SAVINGS AND INVESTMENT BEHAVIOUR OF RUBBER CULTIVATORS - A MICRO LEVEL ANALYSIS

by

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THESIS

Submitted in partial fulfillment of the
requirement for the degree of

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Vellanikkara, Thrissur
1998

DECLARATION

I hereby declare that the thesis entitled **"Savings and Investment Behaviour of Rubber Cultivators- A Micro Level Analysis"** is a bonafide record of research work done by me during the course of research and the thesis has not previously formed the basis for the award to me of any degree, diploma, fellowship, associateship or other similar title, of any other University or Society.

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CHAPTER I

INTRODUCTION

INTRODUCTION

The magnitude of economic growth of any economy is decided by the behaviour of income, consumption, savings and investment. Ample theories have been profounded on these aspects spread over classical, neo- classical and later schools of thought. The volume of investment is directly related to the rate of savings. Savings of an economy comprise of household savings, private corporate savings and public savings. The household sector comprises, individuals, all non-government, non-corporate enterprises like sole proprietorships and partnership owned and/or controlled by individuals and non-profit institutions which furnish educational, health, cultural, recreational, and other social community services to households. The private corporate sector comprises all non-government, non-financial / financial corporate enterprises and corporate institutions. Public sector covers government administration, departmental enterprises and non departmental enterprises. Among these sectors, the household sector has been a major contributor to the domestic savings for over a couple of decades. For instance, during 1994-95 the share of household sector in the net domestic savings was 78 per cent (CSO 1994-95). Hence it is evident that the savings behaviour of the household sector is vital in the determination of savings and investment.

Majority of the households are engaged in agriculture, hence the earning potential of agriculture has a strong bearing on the formation of household savings in the country. However, it remains a fact that majority of the farmers are following subsistence farming with focus on food crops. As a consequence, their savings

tends to be meagre. On the contrary, those farmers who have turned to commercialization of agriculture especially into cash crops enjoy a higher income. Understanding the benefit of commercialisation, the entrepreneurial farmers of Kerala have ventured into different plantation crops quite for sometime now. This progressive shift towards plantation crops is taking place by replacing food crops like paddy, banana, tapioca and vegetables. As stated in the Economic Review of Kerala 1994-95, the State's agricultural economy was undergoing structural transformation from mid seventies by switching over a large proportion of its traditional areas which were devoted for subsistence crops like rice and tapioca to more remunerative crops like coconut and rubber. However in recent years rubber cultivation is increasingly become popular due to number of reasons. (1) Increasing political and institutional support to the cultivation of rubber. (2) The demand and supply gap in the natural rubber industry provides ample scope for rubber cultivation. (3) Rubber Board provides adequate institutional support through the supply of inputs and provision of investment subsidy. (4) Availability of credit is not a serious problem because of the viability of rubber plantations. (5) Rubber farmers are considered to be an influential lot because they fall in a comparatively higher income bracket and also due to their communal and political influence. Due to the influence of all these factors, rubber farmers are enjoying a better position among the farming community of Kerala. Also, because of the adaptability of rubber to varying agroclimatic conditions, it attracts farmers from all segments. Owing to the above mentioned advantages rubber cultivation is a lucrative investment proposition. Hence rubber cultivation is a primary occupation to large cultivators and also a subsidiary source of income to those engaged in other occupations.

While rubber consumed only 14.55 per cent of the net cropped area, it contributed 18.32 per cent to the agricultural state domestic product. This points to the high productivity of rubber farming. Justifying this contention, the area under cultivation, production and productivity of rubber has increased by about 5 times, 20 times and 3 times respectively during the last four decades. Hence we may believe that the rubber cultivators probably constitue a single class of farmers who has maximum potential for saving. However it can't be believed that this higher saving is ploughed back again as reinvestment into this crop or at least into the agricultural sector. Infact such a ploughing back of resources is much needed for the lager development of agricultural sector.

