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DISTRESS DEBT AND SUICIDES AMONG AGRARIAN HOUSEHOLDS: FINDINGS FROM THREE VILLAGE STUDIES IN KERALA

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ABSTRACT

This paper examines the factors and process underlying agrarian distress in Kerala by undertaking the case studies of three villages situated in Wayanad and Idukki districts namely, Cherumad, Kappikkunnu and Upputhara. The impact of distress on household livelihoods and indebtedness and how they cope up with the situation are examined with entire village and intra village analysis of data. The process of agrarian distress which resulted in suicides were analysed through a few in-depth studies.

Decline in crops yield, coupled with sharp fall in their prices, created severe distress in all sections of agricultural population. Many household cope with these distresses by reducing household expenditure, diversifying their household incomes and searching for jobs in other places. Meanwhile, government interventions in terms of PDS, health care provision, education and supply of drinking water gave some relief to the affected persons. However, these measures could not completely prevent the occurrence of suicides among the members of agrarian households. The paper shows that the villages in which household income are more diversified and social networks much stronger, the distress conditions did not result in suicides. Mitigation of agrarian distress requires not only for debt relief but also implementation of long term strategies containing policies to promote price stability, ecological sustainability of agriculture, strengthening of formal rural credit and support networks, and income and employment generation programmes.

Key words: Distress debt, Suicides, Agrarian Households, Livelihood risk, Coping Strategies, Livelihood, Livelihood Assets, Institutions, Kerala

JEL Classification: Q, Q00

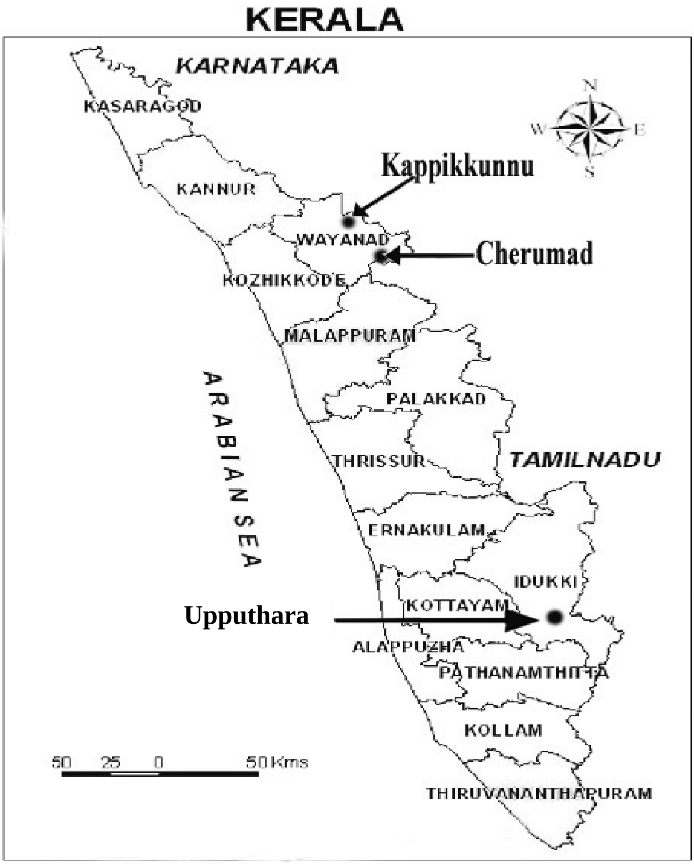
I. Introduction

Agrarian distress and farmers suicide is a subject of widespread discussion in recent years[1]. It is argued that the primary cause of the distress is the neo-laboural policies followed by the central government since the launching of economic reforms. The belief that agriculture would continue to grow even after withdrawal of state support, by integrating it with the world market, appears to have been disproved by the experience of the recent past[2]. Going by indicators like agricultural investment, output, prices and incomes, the emerging picture is not at all satisfactory. Public investment in agriculture has been on the decline, output has been growing only at a rate of 1.5 to 2% per annum, the prices of most of the agricultural commodities have been rising at lower rates than those of input prices and on the whole farm incomes have been falling[3]. Trade liberalization has resulted in imports of several agricultural commodities to the domestic market thereby adversely affecting prices. The impact of these process has been widespread and rural distress has intensified. The gravity of the situation is reflected in farmers' suicides[4] in those regions where farmers have taken up the cultivation of export-oriented high-value crops. The Central and the State governments have come out with intervention programmes for mitigating the sufferings of the people in the affected areas. These programmes include measures for debt relief, (by waiving of the interest rate component and restructuring the repayment schedule of the principal) and specific schemes for generating employment and income for the affected population. However, in the framing of such policies and programmes, the factors and processes underlying the agrarian distress remain unaddressed. Part of the reason for this lacuna is the lack of empirical studies that examine the causes of distress, its consequences on the household livelihood strategies and accumulation of household debt.

The present paper is an attempt to put together some of the insights gained from a study conducted in three villages situated in Wayanad and Idukki districts of Kerala. Wayanad in North Kerala has faced severe agrarian crisis since 2000[5]. This is reflected in the large number of suicides reported from among the agrarian population. According to the State Farmers Debt Relief Commission[6], there were 371 suicides by farmers in the district during the period 2000-2006[7]. Idukki district in Central Kerala, the second district surveyed, has been also under the grip of agrarian distress and reported 89 cases of farmers' suicides during the same period. Both the districts are located in the high land region of the state; agriculture and plantations contributes roughly to 35 percent of the district incomes with about 50 percent of the labour force absorbed in these sectors. A perusal of the various indicators of development at the district level shows that these are two of the backward districts in the state[8] that still retain their agrarian characteristics.

In order to unravel the factors and processes underlying the agrarian distress on the one hand and indebtedness and suicides among the agrarian population on the other, we have conducted intensive research in two villages in Wayanad and one village in Idukki[9]. The villages selected for study in Wayanad, were Kappikunnu in Pulpally Panchayat and Cherumad in Nenmani Panchayat (see the Map for the locations). The reasons for choice of these villages were the following: (i) Pulpally Panchayat has reported the maximum number of suicides in Wayanad in recent years; this also happens to be a location where, the increase in coffee and pepper prices in the 1990s had generated a booming economy. On the other hand, Nenmani Panchayat that witnessed increasing agricultural prosperity, did not record many suicides following fall in

Map 1. Location of villages selected for the study



prices. The village selected for study from Idukki is Upputhara in Upputhara Panchayat. One of the characteristics of this Panchayat is that there exist in it both small agricultural holdings and large estates. Unlike other highland regions in the state, farmers in Upputhara have taken up cultivation of tea as one of their crops along with pepper, cardamom and various food crops. The crash in prices of pepper, cardamom, coffee and tea has adversely affected the economy of the Panchayat. The methodology of the study consisted of (i) a listing of all households in the selected villages to collect information on the principal source of income of the household, and (ii) the nature of ownership and the extent of operational landholding. Based on these data, a stratified random sample[10] was chosen giving due weightage to both sources of household income and land owned. Apart from the household survey, the study also made use of qualitative research techniques like focus groups, semi-structured interviews, and case studies. Detailed description of the study locations, methodology and results from the study for each of the locations is available as separate papers[11]. The first round of household survey and qualitative investigation was carried out in the study villages from June 2003 to December 2004. The study team started the work in Cherumad in June 2003 and completed it with Upputhara in December 2004; taking roughly about 6 months in each village. Because of this, the qualitative estimates have limitations for purposes of comparison. However, the final round of research using PRA tools was conducted in the villages from July to September 2006, and the information thus collected thus supplemented the earlier data and made comparison possible of the changes taking place across these villages. Based on these surveys and the individual study reports, the present paper provides a comparative analysis of agrarian distress, indebtedness and suicides among the agrarian population in the study areas.

The organisation of this paper is as follows: Section 2 examines the causes of agrarian distress in the study villages and the impact of distress on household livelihoods; Sections 3 and 4 discuss the different dimensions of household indebtedness. The issue of 'suicides' is taken up in Section 5. In the light of this analysis, Section 6 brings out the implications of the findings for the design of mitigation measures.

II. Causes of Agrarian Distress

There are two sets of factors that have to be considered for understanding the causes of agrarian distress: factors that are exogenous and factors that are endogenous, to the study areas. The impact of factors like trade liberalization, other macro-economic policy changes and weather-related conditions falls in the first category. Factors like local ecology, social structure, and institutional arrangements fall in the second category. As shown in a recent study[12], the period since 2000 (the post-WTO period) has witnessed a sharp fall and an increased volatility in the prices of a number of important crops like pepper, coffee, cardamom and tea. The domestic prices of these commodities have moved more closely with international prices thereby indicating that domestic prices are increasingly shaped by international prices. It may be noted that the fall in prices was sharper in the case of pepper and coffee than in tea and cardamom. The domestic prices of these commodities have moved more closely with international prices thereby confirming the contention that domestic prices are increasingly shaped by international prices. This period has been also marked by sharp fall in rainfall and increased incidence of drought that adversely affected crop yields. These factors together have resulted in decline in farm income, adversely affected the livelihood of the agrarian population and created conditions of distress

A comparative understanding of the important socio-economic characteristics of the study villages (see Table 1) will be useful to comprehend the impact of agrarian distress and for an analysis of the indebtedness that follows. Some of the characteristics to be taken note of include the following: (i) Cherumad has 82 percent of its labour force dependent on agriculture whereas in the other villages, the corresponding percentages are 71 percent in Kappikunnu and 63 percent in Upputhara. In Upputhara 19 percent of the labour force was engaged in non-farm employment. The corresponding figures of non-farm employment for the Wayanad villages are lower- 6 percent for Cherumad and 14 percent for Kappikunnu; (ii) While the mean size of land holding in the Wayanad villages is 120 cents, in Upputhara it is 160 cents. Although the proportion of landless households is only about one percent in the Wayanad villages, and 5 percent in Upputhara, 28 percent of the cultivators in Cherumad and 26 percent in Kappikunnu owned less than 10 cents each. In both the Wayanad villages, nearly 30 percent of the population belongs to the scheduled tribes whereas the scheduled tribe population is almost absent in Upputhara; (iii) The economic condition of the households in Upputhara is comparatively better than in the Wayanad villages as is reflected in the Monthly Percapita Consumption Expenditure (MPCE). While the mean MPCE is Rs 1280 in Cherumad and Rs 990 in Kappikunnu, for Upputhara it is Rs Rs 1328. Strikingly, the average monthly earning of agricultural workers was Rs 738, Rs 626 and Rs 1246 for Cherumad, Kappikunnu and Upputhara respectively. For non-agricultural workers, the corresponding figures were Rs 1475, Rs 1221 and Rs 2034; (iv) Of the population with MPCE below Rs 500, 82 percent in Cherumad , and 70 percent in Kappikunnu belong to the ST population.

