for unproductive purposes is more than half of their total debt. It is clearly presented in tables (4.46) and (4.47).

Table 4.46

Utilization pattern of agricultural credit of sample respondents

Amount of Debt	Purpose		Total
	Farming	Unproductive	
<50000	36 (92.3)	3 (7.69)	39 (100)
50000-100000	38 (95)	2 (5)	40 (100)
100000-150000	6 (100)	0	6 (100)
150000-200000	2 (66.7)	1 (33.33)	3 (100)
>200000	17 (100)	0	17 (100)
Total indebted	99 (94.29)	6 (5.71)	105 (100)
No debt	1 (0.5)	194 (99.49)	195 (100)
Total	100 (31.7)	200 (66.67)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

Table 4.47
Renewable pattern of agricultural credit of sample respondents

Amount of Debt	Renewable pattern				Total
	Regularly renew	Renewed loan once	renewed loan more than two times	Other type	
<50000	26 (66.7)	3 (7.7)	9 (23.08)	1 (2.6)	39 (100)
50000-100000	17 (42.5)	9 (22.5)	13 (32.5)	1 (2.5)	40 (100)
100000-150000	0	3 (50)	3 (50)	0	6 (100)
150000-200000	1 (33.33)	0	1 (33.33)	1 (33.33)	3 (100)
>200000	2 (11.8)	1 (5.9)	13 (76.47)	0	17 (100)
Total indebted	46 (43.81)	16 (15.24)	40 (38.09)	3 (2.86)	105 (100)
No debt	1 (0.5)	0	2 (1.03)	192 (98.5)	195 (100)
Total	47 (15.7)	16 (5.3)	42 (14)	195 (65)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

The difference between cost of cultivation and return from each crop together with agricultural losses compel farmers to depend on other sources for their finance. It is evident from the above discussion that, many of the farmers have more than two numbers of loans. Co-operative banks and commercial banks are the major sources of institutional finance for the sample farmers, while role of money lenders are also important. When the amount of first loan is not sufficient for farm operations, farmers depend on other non-institutional sources at a higher rate of interest. Another observation is that, instead of closing the old debt, farmers have a tendency to renew the existing loan before its maturity period and taking new loans from non-institutional

sources. Many of the loans were diverted by the farmers for the purposes of medical expenses, house constructions etc. Ancestral debt also has a major role in accumulating present debt. We shall now discuss the extent and determinants of agricultural indebtedness in the study area in detail in the next chapter.

Chapter V

Extent and Determinants of Agricultural Indebtedness

CHAPTER V

EXTENT AND DETERMINANTS OF AGRICULTURAL INDEBTEDNESS

5.1 Introduction

The study on agricultural indebtedness is significant in the context where the farmers face distress. It may be of the result of indebtedness of the peasantry. There is nothing wrong in borrowing when the farmers required financial aid for agricultural operations. Indebtedness arises when the income of the farmer is not sufficient to repay the debt incurred or when he spends his income for unproductive purposes and does not yield any income and thus he cannot save for the purpose of paying off his debt. When the borrower fails to repay the loan on time and the loan goes on accumulating, he becomes indebted (Puja Mondal). Following discussions clearly indicates the extent and determinants agricultural indebtedness among the sample farmers.

Table 5.1

Level of default of all loans availed by the sample respondents

Default	Palakkad	Thrissur	Wayanad	Total
Have default	61 (36.97)	35 (21.21)	69 (41.82)	165 (100)
No default	20 (22.22)	50 (55.56)	20 (22.22)	90 (100)

Source: Primary Survey.

Data on default of loan is represented in table (5.1). It can be seen from the table that, majority of the loan made as default among the farmers in Palakkad and Wayanad. Only 21 percent loans were reported as default in Thrissur. It may be of the reason that number of farmers reported losses in Thrissur district is very few (table 5.2).

Table 5.2

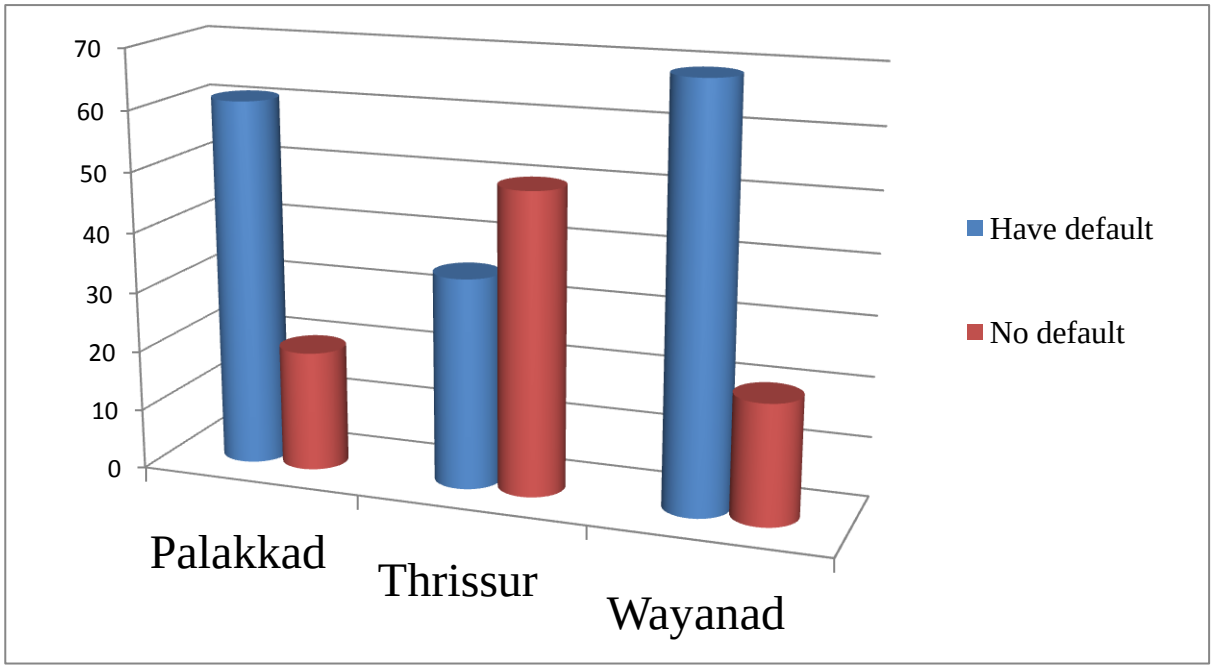
Land size and default of sample respondents across the districts

Land size	Palakkad	Thrissur	Wayanad	Total
<2	26 (59.09)	12 (27.27)	6 (13.64)	44 (100)
2-3	13 (41.94)	7 (22.58)	11 (35.48)	31 (100)
3-4	8 (38.09)	3 (14.29)	10 (47.62)	21 (100)
4-5	5 (20)	7 (28)	13 (52)	25 (100)
>5	10 (22.22)	6 (13.33)	29 (64.44)	45 (100)
Total	62 (37.35)	35 (21.08)	69 (41.57)	166 (100)

Source: Primary Survey.

Figure 5.1

Level of default of all loans of the sample respondents



Source: Primary Survey

The level of default with respect to the size of land holdings is presented in table (5.2) and figure (5.1). Out of the total 166 defaults, more default is reported from wayanad and it is by the farmers occupying land above

500 cents. Thrissur district has less number of defaults compared to the other two districts.

There are different causes of agricultural indebtedness. It may be of poverty of the farmers, ancestral debt, ease of taking loan, litigation, small sized holdings, illiteracy and ignorance, extravagant expenditure, malpractices of the money lenders, high rates of interest, high standard of living, excessive burden of land revenue or rent, addiction to drinking, inflation, inadequate infrastructural facilities and institutional arrangements etc. Already we have seen indebtedness in India its sources and extent in the previous chapter (3). Now, let us analyze and discuss debt situation of Kerala by taking a sample of 300 farmers from three districts where the incidence of indebtedness is very high. Here the study uses deductive method for analyzing the debt situation of the sample farmers of three districts. For that purpose let us see the total and average debt of the study area in table (5.3).

Table 5.3

Total and average amount of outstanding of indebtedness in the study area

Total Debt	**District**			**Total**
	Palakkad	**Thrissur**	**Wayanad**	
Total Outstanding	11410502	11575000	16905500	39891002
Average Outstanding	114105.02	115750	169055	132970
Average Amount debt, outstanding and rate of interest of each loan				
Items	**Loan**			
	1st loan	**2nd loan**	**3rd loan**	**Others**
Average amount of loan	71853.34	45736.69	7553.35	1616.68
Rate of interest	4.06	15	17	17
Outstanding amount	75306.67	45670.09	7456.69	2300
Amount of agricultural loss	28306	26282	101964	60142

Source: Primary Survey.

Table (5.3) shows the aggregate and average amount of outstanding debt at a given rate of interest. The table also gives the information

on the amount of agricultural loss faced by the sample farmers across the districts. As we already discussed, many of the farmers have more than two numbers of loans. The average amount of outstanding is comparatively low for the farmer's holds third loan and other loans. These loans were availed by the farmers because of the insufficiency of the first two loans. Most probably it is taken from non institutional agencies like relatives, friends, money lenders or other private financial institutions. To check out whether there is a significant relation between indebtedness across districts, chi square test have been worked out (table 5.4)

It reveals the extent of indebtedness of three districts. District wise analysis shows (table 5.4) that, Thrissur district has comparatively low incidence of indebtedness. Because, they concentrated more on food crops which is comparatively less chance to loss due to price volatility. The incidence of indebtedness is very high in Wayanad. It is because of the large number of crops cultivated in the district and most of the crops are plantation in nature (see table 4.23).

Table 5.4

District wise Indebtedness of sample respondents

Debt Amount	Agricultural category			Total
	Palakkad	Thrissur	Wayanad	
<50000	33 (34)	39 (40.2)	25 (25.8)	97 (100)
50000-100000	17 (32.7)	22 (42.3)	13 (25)	52 (100)
100000-150000	14 (51.9)	4 (14.8)	9 (33.3)	27 (100)
150000-200000	6 (27.3)	3 (13.6)	13 (59.1)	22 (100)
>200000	13 (22)	20 (33.9)	26 (44.1)	59(100)
Total indebted	83 (32.29)	88 (34.24)	86 (33.46)	257 (100)
no debt	17 (39.5)	12 (27.9)	14 (32.6)	43 (100)
Total	100 (33.3)	100 (33.3)	100 (33.3)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (5.4) shows the incidence of indebtedness by agricultural category. It clearly explained that, 37.74 percent of total indebted farmers hold indebtedness below Rs 50000. It is because of easy getting of loan without interest burden from institutional sources. Another fact as explained earlier (see table 4.36) Small Farmers (SF) are more indebted than Large Farmers (LF) and Medium Farmers (MF).

Table 5.5

Incidence of indebtedness across agricultural category

Amount of Debt	**Agricultural category**			**Total**
	LF	**SF**	**MF**	
<50000	7 (7.2)	71 (73.2)	19 (19.6)	97 (100)
50000-100000	1 (1.9)	39 (75)	12 (23.1)	52 (100)
100000-150000	0	19 (70.4)	8 (29.6)	27 (100)
150000-200000	2 (9.1)	16 (72.7)	4 (18.2)	22 (100)
>200000	1 (1.7)	42 (71.2)	16 (27.1)	59 (100)
Total indebted	11 (4.28)	187 (72.76)	59 (22.96)	257 (100)
no debt	1 (2.3)	36 (83.7)	6 (14)	43 (100)
Total	12 (4)	223 (74.3)	65 (21.7)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (5.5) shows the incidence of indebtedness across the agricultural category. Table presents 37.74 percent of total sample farmers hold indebtedness below Rs 5000. It is because of the easy getting of loan without a high interest burden from institutional sources (see table (4.45).