Reinvestment in agricultural sector can take place mainly in two ways. The first one is the direct reinvestment by existing farmers who have saved from their earlier cultivation and the second one is an indirect or mediated reinvestment. When the existing farmers put their savings in the form of 'financial assets', there are also chances of it getting channelised through financial agencies like banks into the hands of existing and new cultivators to be reinvested in the sector. Instead, if the savings is made in the form of 'physical assets' like buildings vehicles etc., it may not be of much help to agriculture since it does not indicate any reinvestment possibilities in the agricultural sector. The issue assumes greater importance in the wake of certain macro-level data on household investment. The CSO's quick estimates of national income for 1994-95 had suggested that there was a substantial rise in the household savings in the form of physical assets, during the post liberalisation period. If this observation is taken into account, the chances of reinvestment in agriculture would be adversely

affected. Hence a micro-level study on the household savings and investment behaviour related to agriculture would be of paramount importance. It is in this context the study entitled "Savings and Investment Behaviour of Rubber Cultivators- A Micro Level Analysis" is taken up with the following specific objectives.

1 To analyse the extent and pattern of savings and investment of rubber cultivators.

2 To examine the factors influencing their savings and investment decisions.

Scope and practical utility

The study purports to look into the various dimensions of the savings and investment behaviour of rubber cultivators. An attempt is also made to identify the factors influencing the savings and investment decisions of the rubber cultivators which shall also indicate the extent of capital formation in rubber farming and also the volume of investment in physical assets and financial assets. The present study will help the banks and other financial intermediaries to frame suitable strategies for mobilising savings of the rubber cultivators

Limitations

As in any other study, the present study is also not free from limitations. The major limitations of this study were,

1. The study is primarily concerned with income, expenditure, savings and investment variables. While in the process of data collection, it was seen that the farmers tried to provide an under estimation of their income on account of their apprehensions regarding the use of the information disclosed.

2. The savings behaviour of rubber cultivators is very much related to price of rubber which underwent considerable variations since 1996. These fluctuations affected the magnitude of savings which led to over estimation and under estimation in certain periods.

3. Considerable difficulties were experienced in valuing investment particularly investment in physical assets.

4. Every care was taken to maintain homogeneity in cultivation practices, size of holdings, agroclimatic influences etc., so that comparisons can be made more useful and relevant. However mild variations were creeped into data collection.

Organisation of the report

The report is divided into five chapters including introductory chapter. An analytical review of the available literature relevant to the problem is made in the second chapter. The framework of analysis is presented in the third chapter, followed by the presentation of results and discussion of the findings. The summary and conclusion of the study forms the fifth chapter, followed by bibliography, appendices and abstract of the report.

CHAPTER II

REVIEW OF LITERATURE

REVIEW OF LITERATURE

Literature on savings and investment is voluminous. For precision and clarity in presentation, this section is subdivided into three, viz.

Concepts and issues.

Extent and Pattern of savings and investment.

Factors influencing savings and investment.

CONCEPTS AND ISSUES

Bal and Singh (1970),Bohah (1985), Bhuvaneswari(1993), and Sinha and Kumar (1996), computed disposable income by deducting production expenditure from farm family gross income. The investment included farm, nonfarm and household investments. The household savings was derived through asset account method.

In the Papers of Miglani et.al.(1975) Singh et.al. (1975) and Bhatty and Vashistha (1988) income refers to "farm business income which is equal to gross income minus cost incurred on seeds, manure, fertilizers, pesticides, human labour, bullock labour (owned and hired) running expenditure and depreciation on irrigation structures, farm machinery implements and farm building, taxes, cesses, water rates and interest on working capital. In a study by Garg and Srivastava (1972) investment on crop enterprises was measured as expenditure incurred on bullock labour, HYV seed,

fertilizers, irrigation, revenue and saving is derived as gross income minus investment on the crop enterprise minus investment on diary enterprise minus investment on fixed farm asset minus family consumption. According to Nandal (1972) Panikar(1992) and Prema (1995) income includes farm income, non farm income and borrowings and farm income derived as value of crops and livestock product plus amount received from the sale of farm asset and receipts of land rent, etc. Investment is derived as sum of farm investment (including expenditure on house hold durables).The concept of gross saving and net saving used by Nandal (1972) and Panikar (1992) conform to the generally accepted definitions. They define gross savings as equal to changes in physical assets, financial assets, borrowings, lendings and out flow and in flow of capital transfers, and net saving as equal to gross saving minus depreciation.