Since the year 2000, all the households in the Wayanad villages, and 97 percent of them in Upputhara reported fall in incomes. Decline in prices and fall in yields were reported as the major reasons for this. The main reason for fall in yields reported by 40 percent of the households in the Wayanad villages, was infestation of pests and diseases whereas in Upputhara, only 8 percent of the households reported so. Adverse weather conditions were another major causative factor for the fall in yield: Fifty percent of the households in Wayanad villages and 35 percent in the Idukki village reported this as reason. Analysis of the reasons cited by the farmers for the decline in agricultural prices showed a marked difference between Wayanad and Idukki. Respondents in Wayanad villages reported imports as the predominant reason (about 80 percent) where as in Upputhara, only about 42 percent reported this as the cause. But in Upputhara also factors like reduction in exports and increase in imports were cited by the respondents as reasons.

In Wayanad villages, about one-third of the cropped area is under pepper; in Upputhara the corresponding proportion is only one-fourth. Coffee and ginger are the other two important crops in Wayanad,

Table 1. Characteristics of the households selected for the present study

	Indicator	Cherumad	Kappikkunnu	Upputhara
1	Estimated Number of Households	445	684	420
2	Average household size	4.5	4.5	3.9
3	Occupational Structure			
	Farming	39.8(177)	30.8(211)	32.6(137)
	Agricultural labour	41.8(179)	50.1(343)	30.3(127)
	Non-Agricultural labour	5.8(26)	11.4(78)	19.8(83)
	Regular salaried & wage paid employment	8.7(39)	1.6(11)	4.8(20)
	Trade transport, commerce	3.8(18)	-	2.1(9)
	Forest dependence	0(0)	2.8(19)	-
	Others	1.8(8)	3.2(22)	10.5(44)
	Total	100.0(445)	100.0(684)	100.0(420)
4	MPCE (mean)	1488.93	988.90	1328.38
5	% of households <Rs. 500/- MPCE	25.3	25.7	2.2
6	Average of landholdings (in cents)	166.40	138.70	168.66
7	Percentage of households with <10 cents	17.4	20.2	4.8
	% of SC Households	1.1	6	13.1
	% of ST Households	27.4	28.6	-
	% of households with electricity	58.3	63.8	65.8
	% of households with latrine facility	71.3	70.5	92.9

Note: Parenthesis gives the estimated households occupying about 15 percent and 6 percent of the cropped area respectively. In the case of Upputhara, the important crops next to pepper are tea and cardamom, with 45 percent and 15 percent of the cropped area respectively. Although cultivation of tea is done mostly in the estate sector, in Upputhara it has spread to farm holdings also. The farmers' perception of the causes of the fall in agricultural prices is by and large a reflection of their recent experiences with these crops. Pepper, cardamom, coffee and tea are primarily export-oriented crops. For the export-oriented crops, import policies did affect their domestic prices. This fact is reflected in the farmers' responses.

Since decline in crop yields is reported as a major reason for the fall in agricultural incomes, we have attempted to derive further insights into this by examining the trends in productivity of major crops grown in the study villages. Since village level estimates of crop yields over time are not available from any source, we have generated the yield data through focus group discussions in the study areas with farmer groups. It may be noted that yield levels given are quantities reported by the respondents from their memory and therefore they should be taken as

Table 2. Changes in the productivity of pepper and coffee in the study villages.

Period	Range of Productivity (kg per acre)		
	Cherumad	Kappikkunnu	Upputhara
PEPPER			
1980-1990	500-600	900-1000	1000-1100
1990-1999	200-300	750-900	800-900
2000-2005	60-80	200-300	300-350
COFFEE			
1980-1990	400-500	450-500	475-500
1990-1999	300	250-300	250-300
2000-2005	200-300	250-300	275-300

broad indicators of the levels and directions of change. These data (see Table 2) revealed the following findings: (a) The yield of pepper in general has been higher in Upputhara followed by Kappikunnu and Cherumad; (b) In all the locations, one finds a sharp fall in pepper yield overtime, especially since 2000. Coffee also reported a decline in yield, but the order of decline was lower than in pepper.

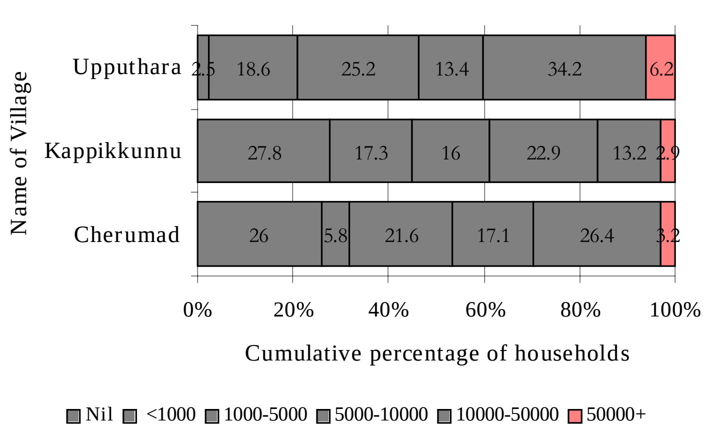
The yield of rice was about 1600 to 1700 Kg per acre in the 1990s and it declined to the range of 1400 to 1500 Kg in both the Wayanad villages. The yield of ginger that centered around 3 tons per acre in the 1980s declined to about 2 tons since 2000. Tea and cardamom, two of the important crops grown in Upputhara, have recorded differential trends in yields. In the case of tea, the yield has declined from 1.5 tons to 1.8 tons per acre in the 1980s to 400-600 Kg since 2000. The yield of cardamom did not record any decline during the past two decades.

The decline in productivity of important crops will have to be viewed along with the changes in their prices. The price of pepper which was around Rs 80 per Kg during the first half of the 1990s increased to a peak level of about Rs 260 per Kg during the second half and centered around Rs 180 per Kg in 2001 and 2002; it showed a sharp fall in the subsequent years reaching a level of Rs 60 to Rs 70 per kg by 2004-05[13]. This crop accounted for more than one-fourth of the area under cultivation in all the three villages and the levels of productivity are relatively high (especially in Upputhara and Kappikunnu) when compared to the state or the district average. Under conditions of upswing in prices, income generated from this crop would have been substantial. However the decline in both yields and prices since 2002 has resulted in significant fall in incomes from pepper cultivation. The price of coffee, the second important crop in Wayanad villages, also showed a similar trend as that of pepper. In the 1990s, deregulation of coffee procurement by the Coffee Board, the rapid expansion of private trade and its closer integration with the world market, have resulted in significant upward movement in prices. But this process of integration has resulted in downswing in prices since 2000. Like pepper, coffee has also added to the prosperity of farmers in Wayanad villages in the 1990s; the fall in prices and yields since 2000 has aggravated the fall in incomes. In Upputhara, cardamom has emerged as an important crop and, given the fact that its yield did not show any decline though prices have fallen, the price factor would have created lesser impact than in the case of pepper and coffee. However, the fall in prices of tea has severely affected the incomes of the small growers. Cultivation of ginger would have brought in some degree of prosperity in all the three villages in the1990s, since this crop had good yield and attractive prices. However, in recent years its prices have declined, thereby contributing to a further fall in agricultural incomes.

The persistence of adverse weather conditions for a few years consecutively has resulted not only in decline in pepper yields, but also decay and death of pepper vines and some of the commonly planted support trees. The increase in the incidence of pests and diseases has contributed to increase in the quantity of pesticides used for maintaining yield levels. Since there is enough evidence to suggest that the costs of inputs in agriculture have been increasing at a faster rate than prices of agricultural commodities in general, and the fact that both the prices and yields of a number of crops that contributed to a good part of the incomes of agrarian households in the study areas have shown sharp fall in the first half of the present decade would have created conditions of distress, shocks and vulnerabilities among farmers.

The household survey conducted in the study villages did not collect data on farm expenditure and income which would have given some idea of the intensity of the distress. At the pilot phase of the survey, we found it difficult to collect reliable data on cost of cultivation and income for each of the crops and other activities like livestock keeping. However, we have attempted to derive some insights into the impact of shocks on household incomes by looking at the data collected on the income from sale of crops. These data reveal that the mean household incomes obtained from the sale of crops was Rs 14333 in Cherumad, Rs 13477 in Upputhara and Rs 5502 in Kappikunnu for a period of one year preceding the date of survey. It may be noted that the last village that witnessed a high degree of agricultural prosperity in the 1990s has recorded the lowest level of income from sale of crops. The percentage distribution of households with levels of income from sale of crops is given in Fig I. It may be noted that households with no income from crops are likely to be in the category of households with no land under cultivation; the distribution of other households does reveal the nature of the distress. Only 3 percent of the households in Wayanad villages and 6 percent in Upputhara received an income Rs 50000 and above from the sale of crops. Around 45 to 55 percent of the households in the study villages received only less than Rs 10000; and about 26 percent of them in Cherumad, 13 percent in Kappikunnu and 34 percent in Upputhara received an income range of Rs 10000-Rs 50000. These data are a clear indication that the most severely distress affected area was Kappikunnu. The income from sale of crops is not even sufficient to meet the annual consumption expenditure of a single member of the household in the study areas. The MPCE that was the

Fig. 1 Percentage distribution of households by crops income in three villages



lowest in Kappikunnu also happens to be the village with the lowest income from sale of crops.