Table 5.6

Indebted Farm households among the sample farm households

Districts	No of loans	Estimated number of indebted farm households				Indebted farm households as percent to total farm households		
		Agricultural category				Agricultural category		
		LF	SF	MF	Total	LF	SF	MF
Palakkad	1	0	16	7	23	0	19.51	41.18
	2	0	3	1	4	0	3.66	5.88
	3	0	1	1	2	0	1.22	5.88
	Total	0	20	9	29	0	24.39	52.94
Thrissur	1	3	9	3	15	100	10.98	20
	2	0	2	0	2	0	2.44	0
	Total	3	11	3	17	100	13.41	20
Wayanad	1	1	17	14	32	12.5	28.81	42.42
	2	3	8	5	16	37.5	13.56	15.15
	3	0	2	0	2	0	3.39	0
	>3	2	0	1	3	25	0	3.03
	Total	6	27	20	53	75	45.76	60.6
Total	1	4	42	24	70	33.33	18.83	36.92
	2	3	13	6	22	25	5.83	9.23
	3	0	3	1	4	0	1.35	1.54
	>3	2	0	1	3	16.67	0	1.54
	Total	9	58	32	99	75	26	49.23

Source: Primary Survey, Note: values in brackets are percentages

Table (5.6) expresses the estimated number of indebted farm households and indebted farm households as percentage of total farm households of Palakkad, Thrissur and Wayanad with respect to the number of loans. The ratio of indebted farm households as per cent to total farm households in Wayanad and Palakkad is 60.6 per cent and 52.94 percent respectively; which is relatively high compared to Thrissur. In the case of Thrissur, it is only 20 per cent. The main cause of high indebtedness of farm households in Palakkad and Wayanad is the differences in cropping pattern. Easy availability of credit without any security and at low rates of interest also becomes a reason for increasing indebtedness. Co-operative banks give agricultural loans to the farmers without any security and a very low rate of interest. Meanwhile, other agencies give loan to the farmers at a given rate of interest and also based on securities. Of the total MF, 65 farmers (33.33 percent) are indebted (see table 4.36). While, LF from Plakkad district not reported any type of loan.

It would be of interest to enquire into the number of loans of the farmers from three districts across the agricultural category. It is found that, majority of the farmers have more than two loans. In this study, it is referred as first loan, second loan, and third loan and that according to the number of loans, taken by the farmers. First loan indicates those farmers have only one loan, which is bought by the farmers for agricultural purposes only. Majority of the first loan was taken by the farmers from institutional sources at lower rates of interest. But it is very interesting to note the utilization pattern of this loan. Even though banks give loans at low rates of interest without any security for agricultural purposes, farmer deviate this amount into other unproductive purposes like repaying the old debt, consumption purposes, education expenses, marriage and ceremonies etc. Before going to the details of amount, nature, period and security of each loan taken by the farmers, we have to look into the amount of borrowing of each loan across the district (table 5.7).

Table 5.7

Number of loans taken by the sample respondents

District	Number of Loan	Agricultural category			Total
		LF	SF	MF	
Palakkad	1	0	16 (69.6)	7 (30.4)	23 (100)
	2	0	3 (75)	1 (25)	4 (100)
	3	0	1 (50)	1 (50)	2 (100)
	Total	1 (1)	82 (82)	17 (17)	100 (100)
Thrissur	1	3 (20)	9 (60)	3 (20)	15 (100)
	2	0	2 (100)	0	2 (100)
	Total	3 (3)	82 (82)	15 (15)	100 (100)
Wayanad	1	1 (3.1)	17 (53.1)	14 (43.8)	32 (100)
	2	3 (18.8)	8 (50)	5 (31.3)	16 (100)
	3	0	2 (100)	0	2 (100)
	above3	2 (66.7)	0	1 (33.3)	3 (100)
	Total	8 (8)	59 (59)	33 (33)	100 (100)
Total	1	4 (5.7)	42 (60)	24 (34.3)	70 (100)
	2	3 (13.6)	13 (59.1)	6 (27.3)	22 (100)
	3	0	3 (75)	1 (25)	4 (100)
	Above 3	2 (66.7)	0	1 (33.3)	3 (100)
	Total	12 (4.)	223 (74.3)	65 (21.7)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (5.7) indicates that, out of the 300 farmers surveyed, 33 percent of the farmers had debt. The number of loans is higher among the SF in all the three districts where as the number of loans confined to one or two loans among the LF.

Table 5.8

Nature of total number of loans taken by the sample farmers across the agricultural category

Nature of loan	Palakkad				Thrissur				Wayanad				Total		
	LF	SF	MF	Total	LF	SF	MF	Total	LF	SF	MF	Total	LF	SF	MF
Hereditary loan	0	7 (77.78)	2 (22.22)	9 (100)	0	2 (100)	0	2 (100)	1 (5)	12 (60)	7 (35)	20 (100)	1 (3.23)	21 (67.74)	9 (29.03)
Loan contracted in cash	0	3 (100)	0	3 (100)	0	11 (100)	0	11 (100)	4 (15.38)	14 (53.85)	8 (30.77)	26 (100)	4 (10)	28 (70)	8 (20)
Loan contracted in kind	0	80 (77.67)	23 (22.33)	103 (100)	6 (6.67)	68 (75.56)	16 (17.78)	90 (100)	17 (13.71)	68 (54.84)	39 (31.45)	124 (100)	23 (7.25)	216 (68.14)	78 (24.61)
Loan contracted partly in cash and kind	0	2 (50)	2 (50)	4 (100)	0	0	0	0	0	1 (50)	1 (50)	2 (100)	0	3 (50)	3 (50)
Total	0	92 (77.31)	27 (22.69)	119 (100)	6 (5.83)	81 (78.64)	16 (15.53)	103 (100)	22 (12.79)	95 (55.23)	55 (31.98)	172 (100)	28 (7.11)	268 (68.02)	98 (24.87)

Source: Primary Survey.

Table (5.8) explains the nature of total agricultural loan. Of the 300 farmers surveyed, 69 percent of the farmers have the loan contracted in kind. Across the agricultural category, the share is 73.9 percent among the SF, 20.8 percent among MF, and only 5.3 percent among LF. This table also shows that Large Farmers (LF) from Palakkad district has no loan.

The nature of loans indicates that (table 4.42) majority of the sample households had the loan contracted in kind. They take loans by giving their land as security. The difficulties in availing agriculture credit and insufficient amount of credit from the scheduled commercial banks persuade farmers to depend other sources for their credit requirements. Therefore majority of the farmers had more than one loan. Among this, some of them have hereditary loans. While collateral security is not essential for small loans, farmers do find it difficult to get credit in the absence of credible collateral security. It also pushed the farmers towards non institutional agencies especially to the money lenders.

Table 5.9

Amount of borrowing and number of loans

Amount of borrowing	Palakkad				Thrissur				Wayanad			
	Single loan	Two loans	Three loans	>3 loans and Others	Single loan	Two loans	Three loans	>3 loans and Others	Single loan	Two loans	Three loans	>3 loans and Others
Below 50000	58	75	97	98	42	85	98	100	38	49	87	96
50000-100000	14	19	3	2	21	12	1	0	32	34	8	4
100000-150000	2	0	0	0	1	0	0	0	11	6	0	0
150000-200000	2	1	0	0	7	1	1	0	3	1	4	0
Above 200000	24	5	0	0	29	2	0	0	16	10	1	0
Total	100	100	100	100	100	100	100	100	100	100	100	100

Source: Primary Survey.

Table (5.9) reveals the amount of total borrowing among the sample farmers. It can be observed from the table that even though the farmers have more than two loans, majority of them belong to loan below Rs 50000. It is because of the reason that, the banks especially co-operative banks loans up to 1 lakh rupees to the farmers having the land 1 acres. Since the majority of the farmers are small and marginal, they can avail loans below one lakh rupees easily.

5.2 Outstanding Debt

Outstanding debt is the debt that has not yet been repaid in full. In general, interest is calculated over the outstanding debt rather than the original amount borrowed. Table (5.10) represents total outstanding amount of

debt of the indebted sample farmers. It includes all loans taken by the farmers from different sources.

Table 5.10

Total outstanding debt of the sample farmers (in lakhs)

Palakkad			Thrissur			Wayanad		
Single loan	**Two loans**	**Three loans**	**Single loan**	**Two loans**	**Three loans**	**Single loan**	**Two loans**	**Three loans**
14.50	18.75	24.25	10.50	21.25	24.5	95.00	12.25	21.75
10.50	14.25	2.25	15.75	9.00	0.075	24.00	25.50	6.00
0.25	0	0	1.25	0	0	13.75	7.50	0
0.35	1.75	0	12.25	1.75	0.17	5.250	1.75	0.70
5.40	11.25	0	65.25	4.50	0	36.00	22.50	2.25

Source: Primary Survey.

Table (5.10) gives a general picture on the amount of outstanding debt of the farmers in each district. It shows the exact amount of total outstanding debt. Amount of outstanding in Palakkad district is comparatively low compared with other two districts. In order to make the analysis clearer, total amount of outstanding is categorized into five categories; from outstanding Rs50000 to above Rs200000. The district wise outstanding debt of each loan is given in table (5.11).

Table 5.11

Total outstanding debt of sample farmers in Palakkad

Outstanding	First loan	Second loan	Third loan and other	Total
Below 50000	8 (10.81)	10 (13.51)	56 (75.68)	74 (100)
50000-100000	13 (50)	12 (46.15)	1 (3.85)	26 (100)
100000-150000	4 (57.14)	2 (28.57)	1 (14.29)	7 (100)
150000-200000	1 (50)	1 (50)	0	2 (100)
Above 200000	3 (42.86)	4 (57.14)	0	7 (100)
Total outstanding debt of sample farmers in Thrissur				
Below 50000	27 (40.91)	6 (9.09)	33 (50)	66 (100)
50000-100000	22 (75.86)	7 (24.14)	0	29 (100)
100000-150000	1 (50)	1 (50)	0	2 (100)
150000-200000	5 (71.45)	1 (14.29)	1 (14.29)	7 (100)
Above 200000	16 (88.89)	2 (11.11)	0	18 (100)
Total outstanding debt of sample farmers in wayanad				
Below 50000	7 (5.93)	16 (13.56)	95 (80.51)	118 (100)
50000-100000	25 (54.35)	18 (39.13)	3 (6.52)	46 (100)
100000-150000	10 (66.67)	2 (13.33)	3 (20)	15 (100)
150000-200000	8 (44.44)	6 (33.33)	4 (22.22)	18 (100)
Above 200000	3 (20)	11 (73.33)	1 (6.67)	15 (100)

Source: Primary Survey.