. In the study of Hinge and Patil(1972) premiums paid for the life insurance and amounts spent on construction and repairs of houses are considered essential items of expenditure along with expenditure on marriages, litigation, education, treating guests etc.

According to Singh and Patel (1972) income means gross value of agricultural produce plus income from other subsidiary occupations and "net capital investment" is defined as capital investment in agriculture minus income received from disposable capital assets.

In a study by Waghmare and Maral(1972) "Net income denotes either net profit or net loss to the operator of land after deducting all sorts of expenditure such as paid-out costs both in kind and cash, depreciation charges, land rent, interest on capital and imputed value of family labour from the total income from the farm".

Chauhan et.al. (1972) calculated farm business income by deducting current expenditure on goods, fertilizers, pesticides, cost of hiring labour and bullocks, interest charges and land revenue from gross farm income. Gross farm income is defined as the value, at the prevailing prices, of the marketed crop output and also income from allied activities such as dairy and poultry. Net household income is defined as farm business income plus non farm income. Household consumption expenditure included expenditure on food, clothing, light and fuel,education, medicine and usual expenditure on social functions and ceremonies. However, expenditure on durable assets, construction of house or non recurring expenditure on items such as marriages were excluded because, according to researchers such items cannot be considered as part of regular consumption financed, to state that the imputed value of farm output retained and consumed was added to the consumption expenditure since the corresponding element was added to net household income. The residual obtained after deducting household consumption expenditure from the "net household income" was defined by the authors to represent household savings.

According to Gupta (1972) the volume of total investment is initially a sum total of funds, both personally earned income and the amount of loan taken. In the paper of Shah(1972), from total agricultural and non agricultural income, agricultural expenditure and consumption expenditures on durables and non durable items are deducted to find savings.

Saroj kanti and Chowdhari(1973), in their studies refer to investment as the amount invested during last five years and the items on which investment is made include land purchase, land improvement, land reclamation, excavation of

land etc., for irrigation purposes, farm houses or cattle shed, residence, business, improved tools and implements, improved livestock, pumpset etc".

Gugrani and Singh (1975) and Panikar (1992) estimated savings as the difference (in an accounting period) between changes in assets and changes in liabilities adjusted to capital transfer and losses.

Singh and Kahlon (1972) and Varadarayan (1995) defined investment as the expenditure necessary for maintaining and improving the productivity of land resources through reclamation of land, promotion of irrigation facilities, investments made in machinery and major implements; plant protection equipment and also investments made in livestock, farm building and structures.

Shastri(1963) Misra et.al.(1965) and State Planning Board, Government of Kerala(1982) conceived consumption expenditure as current expenditure on food, clothing, fuel and light, education, reclamation, entertainment, social ceremonies etc.

From the above account of various definitions used in different studies it appears that there is no generally accepted definition on the concept of income, savings or investment. Some researchers seem to define the gross value of the crop output without deducting any paid-out operating costs as income accrued to the cultivator. If the concept of gross income, net income and disposable income as used in National Income Accounting and macro economic theory are accepted for analysis of cross section

data, another important conceptual issue that arises in measuring saving or investment relates to the treatment on consumer durables. These are some times treated as capital expenditure and hence as savings and investment, and sometimes as current expenditure and hence as consumption. As Keynes observed, " Any reasonable definition of the line between consumer-purchaser and investor purchaser will serve as equally well, provided that it is consistently applied". Gold smith had taken it as saving but Irwin Friend has considered purchase of consumer durables as consumption expenditure, since they do not directly contribute to productivity. National Council of Applied Economics Research in their estimates of household savings for India have included expenditure on consumer durables as also the Planning Board in it study of household savings in Kerala(1981). Consumer durables however, are not included any more in the saving estimates of CSO and the RBI. The same is the case with gold and jewellery, a major component of rural household savings. As against this, the official estimates of savings include additions to the holdings of cash. Inventory changes - stocks of food grain and other commodities- are also taken into account in official estimates.