In the absence of data on expenditure and income from farm business, it is not possible to bring out clearly the extent to which the decline in agriculture has affected the economics of farming in the study villages. However, another study (Kurup 2005) conducted in a village adjacent to Kappikunnu during the year 2003-04 provides data on the income/ loss per holding from cultivation. These data are given in Table 3. It may be noted that even this survey did not collect data for each activity of farm business separately; it is an overall figure reported by the sample holding. The data show that during the reporting year, the sample holdings reported an average loss of Rs 1689. Only holdings with one acre and below reported some profit, though minimal. The reported figures did not include the cost of family labour, and if that were also included, not only would the magnitude of loss increase, but even the bottom size group might also turn out to be loosers.

Table 3. Expenditure and Income in Farm business by size of holding in Pulpally Panchayat

Variables	Size of Holding			
	<1 acre	1-3 acre	>3 acre	Total
1.No of Sample holdings	140	50	60	250
2.Household size	3.9	4.4	3.0	3.82
3.Average size holding	2.3	1.6	4.5	1.6
4.Farm Expenditure per holding	1269.9	7760.0	13000.0	5383.2
5.Income from Farming per holding	1803.3	4620.0	733.3	3693.8
6.Income/loss per holding	533(+)	3140(-)	1689(-)	1689(-)

Source: Kurup (2005)

The decline in agricultural income has adversely affected not only the cultivators, but also agricultural labourers. The data gathered through focus group discussions in the Wayanad villages show that the money wages of both male and female labourers have recorded increase during the 1990s, but has shown a fall during the period of price crash, a trend from which this sector recovered only by 2006 (See Table 4). But in Upputhara, the money wages did not decline at all. It stood at around Rs 70 to Rs 100 during the period 1995-2000 for male agricultural labourers and around Rs 50 to Rs 80 for female agricultural labourers. The rates increased to Rs 125 for male and Rs 100 for female by 2006. The reasons for the differential trends in wages between Upputhara and the Wayanad villages are that the workers in Upputhara have been able to find jobs elsewhere. In both the Wayanad villages, the number of days of employment for male agricultural labourers which was about 150 to 160 a year, has fallen to 80 to 90 a year by 2006. In the case of female labour, from about 170 days a year in the 1990s, it declined by one half. The fall in the days of employment

Table 4. Trends in money wages of Agricultural Labourers, Kappikkunnu

Year	Wages (Rs/-)	
	Male	Female
1970	1.50	0.75
1981	13	7
1990	60	30
1995	70	40
1998	100	80
2000	80	50
2002	90	70
2005	100	80
2006*	100	80

Note: * Wages for head loading of harvested paddy is Rs. 150/-

along with fact of decline of wage rates has meant that annual earnings per worker declined. With the decline in agriculture, non-agricultural employment largely related to trade and transport of agricultural commodities and other service-related activities also declined, and the wages of workers in these sectors behaved the same way of agricultural wages. Compared to the Wayanad villages, in Upputhara, the income sources are more diversified and therefore the impact of shocks on the livelihood of workers has been relatively low.

The fall in incomes of the agrarian population has resulted in such households taking up various coping and adaptive livelihood strategies. Some of the coping strategies noted across villages include the following: (1) Reduction in expenditure on farming (2) Reduction in household consumption expenditure like consumption of relatively costly food items like meat, milk, fish, and saving on electricity, cooking gas, travel, clothes and footware (3) Shift more towards public services like withdrawal of children from unaided schools to enroll them in government schools, shift from private hospitals to government hospitals, for health care, and (4) Migration of adult members to adjacent or distant places in search of work. We have seen migration of workers from Wayanad villages to Tirupur in Tamil Nadu to work in cotton mills; agricultural workers from the region have moved to Coorg in Karnataka to practise ginger cultivation; migration of female members of households in Upputhara to various places in the adjacent districts as home nurses and women workers from all the villages migrating to other regions as housemaids. Some of this migration now turns out as adaptive strategies, since they remain in their new places of work for long periods. Other important adaptive strategies developed by households for generation of income and employment are the following: (1) Diversification of cropping pattern: some of the farm holdings have taken up cultivation of crops like vanilla; there has taken place some shift towards food crops like tubers and vegetables and banana. The scope for diversification seems to be more in the medium and large holdings than in the small and marginal holdings because of land area constraints. The degree of crop diversification is seen to be higher in Upputhara than in Kappikunnu and Cherumad; (2) Many households have been taking up dairying as a supplementary source of income to compensate the fall in income from crop production; (3) Poor households have been taking up lease farming as a means to augment their incomes. Apart from individual lease arrangements, leasing of land by self-help groups has been also taking place in the study villages; (4) There exists increased awareness among farmers on the adverse consequences of the use of chemical fertilizers, and pesticides and a change towards organic cultivation is visible; (5) Some of the measures taken by the state, either directly or through local-self governments, have been useful in giving some relief to the affected population. These measures are (i) the public distribution system that provides free ration to the ST households during periods of intense distress and the supply of rice at BPL prices to the poor, measures which have prevented chronic hunger and starvation among the poor; (ii) Though there has been reduction in public expenditure on health care and education, the transfer of some of these functions to the LSGs has resulted in greater participation of the local communities in the management of these institutions and improvements in their functioning. (iii) Expansion of certain other basic amenities like supply of drinking water, housing and sanitation to the poor by the LSGs has also provided some relief to the poor. However, none of these measures could contribute significantly to mitigate the fall in incomes and livelihoods of the people. Households have to borrow from various sources to meet their expenses on consumption and investment and delay the repayment of their pervious loans, as a result of which debts have accumulated among the households. In the sections that follow, we will look into this aspect in some detail.

III. Household Indebtedness

Taking into account the specific situations prevailing in the Kerala villages, the enquiry into the sources of loans was modified to include *chitties and kuries*, gold loans, formal sources like cooperatives and banks and informal sources like moneylenders, friends and relatives. Coming to the purpose of loan, apart from expenditure on production (both capital and current expenditure on farm business) other reasons like repair of houses, acquisition of land and other productive assets and repayment of existing loans, were also included in the survey. The survey collected data on the year of availing loans, the amounts repaid, and the balances outstanding. However, it did not collect separate information on interest rates and amounts of principal and interest on loans outstanding. Information gathered from the banking institutions in the study areas and interviews conducted with banking officials were used to substantiate/cross-check the reliability of the data collected. Since all the quantitative dimensions of household debt may not have been captured in the sample survey, qualitative methods including case studies of indebted households were also done to bring out dimensions and processes of indebtedness not otherwise captured.

The distribution of households according to amounts of indebtedness in the study villages is given in Table 5. It shows that in the two Wayanad villages, about one-fourth of the households had either no debt, or the amounts were of less than Rs 1000. In Upputhara, this figure is much lower; about 10 percent[14]. The percentage of households with indebtedness of above Rs 50, 000 constituted 18 percent in Cherumad, 16 percent in Kappikunnu and 22% in Upputhara. It may be noted that the distribution of households with higher amounts of debt is very similar between Kappikunnu and Upputhara, whereas in the bottom groups, it is similar between Cherumad and Kappikunnu. Such a difference comes out more clearly when we look at the distribution of households by size of holding and amounts of debt (Table 6).

As one moves up in the size group of landholding, the percentage of households that falls in the higher debt groups tends to rise, but the relationship is not one to one, with distribution spread also to both lower

Table 5. Estimated percentage distribution of households by amount of debt outstanding

Amount of Debt		Sample village		
		Cherumad*	Kappikkunnu	Upputhara
1	No debt	19.9(87)	21.4(147)	5.6(24)
2	1-1000	2.3(10)	3.5(24)	3.5(15)
3	1000-5000	10.7(47)	9.0(62)	14.2(60)
4	5000-10000	5.0(22)	13.3(91)	10.5(44)
5	10000-25000	23.0(101)	15.1(103)	24.4(102)
6	25000-50000	20.1(88)	21.3(146)	19.5(82)
7	50000-100000	9.2(41)	4.7(32)	7.0(30)
8	100000-200000	8.4(37)	7.3(50)	7.8(33)
9	200000+	1.5(6)	4.3(30)	7.4(31)
	Total	100.0(440)	100.0(684)	100.0(420)

* 5 Inconsistent cases excluded
Note: Parenthesis gives the estimated household;

and upper ends. This in turn indicates that the size of landholding (as a proxy for household assets) has some degree of association with the amount of debt. We have verified the significance of this association by estimating Kendall's Tau-b. Test. The results show a significant association in all the three villages (see Table 7), but the association in the Wayanad villages are seen to be stronger than in Upputhara.

The ability of a household to borrow either from the formal credit system or even from the informal market, depends to a large extent on the security or collateral that household is able to provide to the lending agency. The positive association between size distribution of debt and of landholding confirms this fact. The lower strength of the association in Upputahra might be due to the influence of the diversification of household incomes from sources other than agriculture, that makes it possible for them to borrow by using other type of collaterals than landholding, also.