Table 5.12

Total loan outstanding debt of farmers

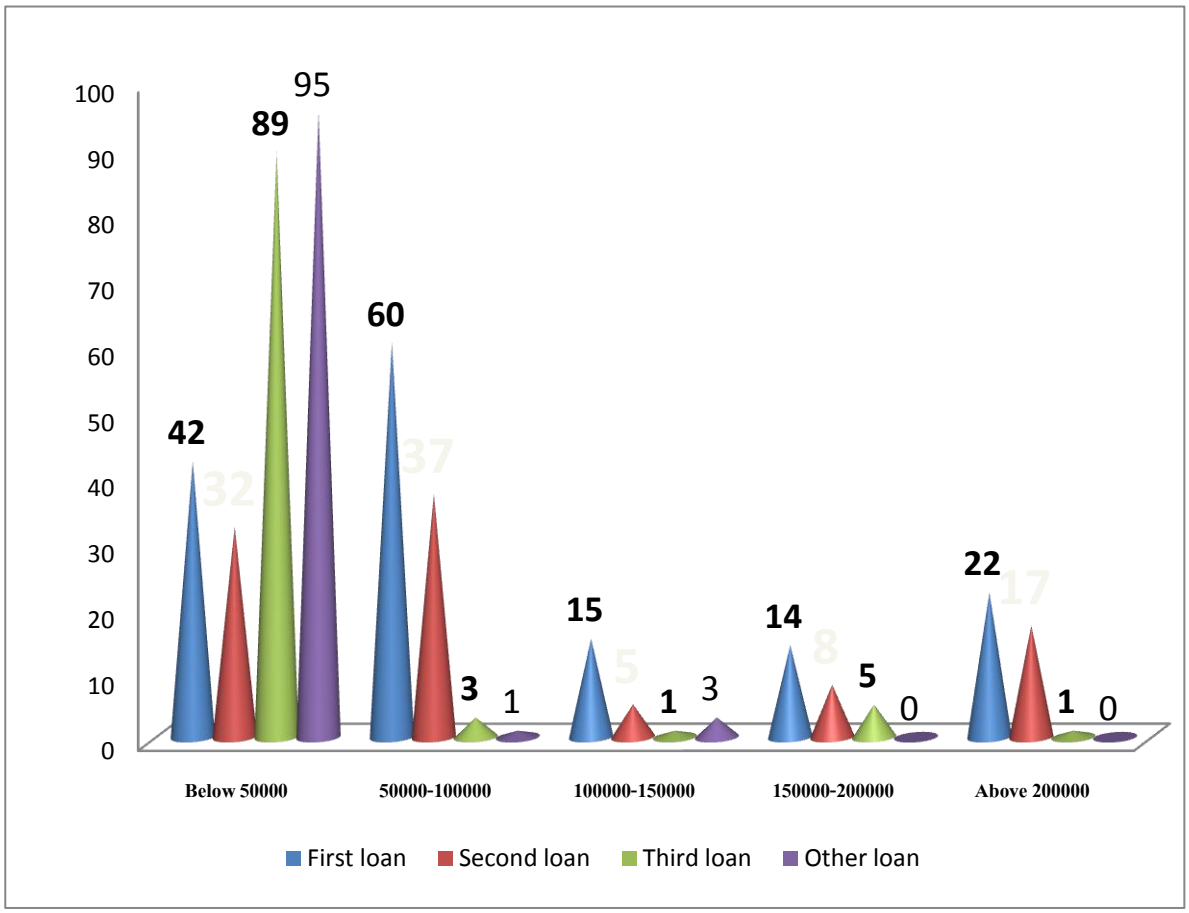
Outstanding	First loan	Second loan	Third loan	Other loan	Total
Below 50000	42 (16.28)	32 (12.40)	89 (34.49)	95 (36.82)	258 (100)
50000-100000	60 (59.41)	37 (36.63)	3 (2.97)	1 (0.99)	101 (100)
100000-150000	15 (62.5)	5 (20.83)	1 (4.17)	3 (12.5)	24 (100)
150000-200000	14 (51.85)	8 (29.63)	5 (18.52)	0	27 (100)
Above 200000	22 (55)	17 (42.5)	1 (2.5)	0	40 (100)

Source: Primary Survey.

There were differences in the amount of outstanding debt among the agricultural category of farmers with respect to the number of loans and the districts can be seen from the above tables (5.11 and 5.12). The variations could be on account of the differences in their level of agricultural holdings, production, cropping pattern and level of prices and commercialization of agriculture.

Figure 5.2

Total loan outstanding debt of sample respondents



Source: Primary Survey

Table 5.13

Total outstanding of debt of the sample farmer by agricultural category across districts

District	Total outstanding	Agricultural category			Total
		LF	SF	MF	
Palakkad	Below 50000	0	52 (91.2)	5 (8.8)	57 (100)
	50000-100000	0	10 (71.4)	4 (28.6)	14 (100)
	100000-150000	0	11 (100)	0	11 (100)
	150000-200000	1 (12.5)	5 (62.5)	2 (25)	8 (100)
	Above 200000	0	4 (40)	6 (60)	10 (100)
	Total	1 (1)	82 (82)	17 (17)	100 (100)
Thrissur	Below 50000	1 (2.0)	46 (90.2)	4 (7.8)	51 (100)
	50000-100000	0	18 (81.8)	4 (18.2)	22 (100)
	100000-150000	0	1 (33.3)	2 (66.7)	3 (100)
	150000-200000	1 (20)	3 (60)	1 (20)	5 (100)
	Above 200000	1 (5.3)	14 (73.7)	4 (21.1)	19 (100)
	Total	3 (3)	82 (82)	15 (15)	100 (100)
Wayanad	Below 50000	0	23 (71.9)	9 (28.1)	32 (100)
	50000-100000	1 (6.3)	11 (68.8)	4 (25)	16 (100)
	100000-150000	0	7 (53.8)	6 (46.2)	13 (100)
	150000-200000	0	6 (66.7)	3 (33.3)	9 (100)

	Above 200000	7 (23.3)	12 (40)	11 (36.7)	30 (100)
	Total	8 (8)	59 (59)	33 (33)	100 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (5.13) provides the distribution of the sample farmers by their total outstanding levels. The highest percent of the farmers having liability of rupees below 50000 in all the three districts followed by 50000 to 100000, and above 200000. On the other, the lowest percent outstanding of debt was rupees 150000 to 200000.

Total loan outstanding based on the number of loan wise analysis showed that majority of farmers have the agricultural loan. This intensity of indebtedness is increasing as the number of loans increases. It can be evident from the tables (5.10, 5.11 and 5.12) that the same farmers have different types of loans from different sources. Initially, they took loan from commercial banks or other institutional agencies by giving their land as security. In Palakaad district, loan is even availed without any security. This loan can be availed by the Palakkad farmers without any security. At the same time, these same farmers take loan from other banks by giving gold as security. This is because of the inadequate amount of loan getting from the scheduled commercial banks for agricultural purposes. Sine majority of farmers are poorer they cannot meet their necessities by their insufficient income; farmers persuade to take loan from other non-institutional sources also at a higher rates of interest. Sometimes, it is because of the time lag taken by the institutional sources. In this way farmers take more than one loan from different formal and informal sources.

Table 5.14

Renewable Pattern of agricultural Loan

Amount of Debt	**Renewable Pattern of first Loan**						**Total**
	No loan	**Regularly renew loan**	**Renewed loan once**	**Renewed loan twice**	**Renewed loan twice**	**Never renewed loan**	
<50000	16 (16.5)	63 (64.9)	1 (1)	4 (4.1)	3 (3.1)	10 (10.3)	97 (100)
50000-100000	8 (15.4)	38 (73.1)	0	0	2 (3.8)	4 (7.7)	52 (100)

100000-150000	5 (18.5)	17 (63)	2 (7.4)	2 (7.4)	0	1 (3.7)	27 (100)
150000-200000	1 (4.5)	15 (68.2)	0	0	0	6 (27.3)	22 (100)
>200000	12 (20.3)	39 (66.1)	0	3 (5.1)	1 (1.7)	4 (6.8)	59 (100)
Total indebted	42 (16.34)	172 (66.93)	3 (1.17)	9 (3.50)	6 (2.33)	25 (9.73)	257 (100)
No debt	10 (23.3)	28 (65.1)	0	1 (2.3)	2 94.7)	2 (4.7)	43 (100)
Total	52 (17.3)	200 (66.7)	3 (1)	10 (.3)	8 (2.7)	27 (9)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

When farmers were not able to repay the loans within the stipulated time period, they were allowed the option of converting the loans into larger period loans. Details of such facilities extended by the agencies are presented in tables (5.14) and (see table 4.47) in the names of renewable pattern.

The duration of each type of loan differed from one to another among the institutional sources. The details are furnished in table (4.40 and 4.44). It could be seen that farmers have different types of loans from different agencies. The maximum number of loan for a sample farmer is 4 to 5. They renew loans regularly or once after the maturity period. The details regarding the renewable pattern of each loan of the farmers across the districts are depicted in table (5.15). Here, the renewable pattern of each loan is categorized into regularly renewed loans; renewed loan once, twice, thrice and never renewed loans. 92 loans were renewed regularly by the farmers from wayanad district; while 49 loans were never renewed. The picture is not different in other two districts. More than 80 loans were regularly renewed in Palakkad and Thrissur districts. At the same time, only 11 loans from Palakkad and 17 loans from Thrissur were never renewed. The renewable nature of loans is subject to the sufficiency of the loan amount. That means, many of the institutional loans are short term in character. It is found during the survey that, the maximum duration of a loan given by the institutional sources to a farmer is 2 or three years. More than that, the amount of loan is not sufficient to the farmers for their production purposes. Even if it is sufficient, he will diversify the amount for other unforeseen expenditures. In this context, the required amount of finance

will met by taking other loans from other agencies. Many times, it may be a jewel loan. After reaching the, maturity period of first loan, he will try to renew. The survey found that, many of the first loans was taken by the farmers from commercial banks at 7 percent rate of interest. From this, 3 percent will returned to the farmers by the bank through their bank account.

Table 5.15

Renewable pattern of all loans of sample respondents in Palakkad

Renewable pattern	First loan	Second loan	Three and above	Total
Regularly renewed loans	68 (80.95)	12 (14.29)	4 (4.76)	84 (100)
Renewed loan once	2 (22.22)	6 (66.67)	1 (11.11)	9 (100)
Renewed loan twice	6 (66.67)	3 (33.33)	0	9 (100)
Renewed loan thrice	1 (25)	1 (25)	2 (50)	4 (100)
Never renewed loan	2 (18.18)	5 (45.45)	4 (36.36)	11 (100)
Renewable pattern of all loans of sample respondents in Thrisuur				
Regularly renewed loans	70 (87.5)	10 (12.5)	0	80 (100)
Renewed loan once	1 (100)	0	0	1 (100)
Renewed loan twice	2 (100)	0	0	2 (100)
Renewed loan thrice	3 (100)	0	0	3 (100)
Never renewed loan	8 (47.06)	7 (41.18)	2 (11.76)	17 (100)
Renewable pattern of all loans of sample respondents in Wayanad				
Regularly renewed loans	62 (67.39)	25 (27.17)	5 (5.43)	92 (100)
Renewed loan once	0	10 (100)	0	10 (100)
Renewed loan twice	2 (22.22)	7 (77.78)	0	9 (100)
Renewed loan thrice	4 (33.33)	6 (50)	2 (16.67)	12 (100)
Never renewed loan	17 (34.69)	13 (26.53)	19 (38.78)	49 (100)

Source: Primary Survey.

Table (5.15) shows the renewable pattern of loans. It is evident from the table that lion shares of all borrowings were regularly renewed. It is because of the reason that the rate of interest charged for the first loan is lower than other loans. More specifically, even though the first loan was taken by the farmers at 7 percent rate of interest 3 percent is repaid to the farmers by the bank before reaching the maturity period. The failure of a sizeable amount of the agricultural loan given by the institutional agencies has been responsible for increase in the number of loans.