EXTENT AND PATTERN OF SAVINGS AND INVESTMENT

Kahlon, Bal and Singh (1972) have presented a detailed analysis of the average farm family investment for various size-groups for the five years,1966-67 to 1970-71. "It was found that on the small holdings, irrigation expenditure formed the major investment from 1966-67 to 1969-70. This means that small holders give high priority to the development of irrigation resources for increasing intensity of cropping. On the medium holdings, the emphasis shifted to the purchase and improvement of land. On the large holdings, investment in farm machinery accounted for large

proportion of 31.32 percent and 54.22 percent of farm investment during 1966-67 and 1970-71. This clearly indicates that the large holdings invested more and more in farm machinery for efficient and timely performance of agricultural operations".

Tewari (1970) found that 80.49 percent of investment was on land . The remaining 19.51 percent was invested in building irrigation structures, machinery equipments and live stock.

Garg and Srivastava(1972) on the basis of an analysis of data obtained from a sample of 100 farmers selected from 10 villages in Kalyanpur block, found that "the net investment on new input particularly irrigation structure and machinery showed an increasing trend with the increase in income and size of farm whereas the traditional input specially livestock showed a reverse trend ". In the studies of Rai,Gover, Nandal(1972) the pattern of investment in irrigated area turned out to be slightly different from that of unirrigated area in Haryana. In the irrigated zone, the author found that the farmers invested mainly on the purchase of farm equipment, machinery and building constructions, where as the farmers working in unirrigated or relatively assumed irrigated zones have made investments largely on purchase of live stock and construction of farm building. Investment on large farms was approximately three times higher than the investment on the small farms in all zones.

Hinge and patil(1972) collected data on investment for the year 1964-65 to1968-69. Instead of analysing the annual changes, they presented only the total investment made during all these years. It would have been interesting if they had analysed the

changes in income and consequent changes in the pattern of investment in different years.

Goswami and Sailera (1972) observed a general tendency among the farmers of Assam to invest the surplus first either in purchasing land or improving the residential or other houses. According to them, such a pattern of investment is not congenial for capital formation in agriculture.

Singh and Patel(1972) found that large size cultivators are investing proportionately more on irrigation equipments and other machinery while livestock and building are the major items of investment on small farms". Wagh and Maral(1972) have observed that "the capital investment in land was found to be the maximum to the extent of 65-39 percent of the total assets. Land including farm dwellings occupied two third portion of the capital. The share of livestock, implements and machinery amounted to 10.62 percent and 6.23 percent respectively.

Singh, Nath and Pandey (1975) found that implements and machinery accounted for highest proportion followed by installation of tube wells on the consolidated farms, while on the unconsolidated farms maximum proportion accounted for construction of dwelling houses, purchase of cycles, radios etc.

Singh et al.(1978) identified initial capital, farm size, lagged net income and family size as important variables that affect capital formation. It was also observed that farmers in the higher income group did not make substantial capital investment.

Nair (1982) reported that in Kerala, land reclamation formed the major item of capital formation in agriculture. Contribution from livestock and irrigation to capital formation were 20 percent and 15 percent respectively.

Borali (1985) established an inverse relationship between house hold size and percapita monthly expenditure. In his study asset pattern showed that the highest percentage share was accounted for by buildings followed by land, livestock, and household durables. Major capital expenditure incurred by the villagers was for the construction and repairs of house rather than on improvement in the methods of cultivation. He also reported a positive relationship between household income and size of family.

Mallic (1993) pointed out that in absolute terms gross capital formation has been declining since 1980's. Technology, demographic pressure,average farm size and credit facilities were identified as factors influencing private investment.

Bhuvaneswari (1993) assessed the extent and nature of capital formation and found that the rate of capital formation was 4.49 percent and about 70 percent of the investment was on traditional assets like livestock and wells. About 94 percent of farmers depended on borrowed funds for making investment in farm and institutional credit was the major source of finance. Her study established a positive and statistically significant relation between net capital formation and the amount borrowed.