Table 6. Percentage distribution of estimated households by the amount of debt and size of landholdings in the sample villages, 2004

Debt	Landholdings (in acre)				Total
	<1	1-2	2-3	3+	
	CHERUMAD				
No debt	34.4(77)	5.9(5)	9.1(5)	0.0(0)	19.7(87)
1-1000	2.2(5)	5.9(5)	0.0(0)	0.0(0)	2.3(10)
1000-5000	16.5(37)	11.8(10)	0.0(0)	0.0(0)	10.6(47)
5000-10000	7.6(17)	5.9(5)	0.0(0)	0.0(0)	5.0(22)
10000-25000	24.1(54)	27.1(23)	27.3(15)	11.5(9)	22.9(101)
25000-50000	10.7(24)	30.6(26)	27.3(15)	30.8(24)	20.1(89)
50000-100000	4.5(10)	2.4(2)	9.1(5)	32.1(25)	9.5(42)
100000-200000	0.0(0)	10.6(9)	27.3(15)	17.9(14)	8.6(38)
200000+	0.0(0)	0.0(0)	0.0(0)	7.7(6)	1.4(6)
Total	100.0(224)	100.0(85)	100.0(55)	100.0(78)	100.0(442)
	KAPPIKKUNNU				
No debt	30.3(125)	8.1(11)	20.0(10)	0.0(0)	21.4(146)
1-1000	3.4(14)	7.4(10)	0.0(0)	0.0(0)	3.5(24)
1000-5000	12.4(51)	7.4(10)	0.0(0)	0.0(0)	8.9(61)

5000-10000	16.7(69)	16.3(22)	0.0(0)	0.0(0)	13.3(91)
10000-25000	16.5(68)	22.2(30)	0.0(0)	5.8(5)	15.1(103)
25000-50000	18.0(74)	16.3(22)	60.0(30)	23.3(20)	21.4(146)
50000-100000	2.7(11)	7.4(10)	0.0(0)	12.8(11)	4.7(32)
100000-200000	0.0(0)	14.8(20)	20.0(10)	23.3(20)	7.3(50)
200000+	0.0(0)	0.0(0)	0.0(0)	34.9(30)	4.4(30)
Total	100.0(412)	100.0(135)	100.0(50)	100.0(86)	100.0(683)
	UPPUTHARA				
No debt	7.9(15)	0.0(0)	0.0(0)	9.0(8)	5.5(23)
1-1000	5.3(10)	0.0(0)	14.3(5)	0.0(0)	3.6(15)
1000-5000	21.1(40)	8.6(9)	0.0(0)	12.4(11)	14.3(60)
5000-10000	13.7(26)	18.1(19)	0.0(0)	0.0(0)	10.7(45)
10000-25000	37.4(71)	20.0(21)	0.0(0)	12.4(11)	24.6(103)
25000-50000	10.5(20)	22.9(24)	14.3(5)	36.0(32)	19.3(81)
50000-100000	2.1(4)	14.3(15)	28.6(10)	0.0(0)	6.9(29)
100000-200000	2.1(4)	8.6(9)	28.6(10)	10.1(9)	7.6(32)
200000+	0.0(0)	7.6(8)	14.3(5)	20.2(18)	7.4(31)
Total	100.0(190)	100.0(105)	100.0(35)	100.0(89)	100.0(419)

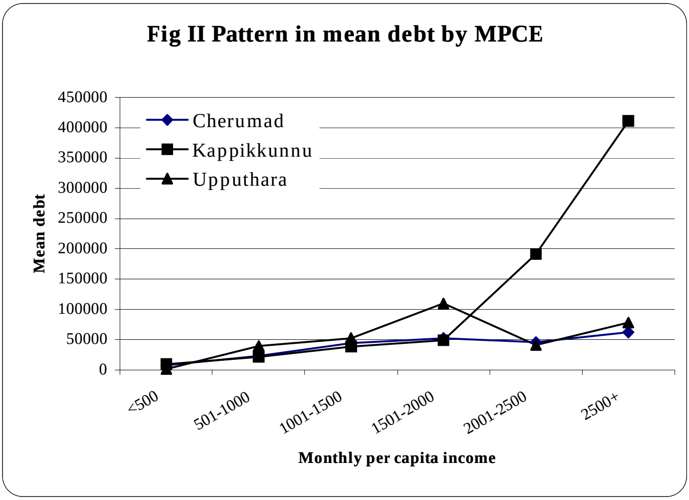
Table 7. Results of Kendall's Tau-b test showing the association of household debt, Monthly per capita consumption expenditure (MPCE) and landholdings

Sl.No	Panchayat	Kendall's tau-b Value	
		MPCE	Land holding
1	Cherumad	0.560***	0.551***
2	Kappikkunnu	0.585***	0.601***
3	Upputhara	0.126***	0.298***

*** Significant at 0.001 level

We have also examined the association between /household debt and MPCE. It may be noted that in the collection of data on household consumption expenditure, the capital expenditure on the purchase of land or land development or housing etc, and current expenditure on farm business has not been included. Therefore, if these components take a significant share of the borrowing, then, one should not expect a significant association in the distribution of households by MPCE and the amount of debt. However, the data presented in Fig II show that there exists some association between the two in all the three villages, with some observations of extreme outliers in Kappikunnu. We have looked into this association using Kendall's tau-b test, which showed that the association is significant in all the three villages (see Table 7). In other words, it shows that the households incurred debts also to meet household consumption expenditure.

The mean amount of outstanding debt[15] per indebted household is the highest in Kappikunnu (Rs 68505) followed by Upputhara (Rs 52135) and Cherumad (Rs 39406). The average debt per household by the main source of household income, showed some degree of variation (see Table 8). In Cherumad, households with business incomes reported higher amounts of debt, followed by households of Cultivators, with agricultural



labourers and 'others' reporting much lower amounts of debt. In Kappikunnu, the highest amount of debt is reported by cultivators and the lowest by agricultural labourers. In Upputhara, the category with regular salaried employment has reported the highest debt followed by cultivators with non-agricultural labourers reporting the lowest amounts of debt. It may be noted that in the Wayanad villages cultivators and agricultural labourers constitute about 75 percent of the indebted households. In Upputhara, the corresponding figure is lower, about 60 percent. All the cultivators in Cherumad and Kappikunnu reported debt, whereas, in Upputhara, it was about 90 percent. Among agricultural labourers about 50 percent reported indebtedness in Wayanad villages whereas 90 percent reported indebtedness in Upputhara. In sum, a vast majority of households in the category of the self-employed in agriculture, and those dependent on agriculture directly or indirectly, are in debt. The amount of debt by social groups shows that in all the three villages the intermediate castes like Ezhavas, Chettys and Muslims, and the forward communities like Christians and Nairs reported higher amounts of debts, than scheduled tribes like Paniyar, Kattunayakar and Kurumar. In numerical terms, Ezhavas and Christians together constituted a high proportion of indebted

Table 8 . Average amount of debt by Main Source of Household Income in the study villages, 2004

Occupation	Cherumad		Kappikkunnu		Upputhara	
	Mean debt	Household %(No)	Mean debt	Household %(No)	Mean debt	Household %(No)
Cultivators	53508.46	48.6(171)	142356.63	39.3(211)	92212.85	31.9(126)
Agricultural Labourers	8928.95	27.5(97)	17857.14	39.4(212)	24912.61	30.8(122)
Non-Agricultural Labours	23400.00	7.4(26)	22361.43	14.5(78)	15535.29	21.0(83)
Business	80707.81	4.3(16)	-	-	28687.50	2.2(9)
Employed	48521.15	11.0(39)	62500.00	2.1(11)	157218.67	3.0(12)
Others	3000.00	1.1(4)	21631.28	2.8(26)	57741.00	11.1(44)
Total	39046.18	100.0(352)	68505.13	100.0(537)	52135.01	100.0(396)

households. Since the tribals are the poorest among the social groups, and they have practically no assets to offer as collateral, one would expect lower incidence of indebtedness among them.

Data on the amount of debt (see Table 9) outstanding by sources give a number of interesting insights. More specifically, it is seen that (a) access to formal sources of credit (like co-operative banks and financial institutions) is higher in Wayanad villages than in Upputhara; (b) the debt outstanding to friends and relatives is significant in Cherumad and Upputhara but not in Kappikunnu, indicating a lack of social network supports in this village during times of financial crisis; (c) the access of moneylenders is more in Upputhara than in the other two villages; and (d) the practice of pledging gold is widespread in all the three villages. The relative importance of different sources of credit in the outstanding amounts of debt is evident from the pattern of distribution

Table 9. Estimated share of debt by source of provider in the study villages, 2004

Source of Agency	Distribution of Rs. 1000 by source		
	Cherumad	Kappikkunnu	Upputhara
Schedule Bank	400(55.1)	270(43.3)	163(25.9)
Co-operative Bank	224(28.1)	345(31.9)	268(35.5)
Govt. Financial Institutions	55(6.9)	136(10.4)	141(4.0)
Friends and Relatives	151(18.3)	61(34.3)	103(39.7)
Chitties/Kurries	9(1.1)	12(2.9)	44(6.0)
Gold Loan	148(42.3)	101(39.1)	130(57.9)
Money Lenders	-	29(22.4)	85(46.2)
Self Help Groups	13(19.5)	-	-
Others	-	45(38.3)	65(53.5)
Total	1000(80.1*)	1000(78.6*)	1000(94.4*)

Note: parenthesis gives the percentage of estimated households reporting debt; * any of the above source per Rs 1000 of outstanding debt, by sources. The estimate reinforces the role of formal credit[16]; they account for 68 percent of the debt in Cherumad, 71 percent in Kappikunnu and 57 percent in Upputhara.

The purpose for which debts were incurred is evident from Table10. In Cherumad 42 percent of the debt was incurred to meet the current and capital expenditure in farm business. In the other two villages, the share of this item is much higher. Repair of houses constituted another important item of debt. The remaining amount was incurred for a variety of other purposes.

The analysis presented above shows that the magintude of indebtedness is higher in Kappikuunu than in Upputhara and Cherumad. In general, there exists a significant positive association between distribution of the amount of debt and MPCE. The formal sources of

Table 10 Rs. 1000 Distribution of reported Debt by purpose of taken in the study villages, 2004

Purpose	Cherumad	Kappikkunnu	Upputhara
To Meet Increased Production Expenditure	424	656	353
To Meet Increased Non-Production Expenditure	101	55	92
To Repair House	235	150	107
To Acquire Production Assets	56	13	-
To Acquire Land	21	1	43
Medical Expense	47	12	56
Marriage Expenditure	50	26	100
Repay Existing Loans	43	3	187
Others	23	86	62
Total	1000	1000	1000

Note: Sample Weight applied.

credit accounted for a substantially high percentage of the amount of debt. The practice of taking gold loans and also of borrowing from the moneylenders, are noted in the villages. A good part of the debt incurred by households was for farm business and the remaining for a variety of other purposes. Since the villages have been undergoing economic distress, it is necessary to understand the changes in the debt situation of households in the recent past.