Borrowing is not a problem rather is an economic activity only when it is utilized for productive purposes. Farmers borrowed money from different institutional and non institutional agencies by expecting to repay the amount after harvesting. But, it will be a burden when he faces agricultural loss. It may be due to different reasons such as climatic factors, labour factors, price factors etc. It is an unforeseen expenditure for them. For meeting this unforeseen expenditure, they compel to borrow money by giving their land, gold, tax bill etc as security. This is one of the reasons for having more than one loan for a farmer. Here, it is very important to notice the amount of loss faced by the farmers. Amount of loss faced by the sample farmers across the agricultural category is presented in table (4.33). It is clear from the table that, 90 percent of the Small Farmers (SF) faces loss amount of Rs below 100000. While, 42.9 percent of Medium Farmers (MF) face loss amount of Rs above 50000 and 14.8 percent of Large Farmers (LF) faces loss of between Rs 30000 to Rs 40000.

5.3 Determinants of Agricultural Indebtedness

The following discussions analyses various factors related to agricultural indebtedness. That is whether there exists any relationship between the prevalence of indebtedness and factors such as education, size of land holdings, family size, price volatility, sources of borrowing, nature of loans and like that.

5.3.1 Educational Status

The head of the family (farmer in this study) was the decision maker mostly in regard to production decisions and household expenditure. Therefore, his educational status would have a profound influence in the financial management of farm and hence and in turn, on the need of credit. In this aspect, education is considered to be an important determinant of indebtedness. It also affects the farmers borrowing habit, ability to use credit in more effective ways, time management of repayment of the loan etc

Table 5.16

Level of indebtedness and educational status of sample respondents

Amount of debt	**Education**					**Total**
	Illiterate	**Primary**	**Secondary**	**Higher secondary**	**Degree and others**	
< 50000	10 (10.3)	29 (29.9)	38 (39.2)	12 (12.4)	8 (8.2)	97 (100)
50000-100000	6 (11.5)	7 (13.5)	27 (51.9)	5 (9.6)	7 (13.5)	52 (100)
100000-150000	1 (3.7)	8 (29.6)	16 (59.3)	1 (3.7)	1 (3.7)	27 (100)
150000-200000	2 (9.1)	7 (31.8)	9 (40.9)	1 (4.5)	3 (13.6)	22 (100)
> 200000	7 (11.9)	18 (30.5)	22 (37.3)	9 (15.3)	3 (5.1)	59 (100)
Total indebted	26 (10.12)	69 (26.85)	112 (43.58)	28 (10.89)	22 (8.56)	257 (100)
No debt	6 (14)	13 (30.2)	21 (48.8)	2 (4.7)	1 (2.3)	43 (100)
Total	32 (10.7)	82 (27.3)	133 (44.3)	30 (10)	23 (7.7)	300 (100)

Source: Primary Survey

. The education profile of sample farmer is presented in table (4.9). Usually it is hypothesized that the well educated farmers are likely to be non-defaulters. Because, the awareness about the net result of a defaulter and a non-defaulter. Let us make an analysis of indebtedness with the education of farmers. The distribution of 300 sample households by their educational status with the level of indebtedness is presented in table (5.16).

Table 5.17

Total Indebtedness and religion wise distribution of sample respondents

Amount of Debt	Religion			Total
	Hindu	Christian	Muslim	
<50000	75 (77.3)	18 (18.6)	4 (4.1)	97 (100)
50000-100000	44 (84.6)	7 (13.5)	1 (1.9)	52 (100)
100000-150000	24 (88.9)	2 (7.4)	1 (3.7)	27 (100)
150000-200000	14 (63.6)	7 (31.8)	1 (4.5)	22 (100)
>200000	48 (81.4)	7 (11.9)	4 (6.8)	59 (100)
Total indebted	205 (79.77)	41 (15.95)	11 (4.28)	257 (100)
no debt	33 (76.7)	7 (16.3)	3 (7)	43 (100)
Total	238 (79.3)	48 (16)	14 (4.7)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

The incidence of indebtedness across the religion and across the social group is shown in tables (5.17 and 5.18). It is observed that the incidence of borrowing is higher in Muslim according to total percentage of share of total sample across religion.

Table 5.18

Classification of indebted farmers according to social group

Amount of Debt	Social group					Total
	General	OBC	SC	ST	Others	
<50000	35 (36.1)	49 (50.5)	5 (5.2)	5 (5.2)	3 (3.1)	97 (100)
50000-100000	12 (23.1)	30 (57.7)	4 (7.7)	4 (7.7)	2 (3.8)	52 (100)
100000-150000	5 (18.5)	18 (66.7)	0	1 (3.7)	3 (11.1)	27 (100)
150000-200000	8 (36.4)	11 (50)	1 (4.5)	1 (4.5)	1 (4.5)	22 (100)
>200000	18 (30.5)	28 (47.5)	5 (8.5)	8 (13.6)	0	59 (100)
Total indebted	78 (30.35)	136 (52.92)	15 (5.84)	19 (7.39)	11 (4.28)	257 (100)
no debt	10 (23.3)	22 (51.2)	3 (7)	4 (9.3)	4 (9.3)	43 (100)
Total	88 (29.3)	158 (52.7)	18 (6)	23 (7.7)	13 (4.3)	(100)

Source: Primary Survey, Note: values in brackets are percentages

While across the social group, the incidence of indebtedness is more among SC and ST group according to percent share.

5.3.2 Experience of farming

There may be a decrease in borrowing as increase in experience in farming. With this hypothesis let us check out the relation between debt with experience of farming.

Table 5.19

Experience of farming and level of indebtedness of sample respondents

Amount of Debt	Experience of farming				Total
	Hereditary	1-5 years	6-10 years	>10 years	
<50000	78 (80.4)	3 (3.1)	5 (5.2)	11 (11.3)	97 (100)
50000-100000	40 (76.9)	3 (5.8)	3 (5.8)	6 (11.5)	52 (100)
100000-150000	19 (70.4)	4 (14.8)	1 (3.7)	3 (11.1)	27 (100)
150000-200000	19 (86.4)	1 (4.5)	0	2 (9.1)	22 (100)
>200000	51 (86.4)	3 (5.1)	1 (1.7)	4 (6.8)	59 (100)
Total indebted	207 (80.54)	14 (5.45)	10 (3.89)	26 (10.12)	257 (100)
no debt	33 (76.7)	2 (4.7)	1 (2.3)	7 (16.3)	43 (100)
Total	240 (80)	16 (5.3)	11 (3.7)	33 (11)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

5.3.3 Size of the family

Size of the family might influence the demand for credit in two ways; first larger the family, higher would be the cost of living and it would go with higher demand for credit either to meet the short-fall in family budget or for investment in efforts to increase income of the family, the first part for unproductive purposes where as the last for productive credit. Second, larger the family more might be the number of earners and that might generate additional income for productive investment after meeting consumption needs and less

might be the demand for credit. In this family, it also helps to reduce the debt burden of a farmer household (table 5.20). On the other hand, it will help the farmer household from heavy overdue. The survey found that, the average size of the family was about five (4.44) persons for the sample as a whole. A notable feature is that, majority of the family have more earners than dependents. It is very clear from the age wise distribution of sample farmers in table (4.7).

Table 5.20

Level of indebtedness with respect to size of the family of the sample respondents

Amount of Debt	Family size				Total
	1-3	3-5	5-7	>7	
<50000	26 (26.8)	46 (47.4)	21 (21.6)	4 (4.1)	97 (100)
50000-100000	17 (32.7)	28 (53.8)	5 (9.6)	2 (3.8)	52 (100)
100000-150000	12 (44.4)	10 (37)	4 (14.8)	1 (3.7)	27 (100)
150000-200000	6 (27.3)	9 (40.9)	5 (22.7)	2 (9.1)	22 (100)
>200000	15 (25)	28 (46.7)	11 (18.3)	6 (10)	60 (100)
Total indebted	76 (29.57)	121 (47.08)	46 (17.89)	15 (5.84)	257 (100)
no debt	13 (30.2)	23 (53.5)	6 (14)	1 (2.3)	43 (100)
Total	89 (29.6)	144 (47.8)	52 (17.3)	16 (5.3)	301 (100)

Source: Primary Survey, Note: values in brackets are percentages

5.3.4 Price volatility

The negative consequences of low agricultural yield extend from precarious income of farmers to large tracts of land locked in low value agriculture, despite growing demand for high value products such as fruits, vegetables, livestock products because of consumption diversification with rising income and urbanization (see table 4.32). According to NSSO data, the average annual income of the Medium Farmers (MF) net of production costs

from cultivation is less than Rs20000. This includes produce that farmers did not sell (presumably used for self-consumption) valued at local market prices. Given high wages between retail and farm gate price, this might under estimate income but it is still low. Moreover, the variance in agriculture income between the more and less productive states is also very stark. It is observed from the survey that, price is always unstable for many crops. Table (5.21) elicits the number of times the price is changed for the last three years. Price volatility is more evident for plantation crops. From the field survey, it is observed for crops such as paddy, ginger, vegetables, rubber and coconut. Regarding paddy, supply Co gives a price directly to the farmers after harvesting. But it is always unstable price varied as Rs9, Rs12, Rs13, Rs11 and Rs16 per kg. Sometimes, it will take more time to reach to farmers. Coming to ginger, price is always fluctuating especially during june-july. At this time, farmers will not go for harvest and kept ginger expecting hike in price. But, in many cases it will affect farmers badly as damages, crop failures and low prices.

Table 5.21

Amount of indebtedness and change in prices

Amount of Debt	Number of price change paddy				Total
	No change	3 times	4 times	>4 times	
<50000	17 (17.5)	39 (40.2)	35 (36.1)	6 (6.2)	97 (100)
50000-100000	5 (9.6)	21 (40.4)	14 (26.9)	12 (23.1)	52 (100)
100000-150000	2 (7.4)	10 (37)	10 (37)	5 (18.5)	27 (100)
150000-200000	5 (22.7)	8 (36.4)	7 (31.8)	2 (9.1)	22 (100)
>200000	9 (15.3)	22 (37.3)	22 (37.3)	6 (10.2)	59 (100)
Total indebted	38 (14.79)	100 (38.91)	88 (34.24)	31 (1.17)	257 (100)
no debt	8 (18.6)	15 (34.9)	15 (34.9)	5 (11.6)	43 (100)
Total	46 (15.3)	115 (38.3)	103 (34.3)	36 (12)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table 5.22

Principal source of income and level of indebtedness of sample respondents

Amount of Debt	Principal income source				Total
	Cultivation	Farming other than cultivation	Salaried employment	Others including Pensions	
<50000	79 (81.4)	1 (1)	12 (12.4)	5 (5.15)	97 (100)
50000-100000	39 (75)	0	7 (13.5)	6 (11.5)	52 (100)
100000-150000	23 (85.2)	0	3 (11.1)	1 (3.7)	27 (100)
150000-200000	18 (81.8)	0	3 (13.6)	1 (4.5)	22 (100)
>200000	57 (96.6)	1 (1.7)	0	1 (1.7)	59 (100)
Total indebted	216 (84.05)	2 (0.78)	25 (9.73)	14 (5.45)	257 (100)
no debt	38 (88.4)	1 (2.3)	0	4 (9.30)	43 (100)
Total	254 (84.7)	3 (1)	25 (8.3)	18 (6)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (5.22) sheds light on the existence of inequality in the land holding pattern and its possible impact on the farmers borrowing capacity. The percentage distribution of sample farmers based on size of holding across the districts is presented in table (5.23). The analysis of indebtedness with the size of land holdings reveals significant relation. Therefore, we can understand that the size of land holding is a determinant of borrowing. The amount of debt is very high as far a farmer holding more and large area of land. As the area of land is high cost of production is also very high. Farmers can produce more with less cost only by economies of scale. The cost can be reduced with the application of HYV seeds and fertilizers and only with the mechanization. It needs the urgency of credit. Since the plantation crops are large farmers need long term credit. This time they didn't get the reasonable prices or the price they

have expected. Thus the farmers compel to find out other sources for their credit needs and thus amount of debt is increasing day by day.