IV. Changes in Indebtedness: Some Insights

Development of credit institutions in the study villages is closely linked with the evolution of cultivation of plantation crops. Before in-migration of population into the study areas from the plains began, landed households had only the facility to exchange rice with traders in the local markets (chantas) in exchange for condiments and household utensils. In the colonization scheme in Wayanad, there was a component of agricultural loan, which was not repayable, but was to be used exclusively for the cultivation of plantation crops. A formal institutional facility for disbursing loans was initiated mainly due to the efforts of in-migrant farmers. They started 'Aikya Nanaya Sangham' as a self-help attempt. In Cherumad, a Sangham was floated in 1952 for the whole region by a number of enterprising farmers collecting contributory shares from among themselves and loans were distributed according to requirements. In 1962, this association was registered as a co-operative bank under the District Co-operative Bank, then functioning with financial assistance from the State Government. The banking activities were scaled up as a result when disbursal of agricultural and non-agricultural credit began as a regular banking process. A Director Board elected by the shareholders, on political lines, handles the day-to-day affairs of the bank. This makes the bank accountable for and sensitive to the requirements of the local people and local interests. Besides, the Coffee Board provided some credit facilities to the coffee growers till 1994, when the Board was dismantled. The households in Kappikunnu, reported that there are three co-operative banks, three nationalized banks and two private banks functioning in that area, from all of which they avail credit. In Cherumad also, all these types of banks are in operation. Private financial institutions, like chit funds and moneylenders have become active in the area during the past two decades. In Upputhara, a co-operative credit society started functioning from as early as the 1940s. Apart from the Upputhara service co-operative society formed in 1949 and which covers the entire Panchayat, two more co-operative credit societies have started functioning in 2005. Besides, a branch of the Idukki District Co-operative Bank and the Malanad Service Co-operative bank have also been servicing in Upputhara.

Since the 1990s, all the three areas witnessed rapid increase in the availing of credit by their households. For example, as Table 11 shows, the percentage of households that took loans from both formal and informal sources in Cherumad, has grown rapidly since 1995.

While the former sources continue to be important, other financial institutions like private bankers who issue gold loans, and moneylenders

Table 11. Distribution of households with loans outstanding, according to period and sources of loan , Cherumad

Source of Loan	No. of Households by Period of Loan			
	Before 1995	1995-2000	After 2000	Total
Scheduled Banks	41 (19.61)	69 (33.0)	99 (47.36)	209 (100)
Co-operative banks	14 (11.38)	65 (52.84)	44 (35.72)	123 (100)
Government Financial Institutions	-	13 (41.53)	18 (58.42)	31 (100)
Friends and Relatives	-	42 (50.60)	81 (49.60)	83 (100)
Chitties	-	-	9 (100)	9 (100)
Gold Loan	15 (7.89)	21 (11.05)	154 (81.05)	194 (100)
Money Lenders	5 (6.0)	-	80 (94)	85 (100)

Note: Figures in bracket indicate the percentage of households to the total.

are found to have assumed great significance in recent years in Cherumad. In the other two villages the situation of indebtedness is severe (Table 12). In Kappikunnu, a high percentage of households availed of loans from formal sources, but the practice of taking gold loans has increased significantly. However, in this village about two-thirds of the households had taken loans from moneylenders even prior to 2000.

In Upputhara also, a very high percentage of households reported outstanding debt to commercial banks since 2000 but the sources of debt have become diversified as is evident from the fact that a very high percentage of households owed debt to Chitties/kuries, moneylenders, private bankers, etc.

In trying to explain this pattern of farmers accessing loans from more and more sources, one must bear in mind that there had taken place an unprecedented price hike in the case of major crops during the 1990s, that flared up the aspirations of households. Concomitantly, they made long-term plans in anticipation of a sustained price rise. This was also a period when banks were competing with one another to entice farmers into taking loans under various schemes, goaded by a bloated impression of credit-worthiness of farmers, an impression which often proved unfounded as it rested on anticipations of rising crops and yields. The farmers too were persuaded to enter into market speculations often based on expectations rather than on hard facts and reliable information of market trends. And they made use of all the loan facilities available from various sources. They used the loans not only for agricultural purposes, but also for various other purposes, productive and non-productive. House construction was an activity which received the greatest priority in the investment decisions in the case of both the poor and the not-so-poor farmers. Thatched roofs were changed to tiled or concrete roofs. Floors were cement-plastered or laid with marbles/granite or mosaic. Investments were made in land (either investment in land improvements or purchase of land), for raising new plantations and in financial assets. It is difficult to get a category-wise quantitative estimate

Table 12. Average loan outstanding by source of Loan before and after 2000

Source of Loan	Before 2000				After 2000			
	Upputhara		Kappikunnu		Upputhara		Kappikunnu	
	A	B	A	B	A	B	A	B
Nationalized Bank	48,588	35.8	22,552	25.2	21,297	64.2	30,793	74.8
Primary Co-operatives	24,459	58.6		-	9140	41.4	-	-
District Co-operative Bank	70,806	29.2	17,287	19.4	55,188	70.8	1,21,430	80.6
Other Government Financial Institution	13,0,000	23.7		-	1,85,251	76.3	-	-
Chitties/Kuries	40,000	21.2		-	35,273	78.8		-
Gold Loan	12,000	1.8	16,147	37.9	10,994	98.2	20,148	62.1
Money Lenders	-	-	4746	66.6	9073	100.0	1136	33.4
Friends and Relatives	17,845	6.0		-	12,407	94.0	-	-
Others	-	-		-	6016	100.0	-	-

A- Average amount per household; B- Percentage of households to the total.

of such investments. However, we have collected information on this activity for one village (Kappikkunnu), for a period of five years (1999-2004). The estimates are given in Table 13.

It shows that about 36% of the households invested in housing, 29% in land, 25% in plantations and 22% in financial assets. It is the households belonging to the top expenditure groups that invested more in all such activities. Besides these investments, there appear to have been also acquisitions of consumer durables, by making maximum use of the flexible lending approach of the credit institutions. Two percent of the households in Cherumad, 7% in Kappikkunnu and 5% in Upputhara acquired cars or jeeps by availing loans from banks. Nearly 4% of the houses in Cherumad, 12% in Kappikkunnu and 6% in Upputhara purchased scooters or motorcycle with bank loans. Similarly, purchase of items like refrigerator, TV etc. became widespread. The increased prosperity of the 1990s also resulted in changes in the lifestyles of households. To give an indicator, nearly 8% of the households in Cherumad took telephone connection; the corresponding percentage in Kappikkunnu and Upputhara being 16% and 12% respectively. The use of credit institutions for meeting health care expenditure and education of children (especially sending them for technical higher education courses like nursing, medicine, and engineering, to places outside the state) also became common in the study areas.

The sharp fall in agricultural incomes due to the crash in prices of pepper and coffee from the year 2000 onwards, and the adverse impact of drought and pests and diseases on crop yields have increased the debt burden of households. They failed to repay loans. Consequently, overdues mounted up. For instance, loan overdues as proportion of loans disbursed were 7.25 percent in the Pulpalli branch of the State Bank of India[17], in the year 2000. By 2005, the corresponding proportion increased to 54 percent. A similar trend was noted in other banks as well. The overdue position of banks was more severe in Wayanad than in Idukki.

Table 13. Investment made by households during the five year period, 1999-2004 by MPCE class in Kappikkunnu

MPCE	Percentage of households investing by type of investment			
	Housing	Land	Plantation	Financial Assets
0-300	1.5	-	-	-
301-500	30.6	10.2	-	30.6
501-800	24.7	2.9	2.9	17.2
801-1000	36.8	25.3	40.2	13.8
1001-1250	26.9	47.9	30.3	16.8
1251-2500	80.8	79.5	66.7	26.9
2500 and above	80.0	80.0	80.0	80.0
All	35.5	28.7	24.6	22.4
Mean Investment (Rs)	21403	6470	8737	10840

The lending policies of banks have undergone change in response to the mounting overdues. The banks have reduced their long-term and medium-term loans to agriculture[18]. Priority has shifted from long-term to short-term loans, especially loans with gold as collateral. Banks have also stopped issuing fresh loans to defaulting households and started issuing notices of revenue recovery. Under pressure from farmers' organizations[19], banks have made attempts to adjust old loans against new loans, which reflected in the bank records as increase in the supply of credit, but in reality it did not ease the credit constraints to households.