5.3.5 Size of land holding

The size of holdings would be an important one among the economic variables influencing the demand for credit. The practice of lease-in and leasing-out lands could be seen during the survey; area operated and area owned are differed. Larger the area owned higher would be the credit-worthiness of farmers because land provided the best security. Farmers would then be able to both borrow and repay loans easily. Even when area owned was small, farmers can increase the area of operation by leasing-in land. If the income net of operational cost and rent was positive, it would be rational to lease-in land. The prospective incremental income from land would increase the repaying capacity of farmers and improve their credit-worthiness. Therefore, the sizes of area of land owned and cultivated by the sample farmers are also studied.

Table 5.23

Indebtedness with respect to size of land holdings of sample respondents

Amount of Debt	Size of land holdings (in cents)					Total
	<200	200-300	300-400	400-500	>500	
<50000	29 (29.9)	18 (18.6)	13 (13.4)	10 (10.3)	27 (27.8)	97 (100)
50000-100000	15 (28.8)	14 (26.9)	5 (9.6)	7 (13.5)	11 (21.2)	52 (100)
100000-150000	4 (14.8)	6 (22.2)	4 (14.8)	5 (18.5)	8 (29.6)	27 (100)
150000-200000	6 (27.3)	6 (27.3)	0	3 (13.6)	7 (31.8)	22 (100)
>200000	13 (21.7)	9 (15)	10 (16.7)	7 (11.7)	21 (35)	59 (100)
Total indebted	66 (25.68)	53 (20.62)	32 (12.45)	32 (1.25)	74 (28.79)	257 (100)
no debt	18 (41.9)	4 (9.3)	4 (9.3)	8 (18.6)	9 (20.9)	43 (100)
Total	84 (28.2)	57 (18.9)	36 (12)	40 (13.3)	83 (27.6)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

The analysis on size of land holdings with the amount of debt gives a positive correlation. Farmers having more land holdings also have a significantly larger amount of debt. So as revealed earlier (table 4.24) not only the average size of cropped area across crops were a determinant of farmer debt situation; but the gross cropped area is also a determinant in this regard.

Analysis on indebtedness with respect to age of the farmers indicates that there is no significant relation between indebtedness and the age of the farmers. This finding is disagreeing with the findings made by Vinay Jayappa (2006). He found that, the middle age group is more likely to be in debt than younger or older farmers. According to him, this is the age when a large number of decisions are made for the households. Here, what makes the difference is that, all age group except from the age 25 (younger group) to the older group shows the similar trend. At the same time, this study found that, majority of the indebted farmers belong to the age group from 50-60 and above 60. The study also found that, majority of the decisions relating to farming and other economic activities are made by the head of the households. The value of chi square also proves the same by giving the value greater than 0.05, which ultimately means that, there is no significant difference between the age group and level of indebtedness.

Table 5.24

Age composition and level of indebtedness of sample respondents

Amount of Debt	**Age**					**Total**
	Below 25	**25-40**	**40-50**	**50-60**	**>60**	
<50000	0	5 (5.2)	21 (21.6)	19 (19.6)	52 (53.6)	97 (100)
50000-100000	1 (1.9)	6 (11.5)	9 (17.3)	13 (25)	23 (44.2)	52 (100)
100000-150000	0	0	3 (11.1)	10 (37)	14 (51.9)	27 (100)
150000-200000	0	2 (9.1)	3 (13.6)	5 (22.7)	12 (54.5)	22 (100)
>200000	0	4 (6.7)	10 (16.7)	15 (25)	31 (51.7)	59 (100)

Total indebted	1 (0.39)	17 (6.61)	46 (17.89)	62 (24.12)	132 (51.36)	257 (100)
no debt	0	3 (7)	5 (11.6)	15 (34.9)	20 (46.5)	43 (100)
Total	1 (0.3)	20 (6.6)	51 (16.9)	77 (25.6)	152 (50.5)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages.

More than 50 percent of the older farmers have more amount of debt from different sources. We have already seen the different sources of debt and its utilization pattern in the previous chapter.

Table 5.25

Level of indebtedness and rate of interest of total borrowing of the sample respondents

Amount of Debt	**Rate of interest**				
	below 5	**5-10**	**10-15**	**15-20**	**Total**
<50000	69 (71.1)	17 (17.5)	9 (9.3)	2 (2.1)	97 (100)
50000-100000	37 (71.2)	11 (21.2)	4 (7.7)	0	52 (100)
100000-150000	19 (70.4)	5 (18.5)	2 (7.4)	1 (3.7)	27 (100)
150000-200000	16 (72.7)	2 (9.1)	3 (13.6)	1 (4.5)	22 (100)
>200000	43 (72.9)	9 (15.3)	6 (10.2)	1 (1.7)	59 (100)
Total indebted	184 (71.59)	44 (17.12)	24 (9.34)	5 (1.95)	257 (100)
no debt	30 (69.8)	7 (16.3)	5 (11.6)	1 (2.3)	43 (100)
Total	214 (71.3)	51 (17)	29 (9.7)	6 (2)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table 5.26

Level of indebtedness and monthly farm income of sample respondents

Amount of Debt	Monthly Farm Income						Total
	Below 10000	10000-20000	20000-30000	30000-40000	40000-50000	>50000	
<50000	14 (14.4)	20 (20.6)	14 (14.4)	7 (7.2)	3 (3.1)	39 (40.2)	97 (100)
50000-100000	13 (25)	7 (13.5)	3 (5.8)	4 (7.7)	4 (7.7)	21 (40.4)	52 (100)
100000-150000	4 (14.8)	8 (29.6)	3 (11.1)	4 (14.8)	2 (7.4)	6 (22.2)	27 (100)
150000-200000	9 (40.9)	2 (9.1)	0	2 (9.1)	1 (4.5)	8 (36.4)	22 (100)
>200000	11 (18.3)	5 (8.3)	11 (18.3)	2 (3.3)	0	31 (51.7)	59 (100)
Total indebted	51 (19.84)	42 (16.34)	31 (12.06)	19 (7.31)	10 (3.89)	105 (40.86)	257 (100)
No debt	12 (27.9)	9 (20.9)	1 (2.3)	3 (7)	4 (9.3)	14 (32.6)	43 (100)
Total	63 (20.9)	51 (16.9)	32 (10.6)	22 (7.3)	14 (4.7)	119 (39.5)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	41.397[a]	25	.021
Likelihood Ratio	46.259	25	.006
Linear-by-Linear Association	.247	1	.619
N of Valid Cases	300		

a. 17 cells (47.2%) have expected count less than 5. The minimum expected count is 1.03.

The value of correlation between debt and monthly farm income of a farmer is negative. It justifies a negative correlation between these two variables. As the monthly income increases, the amount of debt decreases and vice-versa. From the chi square analysis (p=0.02 which is less than 0.05), it revealed that there is a significant relation between monthly farm income with the level of indebtedness.

Table 5.27

Number of crops and amount of indebtedness of the sample respondents

Amount of Debt	Total Crops Number						Total
	Single crop	Two crops	Three crops	Four crops	Five crops	>5 crops	
<50000	34 (35.1)	29 (29.9)	15 (15.5)	3 (3.1)	10 (10.3)	6 (6.1)	97 (100)
50000-100000	14 (26.9)	19 (36.5)	10 (19.2)	6 (11.5)	1(1.9)	2 (3.8)	52 (100)
100000-150000	7 (25.9)	14 (51.9)	2 (7.4)	3 (11.1)	1 (3.7)	0	27 (100)
150000-200000	5 (22.7)	7 (31.8)	3 (13.6)	3 (13.6)	2 (9.1)	2 (9.09)	22 (100)
>200000	15 (25.4)	19 (32.2)	7 (11.9)	8 (13.6)	6 (10.2)	4 (6.8)	59 (100)
Total indebted	75 (29.18)	88 (34.24)	37 (14.39)	23 (8.95)	20 (7.78)	14 (5.45)	257 (100)
No debt	20 (46.5)	8 (18.6)	9 (20.9)	1 (2.3)	3 (7)	2 (4.7)	43 (100)
Total	95 (31.7)	96 (32)	46 (15.3)	24 (8)	23 (7.7)	16 (5.33)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

There is close association between the level of indebtedness and the number of crops cultivated by the farmers. Table (5.27) reveals that, the intensity of debt is high (34.24 percent) for farmers cultivating two crops only. 29.18 percent of farmers are indebted who cultivate only single crops. Therefore, it can be inferred that, the amount of debt is high with the increase in number of crops cultivated.

This section focuses on the overall asset position of the indebted farmers by their borrowing in the sample population. The analysis on the debt position of the farmers in relation with the asset holdings can be seen from the following discussions.

5.3.6 Assets and liabilities

Assets and liabilities would indicate the credit-worthiness of the farm households. Moreover, the nature of assets and liabilities would influence the credit requirements of farmers. All types of farm assets like land, buildings, farm machineries and equipments were included in the study. The value of durables is measured based on the actual money value of each asset. The amount of debt in relation to the value of all assets is presented in table (5.28). The value of asset varied between Rs 200000 to Rs 300000 and more than Rs 500000 among the sample farmers. The pattern of asset holding among the sample farmers is described in table (4.12) by presenting the frequency of farmers possessed by each type of asset across the agricultural category such as durables and agricultural implements. This was indicative of the sound financial position of the selected farm households.

Table 5.28
Amount of indebtedness and value of assets possessed by the sample households

Amount of Debt	Asset Value of Durables				Total
	20000-30000	30000-40000	40000-50000	>50000	
<50000	2 (2.1)	0	1 (1)	94 (96.9)	97 (100)
50000-100000	0	1 (1.9)	0	51 (98.1)	52 (100)

100000-150000	0	0	0	27 (100)	27 (100)
150000-200000	0	1 (4.5)	0	21 (95.5)	22 (100)
>200000	1 (1.7)	0	0	59 (98.3)	59 (100)
Total indebted	3 (1.17)	2 (0.78)	1 (0.39)	252 (98.05)	257 (100)
No debt	0	0	0	43 (100)	43 (100)
Total	3 (1)	2 (0.7)	1 (0.3)	295 (98)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

As seen in table (5.28), the value of asset increases when the amount of debt decreases. One of the important observations during the survey is that, land and jewels are the most important forms of farm assets conforming to the rural situation. Therefore the percent of indebted farmers is very high among the category of the value of asset is more than Rs 50000. Thus the value from >Rs 50000 (column 5 in table (5.28); provided the higher percentage.

We have seen the distribution of sample farmers possessing different types of assets across the districts from table (4.12). In relation with this table, total value of assets in association with level of indebtedness is presented in table (5.29). The chi-square value is also worked out to know the relation between the extents of indebtedness with the value of assets as one of the determinants of indebtedness. This shows that there is a significant positive relation. It gives an indication that, the extent of indebtedness is very high as the value of asset is high and vice versa. This was indicative of the sound financial position of the farmers. Institutional lending to such farmers would not be a risky one as generally believed (K.S.S Uduman Mohideen, 1991).

5.3.7 Number of Loans

Number of loans taken by the famers is one of the prominent determining factors that aggravate the problem of indebtedness. Incidence of indebtedness increases with increase in number of loans. The survey found that, many of the farmers hold multiple numbers of loans during the same duration.

Details regarding the number of loans hold by the sample respondents are presented in table (5.29).