Pledging[20] gold had been one of the scarce methods of raising loans under conditions of distress. The liberal policy of banks to issue gold loans has facilitated the growth of loans, with gold as collateral. The data available from commercial and co-operative banks in the study regions have shown the manifold increase in the amount of gold loans disbursed since 2000. The practice of dowry has been getting widespread in the study villages (as it is in the rest of Kerala) in recent years and gold is an integral part of the dowry. It is also seen that households had resorted to purchasing gold during times of the price boom. In Wayanad the dowry system had not existed at all among tribal households, historically speaking. However, they have also started adopting this practice, as 'demonstration effect' of the practice followed by the settler communities, especially Christians. Gold has become a sure form of savings since gold price has been steadily on the increase. A number of private financial institutions that provide gold loans have also come up in the study areas. Some of these agencies also specialize in providing loans to debtors to recover their gold pledged with banks and helping them sell it off. Pledging gold as collateral and obtaining loan is one of the ultimate strategies households resort to. As women adorned with gold jewellery are usually viewed as symbols of their familys' prestige and financial standing, it is customary for women in most communities in Kerala to dress up bedecked with jewellery, for family gatherings, weddings and other social functions. Pledging gold is considered infra dig to households, especially gold which has been part of a woman's dowry. During the agrarian crisis in Wayanad, many families are reported to have put off marriage negotiations of daughters and sisters, as lands and crops were losing value and wedding expenses with the price of gold, skyrocketing. A panchayat member in the Wayanad district narrated his own experience. In his ward, a family was not able to find the means to go ahead with a marriage that had been already arranged as they could not purchase the promised quantity of gold. He intervened in the situation and persuaded a jewellery owner who was his friend, to lend jewellery for the occasion so that the prestige of the families concerned could be kept up. The marriage did thereupon, take place and the jewellery returned to the shop thereafter. This was possible only because the bridegroom's family could empathise with the bride's family and the distress was viewed not merely as household's problem, but also as widespread one, shared by a region as a whole. The ward member narrated the incident with such pride and joy that it was clear to see how important it was to all concerned that the bride was to be bedecked in gold. This was so even when the gold happens to be not hers, which as an asset she could use for eventualities later in life. With such importance placed on gold, it has both intrinsic and symbolic value and people seldom risk losing this asset. A man who sells his wife's gold is considered either irresponsible or in dire straits, both damaging to the family's honour. Therefore, availing a gold loan implies an extreme distress condition. The spread of gold loans is thus, on the one hand, a sign of the gravity of distress and on the other, a reflection of the high liquidity of gold.

The activity of moneylenders calls for some explanation. In all the villages, moneylenders from Tamil Nadu had been present even before the price boom began. But

with the price boom, several new local moneylending agencies started flourishing in the area: some of them were large farmers who had accumulated huge surpluses during the period of the boom. They have come to be known locally as "blades", implying the double-edged annihilating nature of their transactions carrying usurious rates of interest and practicing extortionary methods in cases of default. Many farmers raise emergency loans from them since the procedure for getting loans is much simpler with them than with formal credit institutions.

In the recent past, in the study regions in Wayanad, a number of incidents of destroying the establishments of moneylenders and their loan documents have been reported; measures which the borrowers resorted to as part of their responses to attempts by moneylenders to confiscate properties of defaulting borrowers. Activities of local private moneylenders have come down drastically as moneylenders from Tamil Nadu withdraw from business with fall in prices and for fear of public wrath. In the Idukki region, since the economic situation is better than in Wayanad the number of formal credit institutions is relatively small and the activities of moneylenders are more widespread. The fall in incomes and the squeeze in the local credit system have also resulted in households increasingly resorting to borrowing from sources like friends and relatives.

V. Debts and Suicides

Whether or not the worsening of the debt situation has contributed to farmers' suicides is a complex problem to unravel. Even the statistics on the number of 'farmers' suicides' are misleading. The general tendency noted in these areas is to label all suicides as 'farmers' suicides' but in reality they belonged to cultivators, agricultural labourers and other occupational groups. A recent survey[21] of 331 households in which suicide took place during the period from 2002-2006 in Wayanad district revealed a number of findings on the persons concerned: (a) they belonged mainly to the age group of 21 years and above, with about 60 percent of them in the age groups of 41 to 60 years; (b) 90 percent of them were males; (c) they belonged to all religions and caste groups in the district; (d) 65 percent of them took poison for committing suicide, 30 percent resorted to hanging and the rest to various other methods; (e) 40 percent of the deceased were alcoholics, and only 20 percent had showed suicidal tendencies earlier; (f) they belonged to different land holding categories: 46 percent owned less than 50 cents each, 13 percent between 51 cents to one acre each, 27 percent between 1 to 2 acres each and 11 percent, 2 acres and above each; (g) 59 percent had been taken loans for agricultural purposes, and 13 percent had taken loans for repayment of old loans; (h) 18 percent of the households reported crop failure as the main reason for suicide ; (i) they were under financial distress 40 percent of the deceased had resorted taking loans as a coping mechanism, 44 percent had done nothing and the rest had resorted to sale of property ; (j) in 81 percent of the cases there was an immediate provocation to commit suicide, and in 40 percent of the cases, this provocation had been of a financial nature; and (k) 58 percent of the deceased households did not received any compensatory benefits from the government , 32 percent received an amount of Rs 50,000 each and the rest Rs 10,000 each. It is difficult to infer from these findings that financial distress was the sole cause for suicides. This might have been one of the several contributing factors; another survey conducted in Wayanad district also indicates indebtedness as one of the reasons for suicide (KKN Kurup 2005). To gain a good insight into the manner and the process through which, indebtedness combined with other family and societal factors resulted in suicides among members of agrarian households, we conducted several case studies of indebted households.

In these case studies, the complex nature of factors and processes contributing to indebtedness of households was looked into; attempts were made to find an explanation of as to why while some households succumb to the stress of indebtedness others struggle on and survive. For this purpose, we examined the two categories of indebtedness analytically. In the case of farmer suicides, it is very clear that these households had been in such dire straits because of the cumulative impact of various distressing life circumstances. In all the cases of suicide from our study areas, we find that these were people who had no hope of coming out of their crisis situations. On top of the heavy burden of the debt and the difficulties associated with making both ends meet, some calamity or the other like a terminal or chronic illness of a member of the household or the failure of an expected source of income as in the case of death of dairying cattle, or the death or financial ruin of a sole income earner in the family, had befallen them, driving them to the desperate measure of taking their lives. However, the story of survivors shows that even in such cases of unexpected calamities, the presence of support networks and, the degree of success with which some are able to negotiate various institutions, are crucial factors that enable even persons so deeply troubled to have the tenacity to fight life's battles as will be clear from the discussion of a few case studies which follows.

In the case of Rajeevan, aged 35, his father's cancer treatment had been adding on to his financial burden, a part of which he had inherited from his father. When he took his life in 2005, he left behind an ailing father, a mother, and a young wife and two small daughters. His father had taken a loan of Rs. 50, 000 from the land mortgage bank. To this amount was later added another loan of Rs. 7000 raised from a co-operative bank, and a third loan of Rs. 20, 000 that raised for meeting his father's medical expenses. Above all this, he had some personal loans amounting to Rs. 2000. He had no kin network to support him, no siblings and no parents-in-law to fall back on. Of his three brothers-in-law, one had died and the two surviving ones had themselves been engaged in wage labour and had serious financial difficulties of their own. He had no land or other assets in his name and had no way of raising new loans. He tried to earn some income from lease farming both in Kerala and in Coorg. Price crashes and crop failures not only smashed his income expectations, but also increased his indebtedness since the land he cultivated had been leased in. With education only upto the 8th standard and having had no other skills that could throw open new sources of earning, Rajeevan committed suicide. A few months later, his sick father too succumbed to his cancer. The amount of Rs. 50000 that Rajeevan's wife got from the government as relief, went towards paying off loans. She, with her mother-in-law and two small school-going daughters, were left in abject penury. It is only because of a cow in milk which had been donated to them by a freelance journalist who had come to do a story that the family was pulling on. The debt burden of Rajeevan was less than Rs. 100,000, but deprived of landed assets and not having other sources of income, and confronted with major medical expenses and the emotional trauma of cancer care, he had given up all hope of survival.

In the case of Parijatham too, liver cancer of her husband had added to the family's debt burden. When pepper cultivation was failing, the family had turned to lease cultivation of ginger, yam and plantain. Out of a loan of Rs. 1,50,000 Rs. 60,000 was spent on the husband's treatment. Rs.50, 000 had been borrowed from the Urban Cooperative Bank and another Rs. 50,000 from the Land Mortgage Bank. Apart from a married daughter, she had only a 19 year old son who was not capable of shouldering all these responsibilities. On the 9th day of her suicide the immediate cause of which was a bank notice demanding loan repayment, her son Dhanoop also took to suicide. The daughter took her sick father away with her. This family did not get help from relatives as they were also in financial distress. In fact, a year after the suicides of Parijatham and her son, her husband's brother, also a farmer, also committed suicide.

In the case of Joseph (58 years), who committed suicide in 2006 also, the amount of outstanding loans was not huge; he had only some small personal loans amounting to Rs. 4000. He had only one daughter who is mentally challenged who was in a care home run by Christian nuns. She had some additional health problems as well and needed constant medical care, but it was his brother's son who raised the money required for it. Joseph had no landed asset with title deed in his name, which would have helped him in getting a bank loan. His wife and son were members of two self-help groups and they each took a loan of Rs. 10,000. As Joseph himself was physically challenged, the panchayat had given him money to start a small business. On top of agricultural losses, this business also incurred losses. He had bought a pregnant cow in the hope of diversifying into dairying, but in a case of premature delivery, the cow and its calf died, nipping in the bud his hopes of making good his losses with income from dairy farming. Although he had been at one point of time a member of a political party, he was not associated with any organization for some time prior to his death and he had not communicated his problems with anyone. He had also fractured his legs a couple of times which had incurred him some small personal loans. His hopes of recovering from his losses were during his last days, on dairy farming. When this hope too was smashed, he put an end to his life.

In the case of the 47 year old Varghese alias Kunjunju, the unexpected calamity that added to his economic burden which had arisen from the agrarian distress caused by crop loss and crop diseases was the expenses of a court case that involved his brother who had been alleged of killing his wife. The social stigma of the incident also added to the stress of the financial burden that was steadily going up since this incident. As his two sons working away from home had not yet been well established, he received no help from that source either. Varghese had taken loans from the Land Mortgage Bank, a Commercial Bank and a Co-operative Bank, which together came to a total of Rs. 75,000. He was not able to repay any part of this amount. After Varghese's suicide, his wife moved into a seminary for doing domestic labour. Although she got Rs. 75, 000 from the government as relief, the money was spent entirely on her daughter's delivery-related expenses.