Table 5.29

Amount of indebtedness with the number of loans holds by the sample respondents

Amount of Debt	No. of Loans				Total
	1st (single loan)	2nd (Two loans)	3rd (Three loans)	>3 and other loans	
<50000	53 (54.6)	16 (16.5)	9 (9.3)	19 (19.59)	97 (100)
50000-100000	26 (50)	14 (26.9)	4 (7.7)	8 (15.4)	52 (100)
100000-150000	14 (51.9)	5 (18.5)	3 (11.1)	5 (18.5)	27 (100)
150000-200000	11 (50)	9 (40.9)	1 (4.5)	1 (4.5)	22 (100)
>200000	26 (44.1)	19 (32.2)	3 (5.1)	11 (18.64)	59 (100)
Total indebted farmers	130 (50.59)	63 (24.51)	20 (7.78)	44 (17.12)	257 (100)
No debt	26 (60.5)	7 (16.3)	2 (4.7)	8 (18.6)	43 (100)
Total	156 (52)	70 (23.3)	22 (7.3)	52 (17.33)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Amount of borrowing and the number of loans taken have already explained in fourth chapter. Here we try to relate the amount of debt with the number of loan taken by the sample farmers. Table (5.29) shows that, among the total indebted farmers (85.66 percent), 48.46 percent (63/130) depends on two loans and 15.38 percent holds the burden of three loans. It can be seen from the table that, in 5th column (others), 16.9 percent of the indebted farmers have indebted more than Rs200000. The reason behind it is the nature of farming and the utilization pattern of each loan they have availed. From the survey it is identified that, these farmers engage in group farming rather than single

farming. So, they are in a group and this amount is the total indebtedness of that group.

Table 5.30

Nature and amount of borrowing of the sample respondents

Amount of Debt	Nature of Agricultural Loan					Total
	Others	Ancestral Loan	Loan Contract in Cash	Loan on Collateral	Loan Contracted Partly in Cash and Partly in Kind	
<50000	17 (17.5)	9 (9.3)	6 (6.2)	65 (67)	0	97 (100)
50000-100000	8 (15.4)	2 (3.8)	0	41 (78.8)	1 (1.9)	52 (100)
100000-150000	5 (18.5)	2 (7.4)	1 (3.7)	18 (66.7)	1 (3.7)	27 (100)
150000-200000	1 (4.5)	2 (9.1)	1 (4.5)	17 (77.3)	1 (4.5)	22 (100)
>200000	12 (20.3)	7 (11.9)	1 (1.7)	39 (66.1)	0	59 (100)
Total indebted	43 (16.73)	22 (8.56)	9 (3.50)	180 (70.04)	3 (1.17)	257 (100)
No debt	10 (23.3)	3 (7)	3 (7)	27 (62.8)	0	43 (100)
Total	53 (17.7)	25 (8.3)	12 (4)	207 (69)	3 (1)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (5.30) shows the nature of loan of the farmers, those who hold single loan. As explained in earlier table (4.42), 70.03 percent of total indebted farmers have been taken loan against collateral securities. Among these collateral securities, 52.92 percent of loan was based on tax bill, then on land. The interesting fact to notice is that, when we analyses the amount of debt with the nature of loan, it can be seen that, most of the loan have been taken against jewels or gold and land rather than tax bill.

5.3.8 Duration of Borrowing

Duration of loans taken by the farmers is categorized into three as short term, medium term and long term. Majority (71.59 percent) of the sample farmers hold short term loans. Only 5.45 percent are indebted on medium term loans and long term constitutes 6.61 percent. It is because of the nature of agricultural credit provided by the institutions (table 5.31).

Table 5.31

Duration of loans taken by the sample respondents

Amount of Debt	Type				Total
	No loan	Short Term	Medium Term	Long Term	
<50000	16 (16.5)	69 (71.1)	5 (5.2)	7 (7.2)	97 (100)
50000-100000	8 (15.4)	40 (76.9)	2 (3.8)	2 (3.8)	52 (100)
100000-150000	5 (18.5)	19 (70.4)	2 (7.4)	1 (3.7)	27 (100)
150000-200000	1 (4.5)	18 (81.8)	2 (9.1)	1 (4.5)	22 (100)
>200000	12 (20.3)	38 (64.4)	3 (5.1)	6 (10.2)	59 (100)
Total indebted	42 (16.34)	184 (71.59)	14 (5.45)	17 (6.61)	257 (100)
No debt	10 (23.3)	27 (62.8)	1 (2.3)	5 (11.6)	43 (100)
Total	52 (17.3)	211 (70.3)	15 (5)	22 (7.3)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Majority of the short term loans are availed from co-operative banks with 4 percent rate of interest. Farmers depend on non-institutional sources for medium and long term loans even at higher rate of interest. Table (5.31) depicts the duration of loans taken by the sample respondents.

Table 5.32

Period of loan taken by the sample respondents

Amount of Debt	**Period**						**Total**
	0	**Less than one month**	**1-3 months**	**3-6**	**6-non year**	**> one year**	
<50000	16 (16.5)	1 (91)	1 (1)	2 (2.1)	2 (2.1)	75 (77.3)	97 (100)
50000-100000	8 (15.4)	0	0	0	1 (1.9)	43 (82.7)	52 (100)
100000-150000	5 (18.5)	0	0	0	0	22 (81.5)	27 (100)
150000-200000	2 (9.1)	0	0	0	1 (4.5)	19 (86.4)	22 (100)
>200000	12 (20.3)	0	1 (1.7)	0	2 (3.4)	44 (74.6)	59 (100)
Total indebted	43 (16.73)	1 (0.39)	2 (0.78)	2 (0.78)	6 (2.33)	203 (78.99)	257 (100)
No debt	10 (23.3)	0	0	2 (4.7)	2 94.7)	29 (67.4)	43 (100)
Total	53 (17.7)	1 (0.3)	2 (0.7)	4 (1.3)	8 (2.7)	232 (77.3)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table 5.33

Type of Security for all loans taken by the sample respondents

Amount of Debt	Type of Security for Agricultural Loan						Total
	No loan	Without Security	Land	Tax Bill	Gold	Others	
<50000	16 (16.5)	11 (11.3)	18 (18.6)	41 (42.3)	9 (9.3)	2 (2.1)	97 (100)
50000-100000	8 (15.4)	5 (9.6)	11 (21.2)	25 (48.1)	2 (3.8)	1 (1.9)	52 (100)
100000-150000	5 (18.5)	5 (18.5)	7 (25.9)	10 (37)	0	0	27 (100)
150000-200000	1 (4.5)	3 (13.6)	1 (4.5)	14 (63.6)	1 (4.5)	2 (9.1)	22 (100)
>200000	12 (20.3)	3 (5.1)	10 (16.9)	29 (49.2)	4 (6.8)	1 (1.7)	59 (100)
Total indebted	42 (16.34)	27 (10.51)	47 (18.29)	119 (46.30)	16 (6.23)	6 (2.33)	257 (100)
No debt	10 (23.3)	5 (11.6)	11 (25.6)	17 (39.5)	0	0	43 (100)
Total	52 (17.3)	32 (10.7)	58 (19.3)	136 (45.3)	16 (5.3)	6 (2)	300 (100)

Source: Primary Survey, Note: values in brackets are percentages

For availing these loans farmers used different types of collateral securities like land, tax bill, gold and others. 46.3 percent loans were availed based on tax bill and 6.23 percent are gold loans. At the same time, 10.51 percent loans were given to the farmers by the agencies without any securities. Many times it will give on personal security basis. It is depicted in table (5.33)

Table 5.34

Incidence of indebtedness across social group

Outstanding	Palakkad				Thrissur				Wayanad			
	SC	ST	OBC	Others	SC	ST	OBC	Others	SC	ST	OBC	Others
Below 50000	2 (3.5)	0 (0)	42 (73.7)	13	6 (11.8)	0 (0)	21 (41.2)	24 (47.1)	1 (3.1)	7 (21.9)	15 (46.9)	9 (100)
50000-100000	0 (0)	0 (0)	11 (78.6)	3	5 (22.7)	0 (0)	10 (45.5)	7 (31.8)	1 (6.3)	3 (18.8)	5 (31.3)	7 (100)
100000-150000	0 (0)	0 (0)	9 (81.8)	2	0 (0)	0 (0)	2 (66.7)	1 (33.3)	2 (15.4)	4 (30.8)	4 (30.8)	3 (100)
150000-200000	0 (0)	0 (0)	7 (87.5)	1	0 (0)	0 (0)	3 (60)	2 (40)	0 (0)	2 (22.2)	5 (55.6)	2 (100)
Above 200000	0 (0)	0 (0)	6 (60)	4	0 (0)	0 (0)	9 (47.4)	10 (52.6)	1 (3.3)	7 (23.3)	9 (30)	13 (100)
Total	2	0 (0)	75	23	11 (11)	0 (0)	45 (45)	44	5	23	38	34 (100)

Source: Primary Survey, Note: values in brackets are percentages

Table (5.34) shows the incidence of indebtedness across the three social groups. It is observed that the incidence of borrowing is higher among the OBC households compared to the SC and ST households. It is very interest to note that the incidence of indebtedness is comparatively very high among the three social groups in between Rs 50000 to Rs 100000. The surveys do not find any ST farm household in Palakkad and Thrissur and thus ST borrowing also. In Wayanad, 23 percent of the ST farm households have debt. Among this, 7 percent had the loan outstanding below rupees 50000 and above rupees 200000. Of the total borrowers from the survey, majority of the sample households had borrowed in 'kind and cash' while 'other' constitutes a limited percentage.

Table 5.35

Determinants of indebtedness Among the sample Farmers-Multiple regression analysis

Palakkad	α	X_1	X_2	X_3	X_4	X_5	X_6	X_7
R^2=0.68	**2076**	0.63	1.34	3.63	-0.18	1.91	0.34	-0.18
	SE	0.84	0.05	1.11	1.36	0.42	0.22	0.93
	t	0.75	26.8*****	3.27*****	0.13	4.54*****	1.54	0.19
Thrissur	**1016**	0.94	2.84	2.82	-1.62	1.11	0.63	-0.17
R^2=0.68	**SE**	0.62	0.94	0.08	0.94	1.0.	0.47	0.59
	t	1.51	3.02*****	35.3*****	1.72	1.09	1.34	0.25
Wayanad	**986**	0.32	3.33	1.98	0.94	2.31	1.64	-0.18
R^2=0.48	**SE**	0.31	2.31	0.33	0.84	1.98	0.92	0.94
	t	1.02	1.44	6.00*****	1.11	1.96*****	1.78	0.91
Kerala (Pooled)	**2816**	0.94	2.82	1.94	0.87	0.48	2.93	-0.36
R^2=0.53	**SE**	0.91	0.45	0.64	1.83	0.002	0.03	1.8
	t	1.03	5.8*****	3.03*****	0.47	24*****	97.66*****	0.19

Note Starred values indicate statistical significance

Agriculture indebtedness in Kerala is one of the significant issues just like in any other state. In the previous pages we have seen that the

accumulation of debt is a consequence of many factors. To know its influence, a multiple regression model was estimated for the sample districts and for the state using a model.

$$Y = \infty + \sum_{i=1}^{7} \beta i \, Xi$$

Where,

Y= Debt

X_1 = Total income of the farmer

X_2 = Size of land holdings

X_3 = Cost of farming

X_4 = Value of Assets

X_5 = Number of loans

X_6 = Family size

X_7 = Age of the farmer

In the case of Palakkad district, the significant variables are X_2, X_3 and X_5. In Thrissur, the significant variables are X_2 and X_3. In Wayanad, the respective variable is X_3. For the pooled data, the variables are X_2, X_3, X_5 and X_6. Thus, we may infer that, the significant variables influencing debt are size of land holdings, cost of farming, number of loans and family size. Of these variables, almost all variables are significantly associated to farming operations. When farming operations increase, debt also increases. This is due to the gap between high farming cost and the low income.

In the present estimations, income is not turned out to be a significant factor, may be because of the underreporting of income data. It is observed that, bringing economies of scale in agricultural operations may bring

down the money burden and resultantly debt. Further, debt may de seem to be high because of the belief that one day these debts may be written off.

The extent of indebtedness is high among the farmers in wayanad and Palakkad districts compared with Thrissur district. The differences in crops, shifting of crops, unstable prices and climatic conditions are influenced the cultivation practices in Wayanad district. From the whole analysis it can be concluded that, the major determining factors that led to farmer's indebtedness are farm income, size of land holdings, cost of cultivation, number of loans, value of assets and size of the family.

Chapter VI

Summary Conclusions and Policy Implications

CHAPTER VI
SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

6.1 Introduction

Since credit is the kingpin of agriculture sector in Kerala economy, it has a significant role in supporting agricultural production and the wellbeing of the farming community in rural Kerala. As the farming becomes uneconomic, farmers are compelled to use more inputs and fertilizers in order to increase their agriculture production and productivity. It increases the demand for agricultural credit. But, the inadequate and untimely credit along with procedural hassles from formal institutions compels the rural farmers to take loans from informal source at exorbitant rates of interest (Satyasai, K.J.E 1988, Jeromy PD 2005, GOI 2010, AIDIS 2013). In Kerala, people living in rural areas characterised by landless labourers, rural artisans, small and marginal farmers, small entrepreneurs etc live on subsistence level and therefore they are caught in the vicious circle of poverty primarily due to their scarce budgets. Together with the structural changes and the shifts in cropping pattern from food crops to cash crops without a corresponding spurt in output prices, agricultural farmers in Kerala are faced in a situation of economic distress. It compelled the farmers to take more and more loans from different agencies even at higher rates of interest. It again questioned the survival and livelihood of the farmers leading to indebtedness of the peasantry. Given this background, it is worthwhile to examine the sources and utilization pattern of agricultural credit, determinants and extent of agricultural indebtedness in Kerala.

The study used both primary and secondary data. The primary data have been collected from three districts of Kerala; where, the incidence of

indebtedness is very high. A pre-tested schedule has been used for the data collection. A multi-stage random sampling technique has been adopted in selecting the farmers from three districts for the primary survey. The most commonly used averages, percentages; diagrammatic methods are used for the analysis of general characteristics of the primary data. The cost and return of each crop worked out to identify the real situation of agricultural production and there by identify the causes of agriculture indebtedness and its consequences. Multiple regression method is used to identify the determining factors of indebtedness. In order to check out, whether there exist significant relation between these factors with the level of indebtedness; chi square test and correlation techniques were used. Determinants of indebtedness have been examined in this study with multiple regression technique.

6.2 Major Findings

- As per AIDIS 2013, people depend on agriculture for livelihood is 58 percent.
- Institutional sources of agricultural credit flow have undergone structural change in favour of co-operative society and commercial banks.
- Share of co-operative society, RRBs and commercial banks were higher in total institutional credit.
- Meanwhile, money lenders, relatives and friends played a major role because of time constraints and insufficient amount provided by the institutional agencies.
- The co-operative banks which were the primary source of institutional credit to agriculture have witnessed a sharp consistent decline in their share in agriculture credit.
- Co-operative banks, particularly since the 1990s have lost their dominant position to commercial banks.

- In terms of total credit to agriculture, the share of cooperative banks during 2005-06 was less than half of what it was in 1992-93. While, the share of commercial banks including RRBs almost doubled during this period. Commercial banks placed a most remarkable performance during this time.
- The average size of the credit (per hectare credit) from the commercial bank has decreased.
- 52 percent are indebted, average debt per household is Rs47,000 in India during 2013-14.
- Incidence of indebtedness in Kerala is also very high.
- Share of indebted farmer in Kerala is 77.7 percent have an average liability of Rs2.14 lakh.
- As per 70th NSSO round (2013), AOD per household is Rs32522 for rural and Rs84625 for urban
- IOI very high in rural areas especially OBCs
- Agriculture debt to total debt (ratio) 73.30 percent
- IOI is 45.94 percent among cultivators across occupational category.
- Outstanding cash debt is higher in institutional agencies.
- 11 major crops were cultivated by the farmers across districts. Major crops cultivated by the sample respondents are paddy, areca nut, coconut, rubber, banana, pepper, coffee, ginger and vegetables.
- Cost of cultivation varies across the districts and across the agricultural category due to change in cropping pattern and economies of scale.
- Cost of cultivation is very high in Wayanad across the agricultural category. Because in Wayanad, number of crop is large and major crops are plantation crops.
- Across crops, average cost of cultivation is very high for ginger, banana, coffee and paddy. It is mainly because of the nature of crops (plantation crops).

- The highest average return earned by the farmers is from coffee, paddy and areca nut.
- There is an income variation among the sample farmers across the size of land holdings. Large Farmers (LF) earns more income than Small and Medium Farmers (SF and MF).
- Net return from crops like coconut and vegetables is negative. These crops subject to higher cost of production than the other crops.
- Low farm income leads farmers to borrow money from other sources.
- Majority of the farmers had more than one loan.

6.2.1 Sources and utilization pattern of agriculture credit

- More than 80 percent of sample farmers are indebted from different sources like co-operative banks, commercial banks, money lenders, friends and relatives etc.
- Dependency on non-institutional sources is higher with increase in the number of loans.
- Among the institutional agencies, co-operative banks and commercial banks played a major role
- Money lenders, relatives and friends are the important sources of credit among the non-institutional sources.
- Total agricultural debt outstanding is higher in Wayanad. It is because of the nature of crops.
- Since major part of the loan amount utilized for the purpose it is sanctioned, they utilized all other loans except one loan for unproductive purposes.
- Unexpected expenditure, crop failure, agriculture loss and low prices lead farmers to divert agriculture loan to other unproductive expenditure.
- The analysis between debt and size of the family results a negative correlation.
- 66.67 percent of the loan utilized for unproductive purposes.
- Number of loans and amount of loans also found a negative correlation.

6.2.2 Extent of agricultural indebtedness

- There is a relation between the amount of debt and districts and also the cropping pattern.
- Across the agricultural category, LF has more amounts of loans. Second position is played by MF
- Across the nature of loan, number of loans is very high based on contract in kind.
- Out of the 394 agricultural loans, 317 are contracted in kind and 40 are in cash.
- Primary data analysis also supports the findings of secondary data that the indebtedness is high among OBCs across the social group.
- The survey revealed that, there is variation in income, size of holding and asset position among the sample respondents.
- Based on the income category, the extent of indebtedness is high either among the small income groups or high income groups. The same trend can be found in case of asset and size of land holdings.
- 64.20 percent sample farmers default loans and only 35 percent farmers repaid loans regularly.
- Default is high among Small Farmer (SF) across the agricultural category.
- Across districts, farmers from Wayanad district reported more default.
- The average amount of outstanding is also high among farmers in wayanad.
- Amount of agriculture loss is also high in Wayanad across the districts.
- Number of loans is high among Small Famers (SF) and Medium Famers (MF) category.
- Insufficiency of single loan compelled farmers to take another loan from other non-institutional sources with high rates of interest for agricultural purposes.
- The rate of interest of each loan varies between 5 to 20 percentages.

- Majority of the farmers renewed every loan before reaching its maturity instead of closing the existing loan.
- 7.86 percent loans were found to be hereditary loans.
- Even if the intensity of agricultural loss is different across the category of farmers more than 85 percent of the farmers incurred agricultural losses. It is mainly because of climatic factors, price factors, labour factors etc.
- Indebtedness is high among SCs and STs across the social group and high among Muslim community across the religion.
- Amount of borrowing is different across the number of loans. Many of the famers hold first loan below Rs50000 at 4 percent rate of interest from co-operative banks.
- Farmers hold two, three or more than three loans from commercial banks and non-institutional sources like private financial institutions, friends, traders, relatives etc at rate of interest between 7 to 20.
- Amount of loan declines as the number of loans increased. At the same time, default and amount of outstanding of loans is very high.

6.2.3 Determinants of agricultural indebtedness

- Major determinants of agricultural indebtedness are income of the farmer, size of land holdings, cost of farming, and value of asset, number of loans, family size and age of the farmer.
- Income variation among the farmers influences borrowing capacity of the farmers.
- The level of indebtedness is directly related to the size of land holdings.
- Larger the area, larger will be the credit-worthiness of farmers because; land is considered as the best collateral security for agricultural credit.
- Survey found that, Small Farmers cultivate more crops by leasing-in land from others. They avail loans by giving gold, tax bill etc as the security.
- The cost of production is high for farmers possess more land and vice versa. Cost can be reduced by economies of scale needs more credit.

- Plantation crops needs long term credit which is subject to price volatility.
- Volatile prices never give a reasonable price to the farmers. Survey found that, price of crop changed five times for the last three years.
- Illiterate farmer reports more default than the literates. Majority of the sample farmers are literate. Illiterate constitute only 10.66 percent.
- Nature of crop has an influence on indebtedness of the farmers. Farmers cultivating plantation crops hold more debt than others. More debt reported for farmers cultivate ginger, coffee and banana.
- Indebtedness is higher with increase in number of crops in Wayanad across the districts while, a reverse trend is obtained from Thrissur and Palakkad districts.
- Incidence of indebtedness is higher with the higher value of asset. It is an evidence of diversion of agriculture credit.
- Number of loans taken by the farmers is a major determinant of indebtedness. The volume of debt is high with the increase in number of loans.
- Ancestral debt has an impact on present debt position of the farmers. It is because of early death of farmer head of the household, alcoholic nature of farmer, disease etc.
- A steep fall in prices of agricultural commodities (volatile prices) adversely affects the financial position of Small and (SF) and Medium Farmers (MF). It leads to vicious circle of low investment, low productivity and low income. Finally it leads farmers into debt trap.

6.3 Validity of hypothesis

1. The first hypothesis to be tested was “There are significant inter temporal changes in the composition of sources of agricultural credit”. The data provided by the NSSO validated this hypothesis. This is supported by the survey data also. Until 1990, cooperatives were dominating the agriculture credit scenario. But since globalisation, it is seen that the

cooperatives are withering away from rural activities. This may probably due to urge on the part of the cooperatives to earn quick profit. During the course of the survey, the respondents also admitted this. Over the years the share of institutional agencies supplying agricultural credit is changing. Hence based on the data evidences and feed backs, this hypothesis can be accepted.

2. The second hypothesis to be tested was "There is significant relation between cost of cultivation, scale of finance and agriculture credit disbursed." The survey data presented in previous chapters indicated that a systematic relation cannot be seen between cost of cultivation, scale of finance and agricultural credit. Banks disburse credit on the basis of scale of finance. There should be a proper link between the scale of finance and the cost of cultivation. Farmers reported and the analysis showed that the cost of cultivation is entirely different from scale of finance due to different reasons. When there is absence of linkage between these two, naturally it leads to unscientific estimation of volume of agricultural credit, in much case under estimation of requirement of credit. This gap between cost of cultivation and availability of credit is bridged by "other sources" and consequently adds to the debt burden. Hence, based on the study, there are no evidences to accept the second hypothesis.

3. The third hypothesis to be tested is "There is negative and significant relation between agricultural income and agricultural indebtedness." It is a fact that there should be a negative relation between agricultural income and agricultural indebtedness. In the present study, it is seen that agricultural income is meagre due to different reasons (i) Marketable surplus and marked surplus is least (ii) There is no value addition and processing (iii) There is diversion of agricultural credit at least at a minimum level (iv) Under reporting of income (v) Decision for wilful

default. As a consequence of these factors, it is observed that there is no relation between income and indebtedness. Thus based on the available evidences, this hypothesis can neither be accepted nor rejected for the time being.