The case of Varghese Edappara, aged 55 years, is a good illustration of the cumulative nature of distress arising from agrarian crisis, emotional disturbances from situations in personal life, unexpected blow to financial calculations and anxiety over a loved one. Varghese's first loan was for an amount of Rs. 2000 only. He had taken it to buy fertilizers and meeting other agriculture-related expenses. He used to renew the loan every year by paying interest with amounts raised through personal loans. Then to payoff the personal loans, he raised new bank loans. He took several small loans for a variety of purposes, like a loan of Rs. 5000 for changing the roof of the house, Rs. 3000 for electrical wiring, and Rs. 8000 for ginger cultivation when ginger prices were going up. But crop losses and market crashes upset all his calculations. On top of this, his wife's rheumatism and his own paralysis that needed hospitalization worsened. An amount of Rs 8000 had to be spent on account of his hospitalization. Rs. 400 had to be set apart for medicines for the husband and the wife. Varghese's only son of 27 years of age, with education only up to the tenth standard, worked as cleaner in a private bus service. He learned driving and obtained a heavy vehicle driving license. He got married in 2004. The same year, he made a bad financial choice of buying a mini lorry, taking the vehicle loan from a private financier. However, he could not make much income out of this investment and defaulted interest payments to the financier with the result that the vehicle was seized. He had used that vehicle only for a year. Meantime, a daughter was born to him with congenital liver disease. An amount of Rs. 7000 had to be spent for her hospital expenses. Being the de facto head of the household with a paralysed father, a sick mother and an ailing child, the responsibilities on him drove him to situations of taking further financial risks. Jointly with a friend, he bought a used vehicle, but with mounting repair costs, he had to sell it at heavy loss. This calamity drove him to take a gold loan, pledging all the gold that his wife had received from her parents at the time of her marriage. This gold was to be sold for a total amount of Rs. 40, 000, when he found he could not pay back his loans. All these transactions were made without the knowledge of his father (Varghese) or his in-laws. At around the same time that Varghese got the bank notice for his loan defaults, he also came to know of the financial mess his son was in. For some 26 long years, he had been taking small loans and managing to honour repayments, but now he was confronted with a situation from which he could find no way to get himself out. Added to this was his frustration of his son's financial misadventures. None of the family was member of any self-help group or any other organization that could have been approached for financial help or emotional support.

In contrast to the above situation of heads of farmer households who committed suicide, we have the cases of people who were faced with more or less similar cumulative burdens of unexpected hospitalizations, misfortunes, difficulty in meeting day-to-day expenses and so on who manage to survive against all odds by sheer will power, social support networks, and ability to negotiate the system. A very good instance of this is the case of Yasoda, a woman upon whom was thrust the headship of a household that had come down precipitously in its socio-economic standing. From a situation of owning 8 acres of land, the family came down to a sorry state of possessing a mere 15 cents. She started the headship of the family under the trauma of her husband's suicide at the age of 30 years, who had bequeathed all his debts, their four children and their living house lost to her husband's creditors. The medical expenses for her children's periodic episodes of illnesses and hospitalization add to her financial burden. The support from her kin, both near and far, political workers, and her self-help group has been substantial in keeping her afloat.

In yet another case of a survivor, Sreemathi, 42 years old, became a de-facto head of the household after her husband became paralysed from a fall from a tree and could no longer work. While taking over the agricultural activities of her husband and diversifying into dairying, she pins her hopes on the nursing education of her son although she cannot afford tuition fees and hostel fees, for his nursing education in a college outside the state. She has decided to raise the amount by taking loans. Her negotiations with various banks and her reasoning that goes into each of her decisions are interesting. As she already had a loan of Rs.16, 000 for agricultural purpose raised from a rural bank-the South Malabar Gramin Bank (SMGB) - and since its interest rate for educational loans is 12%, she decided to approach a scheduled bank which charged 1 % lower interest for such loans. The bank manager however, rejected the loan request as the family already had a loan with SMGB. So she decided to approach SMGB for a small loan to cover only the admission fee of Rs.85,000. The bank was ready to sanction only Rs.50,000, that too by "adjusting" the family's existing loan of Rs.16,000. Although this amount was not enough to solve her problem, as she could not raise the money in any other way before the last day of college admissions, she decided to take the loan. For the rest of the money, she took a gold loan from the bank by borrowing gold from her neighbours, assuring to pay them back within one year. Thus, she raised all the money required to pay her son's admission fee.

For the rest of the tuition fees and hostel fees, she again approached a commercial bank. For about 6 months, she went back and forth to get this loan. Later, she learnt that the bank manager used to take bribes for sanctioning loans. Therefore, she decided to approach four other banks at Sulthan Bathery. All these banks however, rejected her application informing her that she did not live within their service areas and that the deadline for sanctioning such loans had already been over. She thereupon approached some local politicians and a Panchayat Ward Member whose interventions persuaded the manager of the bank to sanction the loan. This was the same commercial bank that she had initially approached. The manager agreed to sanction the loan in order to oblige the powerful politicians and people's representatives. Her perseverance in getting the loan sanctioned has been remarkable. Out of the availed loan amount, she used Rs.35, 000 to close the loan already taken from South Malabar Grameen Bank and Rs.30, 000 to close the gold loan taken with the help of neighbours. The repayment of the principal amount will start only after five years of the completion of the course although a monthly interest of Rs. 7 50 per month has to be paid and she has to also raise Rs. 2, 000 a month towards hostel fees. However, Sreemathi hopes that her son's professional education will fetch him a good job and that their difficulties would then be over. It is this hope that keeps her going. The networks have fortified her perseverance.

There are also the cases of persons like Rajasekharan who became indebted consequent on his decision to be a supporting brother to his sister, a widowed sick woman and her son who had to be educated. A small farmer possessing around one acre of land, he became indebted to the bank for an amount of Rs 30,000, mainly to meet his sister's health care expenditure and her son's educational expenses.

Others like Ramakrishnan went into crop diversification based on speculation regarding soaring crop prices as they were sure of their stable income but wanted to enhance their incomes for better levels of living. A farmer having a total land holding of 1 acre and 85 cents, Ramakrishnan put his entire savings of Rs 2, 00, 000 (Rs Two lakhs) from agriculture into lease cultivation of ginger in Coorg in order to make money for the construction of his dream home; but owing to the unfavourable agricultural conditions, not only did he lose all his savings, but also became indebted for Rs 70,000. One portion of his landholding was under rubber cultivation. In 1996 seeing that rubber prices were steadily going down, he had begun to use the rubber trees as a prop for pepper vines the cultivation of which he decided to expand based on boom conditions in pepper prices. He was proved right to begin with. Within three or four years, with the income from pepper, he was able to clear all his debts. The price for pepper then ranged between Rs 150 to Rs 175 per kilogram. Hoping that the attractive price situation for pepper would continue for long, he raised two bank loans amounting to a total of Rs. 1, 75, 000 and used all his savings and the loans for constructing his dream house. But the favourable agricultural conditions did not last long. Crop diseases ruined his pepper vines and his financial situation deteriorated. Two years earlier, he had planted 250 arecanut plants when areca nut prices were going up, but the severe drought that the region experienced belied his expectations.

Sukumaran, 45 years old, a farmer with 3 acres of own land, also diversified his agriculture speculating on the prices of crops. He too had gone for lease cultivation of ginger in Coorg which he expanded when prices boomed, emboldened also by the promising pepper prices. He too ended up with a huge liability when his speculations were proved wrong.

The case of Joseph is different in the sense that he went in for a loan of Rs 25,000 from a rural bank despite the fact that his financial position was quite sound, only because he got a subsidy amount of Rs. 5000. Joseph is a 66-year-old farmer owning 3 acres of cultivable land on which he cultivates rice, ginger, pepper and coffee. Out of the total loan amount sanctioned, he drew only Rs 9000 as he had adequate own savings. The remaining Rs 16000 of the loan amount, he kept as deposit in his bank account. With low production and low prices for his produce he found repayment of the loan difficult. Then he decided to draw on the Rs. 16, 000 he had deposited in the bank, but learnt that the bank had withdrawn the money as repayment of the interest on his loan amount. The bank suggested to Joseph that he could take a second loan for Rs 5000 to repay the interest on the initial loan and make book adjustment for a new loan. Joseph could not repay this adjusted loan too due to the crisis in agricultural sector. Now he has an outstanding loan of Rs 100,000, although his initial loan was only Rs. 25, 000 with Rs. 5000 as subsidy.

Unlike all the above-mentioned cases, Ramesh, owning 13 acres of land, is one who successfully accessed various credit institutions on the strength of credit worthiness. He took loans to the tune of Rs 14 lakhs from different banks, and used the amount mostly on non-agricultural purposes like repair of the house, development of his plantation, mechanization and modernization of his cattle farm, building of a major tourist home in the town and for putting of his son through an engineering course outside the state. Although a large farmer with comfortable living circumstances, he is a loan defaulter to various banks.

The foregoing case studies highlight the nature and the causes of household debt accumulation. One of the factors noted in all the case studies is the high expectation that the households had held about their income prospects, of high and rising prices of pepper, ginger and other cash crops, an expectation, belied by the crash in prices and decline in yields. It is this high expectation that motivated some households to invest in activities like lease cultivation of ginger, investment in housing and sending children to higher education to institutions outside the state, on the strength of loans raised from financial institutions. In some cases, family problems, unexpected expenditure due to own ill-health or ill-health of members of the family, etc. aggravated their misfortunes.

VI. Conclusions and Implications

The major findings from the preceding analysis are briefly summarized as below:

- Sharp fall in prices of crops like pepper, coffee, cardamom and tea along with fall in their yield levels due to adverse weather conditions created a situation of 'shock and vulnerability' and agrarian distress in the study areas. Every section of the agrarian population -cultivators, agricultural labourers, non-farm workers- was severely affected by the distress.

- Faced with shocks and vulnerabilities households developed several coping and adaptive strategies that included (a) reduction in household expenditures; (b) out-migration; and (c) diversification of household activities. Mitigation measures of the state especially the PDS, and interventions by Panchayats in health care, education, and drinking-water supply provided some relief to the affected population.

- In the face of a prosperous agricultural economy during the 1990s, households raised loans from different sources either for investment or for acquiring consumer durables. However, the shocks experienced from 2000 resulted in non-repayment of loans, and additional borrowing to meet production and household expenditure, thereby increasing household indebtedness.
- Formal sources of credit accounted for bulk of the outstanding debt. Money lenders, and other sources accounted for only less than 20 percent of the outstanding debt. The practice of raising gold loan is seen to be widespread. The purpose of borrowing has been partly to meet expenditures on agricultural production and partly for other household expenditures on housing, education, health, etc.
- There are inter-village differences in the magnitude of distress, coping with indebtedness and adaptive strategies of households. The intensity of the distress and household indebtedness is higher in Kappikunnu; the region where this village is located also reports very high incidence of suicides in the district. The other two villages in which household incomes are more diversified, and social networks much stronger, the distress conditions did not result in suicides.
- Indebtedness is only one of the factors that contribute to the incidence of suicides among members of agrarian households. There have been other unexpected calamities, lack of support networks and the inability of the victims to cope with such circumstances, that drove them to put an end to their lives.

It is evident from these findings that there are multiple dimensions to the agrarian distress. Therefore debt relief alone would not bring solace to the indebted households. Debt relief is at best only a short-term palliative. What is needed is a long-term strategy to mitigate the distress within an integrated framework in which are embedded (a) policies to promote price stability; (b) ecological sustainability of agriculture; (c) strengthening of formal rural credit; (d) strengthening of support networks; and (e) income and employment generation programmes. The emphasis should be on strengthening those activities that households have developed as part of their coping and adaptive strategies. Such an approach to an integrated farmers relief package would attack the root causes of the malady, pro-actively rejuvenating agriculture, farmer households and ecology, as well as livelihoods in distress prone areas. A mere monetary compensation approach to agrarian distress would not put an end to the tragedy of farmers' suicides, but only aggravate the problem.

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Notes:

1 A large number of studies are currently available on farmers suicides done for different parts of the country. Some of the important Studies are Mishra (2006), Mohanty and Shreff (2004) Mohanty (2005), Parthaswarathy and Shameem (1998) Revathy E (1998), Reddy and Rao (1998), Rao and Gopalappa (2004), Gill and Singh (2006), Vaidyanathan (2006).

2 There are two schools of thought on the impact of trade liberalization and globalization on Indian agriculture. According to one school of thought, it would result increase in the efficiency in resource allocation in agriculture and increased productivity gains; on the other hand, the opposing school argues that it would result in erosion of food security, inequality in the distribution of incomes, and overall negative impact on the poor. For details see Bhalla (2004).

3 For a summary of this argument see Reddy (2006).

4 The states that are severely affected by agrarian distress are Andhra Pradesh, Maharashtra, Karnataka, Punjab, Karnataka and Kerala. Within these states, specific regions growing cash crops for exports are more badly affected than other regions.

5 For a preliminary analysis of the crisis see Mohankumar and Sharma (2005).

6 The government of Kerala through a bill introduced in the state assembly has set up this commission with the objective of examining the intensity of agrarian distress in any part of the state and if necessary to reduce distress and initiate and mitigation measures. The Commission is empowered to prevent the recovery of loans by various financial intermediaries from the affected households and to prevent exploitation of the households under distress by the lenders. The Commission can also direct the government to take up mitigation measures. It has a retired judge of the High Court as Chairman.

7 Data on suicide mortality, the characteristics of the victims like age, sex, method of committing suicide etc are fairly reliable and are available in published form. However, there are limitations regarding the causes of death and the occupations of the victims. While the victims' households have been provided with financial support and other relief measures by the state, if the cause is "farm crisis", there is a tendency to classify a suicide in the distress prone areas as "farmers' suicide" .The data on the number of suicides committed by farmers are compiled by the state agricultural department and supplied to other agencies.

8 For a comparison of the development indicators at the district level, see the Human Development Report for Kerala. Government of Kerala (2006). In both Wayanad and Idukki, about 48 percent of the workers are engaged in agriculture, either as cultivators or agricultural labourers. On the other hand, for the state as a whole the proportion is only 23 percent. If we include also the plantation workers, then around two-thirds of the workers in these two districts would be deriving their livelihood from agriculture (including plantations).

9 In Kerala, unlike in other states, a revenue village is a large administrative unit with an average size of about 5000 households and a population of about 20000

persons. Therefore, for the purpose of conducting micro-level studies, a ward of a panchayat (the lowest administrative unit) is usually taken up. A Panchayat ward may have about 500 to 1000 households depending on population density. For the purpose of the present study, villages refer to wards of the panchayats concerned.

10 Multistage stratified sampling method has been used to select the sample households. At the village level, all households were stratified on the basis of the main source of income (Table A). Among the major strata, cultivators and agricultural labourers were again stratified on the basis of the extent of land holdings. The number of households selected for the present study are given in Table B. Appropriate weights were computed for the analysis.

Table A. Distribution of households by major strata (main source of income) in the study villages

Strata	Number of Households		
	Cherumad	Kappikkunnu	Upputhara
Cultivators	176	211	136
Agricultural Labourers	179	343	127
Non-Agricultural Labours	26	67	84
Business, Trade	17	13	6
Employed	39	14	20
Others	8	36	47
Total	445	684	420

Table B. Number of households canvassed in the study areas, 2004

Strata	Households Canvassed		
	Cherumad	Kappikkunnu	Upputhara
Cultivators	36	22	27
Agricultural Labourers	35	34	25
Others	28	26	32
Total	99	82	84

11 Nair et.al (2007a, 2007b, 2007c).

12 See Subrahmanian (2007).

13 According to the 59th round of the National Sample Survey, while for the country as a whole, the percentage of farmer households (ie households with at least one member of the household engaged in the activity of farming in the reference period) which were in debt was 49, the corresponding figure for Kerala was 64.

The other states where the prevalence rates were higher than in Kerala were Andhrapradesh (82) Tamil Nadu (74.5) and Punjab (66.4). See for details, Government of India (2006)

14 The mean amount of household debt estimated for the study villages is higher than the amount estimated by the 59th round of the NSS for the year 2003 for the state. The estimated debt per farmer household for Kerala by the NSS survey was Rs,33907 and for the country as a whole it was Rs.12585. There exist a few other sources of estimates also for the state as a whole and for specific regions. But these sources of data are not comparable due to different reference periods and differences in the concepts and methodologies used.

15 The findings from the household survey are in conformity with that available from the 59th Round of the NSS. According to the NSS survey, the percentages of households taking credit from co-operatives, banks, and other government sources respectively were 46, 42 and 8 respectively. The corresponding percentages for the country as a whole were, 26, 27 and 3. In Kerala 16% of the households borrowed from moneylenders, whereas for all-India, the corresponding figure was 29. The amount of outstanding debt to formal credit institutions were Rs.830 (per Rs.1000 of outstanding debt) whereas for the country as a whole it was 586. The amount of debt borrowed from moneylenders was Rs.74 for Kerala and Rs.294 for all-India.

16 The purposes for which loans were taken in the survey villages differed from those of the NSS estimates for the state as a whole in one important respect. The amount of debt incurred for production expenditure in non-farm business was considerably higher in the survey villages than the corresponding amount reported by the NSS survey for the state as a whole. The NSS data show that about 25 percent of the outstanding loans were incurred by farmer households for meeting current and capital expenditure in farm business where as for the country as a whole it was 60%. In Kerala, non-farm business and other expenditures together constitute nearly 50% of the loans outstanding.

17 The following data supplied by the State Bank of India clearly show the types of loans issued and the mounting overdue position of Bank.

Amount of loan by type	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Agriculture loans	18.16	27.84	31.22	30.58	50.78	68.7	86.28
SSI Loans	2.94	2.94	0.98	3.87	2.01	4.01	6.95
Others	208.93	294.3	359.69	395.87	400.17	376.97	357.28
Total	230.03	325.08	391.89	430.32	452.96	449.68	446.92
Loans overdue	16.68	45.65	96.98	213.29	249.72	242.00	255.38

18 The data collected from the Services Co-operative Bank of Pulpally show that during the early years of agrarian distress (from 2000-2003), short, medium and the long-term loans issued to agriculture were virtually stagnant; they showed increases since then. A similar trend was also noted in the case of other banks. This trend is not consistent with the state level data on loan advances to agriculture

by commercial banks during the financial years from 1999-00 to 2005-06, available from the State Level Bankers Committee. Part of the reasons for the increase could be the carry over of overdue loans also along with actual advances made to agriculture.

19 The Farmers' Relief Forum which started functioning in 1994 mobilised a revolving fund of Rs. 10,000 to aid farmers to renew loans by paying arrears of interest. However, even this forum did not help farmers when they failed in repaying loans and banks initiated attachment procedures. At this juncture, under Farmers' Relief Forum, "japthi thadayal" – prevention of attachment procedures– was initiated, which turned even violent at times. Farmers say that it is not the act of attachment itself, but the manner in which it was implemented, that hurt the pride of the farmer. The attachment procedure took place with the accompaniment of drum-beating, thus bringing the action to public attention.

20 Gold loan is easy to obtain, since it is a collateral accepted readily by both formal and informal agencies for supply of credit. The rate of interest charged on gold loan by various credit institutions varied between 9.5% to 12.5% per annum. The interest rates charged by moneylenders varied from 24 to 60 percent, depending on the duration and the type of security given as collateral. The interest rates charges by commercial banks on agricultural loans ranged from 8.5 to 9 percent. These are the rates which prevailed during the year 2005-06.

21 The survey results reported here are taken from a study conducted by Shreyas, an NGO which was working in Wayanad district in 2006. The respondents in the survey were members of the victims' households. The nature of information gathered included personal details of the victim, his/her socio-economic background, and the circumstances in which the victim committed suicide. More or less a similar survey was conducted by Mohankumar and Sharma (2006) in 30 households which had a suicide victim each. Both the surveys showed that the average amount of debt among the households were much higher than the figures reported per indebted households in our survey. The Shreyas survey reported a debt of Rs 72000, where as Mohankumar and Sharama reported Rs 793,858

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