6.4 Policy implications

1. The performance of the agricultural sector and the extend of indebtedness are closely related. Hence, policy decisions on strengthening agricultural sector directly and indirectly improves the burden of debt. This is possible by intensive farming, value addition and processing, professionalizing agriculture etc.
2. If better links are established between decentralized planning and local agricultural development, situation can be much improved particularly in the case of small farmers. Hence, local bodies specifically, three tier panchayats should give more attention.
3. As mentioned earlier, the cooperatives are withering away from agricultural credit. In the case of commercial banks, they give credit, but they are utilized for different purposes. It is high time to revisit the strategy of commercial banks agricultural credit by submitting land tax receipt. In many cases, non agriculturists avail these loan facilitates. If institutional arrangements are strengthened, with proper and timely monitoring, situations will improve.
4. It is high time to make the farmers aware about the repayment of agricultural credit. Many farmers do not repay, just because they feel that one day this credit will be written off by the government (willful default). This education and awareness campaign can be undertaken by the local bodies. Unhealthy political support to the willful defaulters is also to be restricted.
5. When there are genuine reasons, like crop failure, low price etc, there should be a supportive mechanism to protect the farmers also. In short, the problem of agricultural indebtedness can be considerably reduced,

provided the local bodies, banks and the state government are more involved in the problem.

6.5 Limitations of the study

1. This study is based on data collected from three districts. The crops cultivated in these three districts are different. So a comparison of cost, returns and indebtedness will give only an average picture.
2. For different category of farmers, size economies are different. This may also slightly affect comparisons.
3. Because of the primitive nature of the farmers and also due to their over consciousness while reporting income, the results are likely to be influenced by outliers.

6.6 Contribution of the researcher

As reported in the earlier chapters, Kerala state is having highest farmer indebtedness. But in recent years, there are no cross section studies on this issue in Kerala. Another merit of this thesis is wide variety of crops are covered. Hence, this study is a humble addition to the available literature on this topic in Kerala. Still, yet more to do.

6.7 Areas for further research

1. Agricultural sector is undergoing structural changes in the context of reforms. Thus there is scope of studying the impact of liberalized agriculture on farmer indebtedness.
2. Crop specific studies relating to crop specific indebtedness can be attempted.
3. More detailed studies relating cost of cultivation, scale of finance, returns and indebtedness are to be encouraged.
4. Studies on efficiency, scale of economies and indebtedness are possible.
5. The role of banks in monitoring indebtedness can also be explored.

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Schedule

A STUDY ON AGRICULTURAL INDEBTEDNESS IN KERALA

I. HOUSEHOLD DETAILS A. basic data of the respondent

Item no.	Item		Serial No:				
1	Name and address of the head of the household:						
2	Name of informant						
3	Sex:						
4	Religion and caste:						
5	Ward		House number				
6	Adhar No		Ration card no				
7	Social group		GENERAL	OBC	SC	ST	Others (specify)
8	Name of the locality:						
9	District:						
10	Block and village:						
11	which categories do you belong		LF	SF	MF	AL	
12	Educational status		19	Type of structure (katcha-1, semi-pucca-2, pucca-3)			
13	Occupational status						
14	Size of land holdings	Owned	20	Principal source of income (code)			
15		Leased- in	21	Phone number			
16		Neither owned nor leased-in	22	Experience			
17		Leased out	23	Which category you belong		APL	BPL
18		Total possessed					
	Total cultivated area						

Codes for I

3. male-1, female-2

12. illiterate-1, Primary-2, Secondary-3, SSLC- 4, higher secondary-5, Graduate and above-6

13. Farming-1, Farming other than cultivation-2, NREGP 3, Govt employee 4, other agricultural activity-5

20. Principal source of income: cultivation-1, farming other than cultivation-2, other agricultural activity-3, wage/salaries employment-4, non-agricultural enterprises-5, pension-6, remittances-7, interest and dividends-8, others-9.

II. Demographic and other particulars of household members

Sl no	Name of member	Relation to head	Sex	Age	Marital status	General education	Monthly income	Pension

Remarks by the investigator

III. METHOD OF CULTIVATION

Puncha ( )	Virippu (autumn)	Mundakan (winter)
	April- may to sep – oct	Sept-oct to feb-march

1. Did you change the method of cultivation for the last five years? Yes ☐ No ☐

If yes, specify:

2. Cropping pattern

Sl no	Crops cultivated	No of acres /area	Cost of Production	Yield
1	Paddy			
2	Cocnut			
3	Arecanut			
4	Bennana			
5	Pepper			
6	Rubber			
7	Vegetables			
8	Ginger			
9	Coffee			
10	Tea			
11	Tapioca			
12	Others (specify)			
	Total			

IV. LIVESTOCKS

Item	Number	Values
Total		

V. CONSUMER DURABLES

		Item	No	Year of purchase	Value
a)		**Luxury items**			
	1.	Television			
	2.	Air Condition			
	3.	Fridge			
	4.	Computer			
	5.	Motor cycle			
	6.	Car			
	7.	Others (specify)			
b)		**Agricultural Implements**			
	1	Pump Set			
	2	Sprayer			
	3	Tractor			
	4	Furniture			
	5	Paddy land			
	6	House and other buildings			
	7	Ornaments			
	8	Bank deposit			
	9	Garden lands			
	10	Business (not asset)			
	11	Any other (specify)			

VI. COST OF CURRENT FARM OCCUPATION PER ACRES

No	Item	Amount (Rs)
1	Land Preparation(a)Labour(b)Tractor /Tiller	
2	Cost of Seeds	
4	Cost of fertilizer	
3	Pesticides and insecticides	
4	Plant protection(Pesticide)	
5	Weeding	
6	Removing African Payal	
7	Harvesting (Traditional/Modern)	
8	Post harvesting operations	
9	Insecticides and pesticide	
10	Energy/ electricity bill	
11	Irrigation charges	
12	Land revenue tax	
13	Transportation and storage	
14	Agriculture implements	

15	Other costs (specify)	
	Total	

1. Labour cost

Amount of labour	Wage per worker	Total cost

VII. REVENUE FROM CULTIVATION

Revenue item	Per acre Rs	Total
Paddy		
Cocnut		
Arecanut		
Bennana		
Pepper		
Rubber		
Vegetables		
Ginger		
Coffee		
Tea		
Tapioca		
Others (specify)		
Total		

VIII. EXTENT OF DAMAGE TO CROP

Damages due to	Year	Approximate loss
Untimely rain		
Heavy rainfall		
Drought		
Salt water intrusion		
Attack of pest/diseases		
Breaking of Bunds		
Lack of irrigation facilities		
Fall in prices		
Absence of effective price stabilization measures		

Shortage of labour		
Increase in cost of cultivation		
Any other		
Total		

IX. Price volatility in agricultural products / average price received by the farmer for the last five years

Year	Type of crop	Area /acres	Production	Price per kg	Productivity	Total revenue
2013						
2012						
2011						
2010						
2009						

X. LOANS AND OTHER LIABILITIES PAYABLE AS ON THE DATE OF SURVEY

sl. no. of loan	nature of loan	Amount of loan	ty pe of loan (code)	type of security (code)	Period (code)	Source (code)	purpose (code)	rate of interest (%)	amount outstanding including interest on date of survey (Rs)
1	2		3	4	5	6	7	8	9

Codes

col. (2): ***nature of loan***: *hereditary loan -1, loan contracted in cash -2, loan contracted in kind -3, loan contracted partly in cash and partly in kind -4.*

Col (4): Type of loan: Short term / medium term / long term

*col. (5): **type of security**: no security - 1, land - 2, crop - 3, ornaments - 4, financial instruments - 5,*

others - 9.
*col. (6): **period**: less than one month - 1, one month and above but less than three months - 2, three*
months and above but less than six months - 3, six months and above but less than
one year - 4, one year and above - 5.
col. (7): ***source***: *government -1, co-operative society -2, bank -3, employer/ landlord -4, agricultural/ professional money lender -5, shopkeeper/ trader -6, relatives/ friends -7, others -9.*

col. (8): ***purpose***: household consumption*: medical expenses -1, educational expenses -2, legal expenses -3, marriage and other ceremonial expenses-4, other household consumption expenses -5; purchase of land/ construction of building -6, other productive purpose -7, repayment of debt -8, others -9.*

1. CREDIT RENEWABLE PATTERN OF FARMERS

Category	
Regularly renew loan	
Renewed loan once	
Renewed loan twice	
Renewed loan thrice	
Never renewed loans	

2. Amount of loan demanded:

3. Amount of loan sanctioned:

4. Disbursement of installment of loan amount

a)Well in advance b) after stating the project c) after completing the project d) two installments

5. Did u find any difficulty in obtaining loan from the bank? Yes/ no

6. If yes, specify the nature of difficulty

(a) non copperation of officials

(b) undue delay

(c) excess security requirement

(d) frequent visit to banlk

(e) complicated procedure

7. Whether the total loan amount received was sufficient: Yes /No

8. How did you manage your portion of project outlay?

a) Personal savings b) Borrowed from friends / relatives c) Loans from other agencies

d) Local money lenders e) Others (specify)

9. how much of the loan amount was utilized?

a) Fully utilized b) Partially utilized c) Not at all utilized

10. whether total area under cultivation Increased after taking loan : Ys / No

If yes:

a) Area before taking loan b) Area after taking loan

XI. REPAYMENT PERFORMANCE

10.1) Repayment of loan (till the date of survey

a) yearly b) Half yearly c) Quarterly d) Monthly e) weekly f) Any other

10.2) sources of repayment

a) Return from farm income c) Borrowing from money lenders d) Income from family members e) Others

10.3) major reason for default in repayment of loan

a) Domestic needs b) Crop failure c) Low returns d) Uneasy installments e) Others

XII. REASONS FOR DEFAULT IN REPAYMENT

(Rank your reasons, if there is more than one)

a) fall in price of agricultural commodities

b) crop failure

i)lack of irrigation facility ii) low quality seeds iii) natural calamities

iv) non availability of labourers in time v) others (specify)

c) loan diversification

d) ancestral debt

e) non-institutional loan

f) high interest rate (bank)

g) defective loan policies

h) lack of recovery efforts

i) illness of borrower / family members

j) ceremonies

k) faith in loan waiver / write off policies

l) lack of access to the consumption loans and diversification of income for consumption purposes

m) non- availability of input in time

XIII. GENERAL AWARENESS/PERCEPTIONS AND OTHER ASPECTS OF FARMING

	are you aware of Minimum Support Price? (yes-1, no-2)	
	if '1' in item 1, are you aware of procurement agency? (yes-1, no-2)	
	did you have your crop insured at any time? (yes-1, no-2)	
	if '2' in item 3, reason therefor (not aware -1, not interested-2, insurance facility not available-3, lack of resources for premium payment-4)	
	whether any member of the household is a member of registered farmers organisation? (yes-1, no-2)	
	do you like farming as a profession? (yes - 1, no - 2)	

XIV. In your opinion, what are the problems suffered by the farmers in tour area? Rank

Low market price of produce

Desease or pests of support crop

Decline in agriculture

Deseease of main crop

Absence of other sources of income

Decrese in produce demand

Crop failure due to climatic variations

High rate of interest

Absence of value addition

Mis utilization of loan

Pest attack of crop

Deficiencies of irrigation of water

Decrease in soil fertility

Inefficient marketing

Low export price