FACTORS INFLUENCING SAVINGS AND INVESTMENT

Patel (1965) found income oriented investment pattern in big and medium farms while it was subsistence oriented in small farms. He observed that the small farmers borrowed more for farm investment and consumption than medium farmers.

Bansal (1968) identified that farm business income per hectare tended to increase with decrease in size of farm. Galgalikar et al (1970) found that crop production accounted for 80 per cent of the gross income and that in small sized holdings wages formed a substantial portion of gross income. No definite pattern of investment was identified. Low and middle income groups resorted to borrowings to meet their consumption expenditure. People spend their meagre savings for the purchase of silver and gold. Savings with the co-operatives were of compulsory nature in the form of shares required to secure loans.

Mishra and Mallik (1969) conducted a study in Orissa revealed a pos effect of these factors on capital formation and at higher income greater percentage of income was devoted for capital formation. Misra et al Orissa(1965) and Sisodia (1969) observed rapid increase in the durable assets of farmers.

Shah (1969) observed in UP that capital formation depended on size of holding, the level of technology and geographical region.

In Assam, Shah and Bona (1969) indicated that under existing level of technology capital formation was not occuring and the surplus generated in agriculture was being invested in consumer goods.

Roy (1969) observed in West Bengal that external factors like irrigation facilities, extension services and credit facilities augmented capital formation in farms. He also observed that the pattern of capital formation depended on the various inherent characteristics of the villages.

Kurian (1969) identified that the capital expenditure of rural household was in three major items-land improvement, agricultural implements, machinery and minor irrigation, and Misra et al(1965) observed that among agriculturalists majority of investment was on purchase of land.

Shah and Agarwal (1970) observed that saving is positive for the progressive, medium progressive and the less progressive large farmers. The study also reveals that the investment made for augmenting production on the farm was less than required.

Pawar(1970) and Baby Soosy (1992)observed that the cultivators had invested a large amount for the building up of fixed capital asset on their holding and use of modern input for crop production. The remaining part of the income was used for consumption and savings.

Sarma (1973) mentioned that the first preference of the farmers was to re-invest the additional income in agriculture for productive purposes. The second preference was for education. The third preference was for repairs of buildings. The fourth preference was for investment in financial assets. The bank deposits were given a very low priority by the farmers.

Gugnani and Singh (1975) estimated savings for modern and traditional farms separately and found that technology had contributed significantly in raising savings and investment. Marginal rate of savings was reported to be higher for modern farms. It was also found that a very high percentage of the savings was effected in the form of productive investment on land.

Kumar et al (1975) reported that savings potential of farmers was affected by size of holdings, occupational pattern, type of family and education level of chief earner.The NSSO (1993) revealed that the average anual income per person increased with rising literacy level of head of household.

Kerala State Planning Board (1978) conducted a house hold savings and investment survey. According to the survey, the total household savings in the state during 1977-78 amounted to Rs.436 crores,of which about 44 percent constituted savings in the form of various financial assets. Fifty five percent of investment in physical assets were on land development, plantations,cattlerearing,renovation of wells and tanks and on farm implements. The survey revealed that higher the expenditure, the more was the savings per house hold. The average annual savings per house hold of the sample households by the survey was Rs.1032.

Rao (1982) in a socio-economic study of farmers in Ollukkara block in the command area of Peechi irrigation project has brought out the fact that there was no relationship between income and family size. The influence of income on consumption was found to be more conspicuous and savings in the lower income group and small holding group was too low to meet the working capital requirements in crop production in the subsequent season.

Subramanyam and Reddy (1987) conducted a study in Kheda District of Gujarat and found that agriculture followed by dairy was the major source of income and cost of cultivation was the main item of operational expenditure and food items accounted for maximum consumer expenditure. Family size, number of earning members, education level of household head and land owned were identified as factors influencing per capita savings.

Bhatty and Vashishtha (1988) studied rural household savings and investment behaviour at national level. According to them,the rate of physical savings had increased much faster for marginal land owner than for small and large ones. Savings rate for rural households increased significantly from 4 per cent in 1970-71 to 10 percent in 1981-82 and the financial component of saving had risen faster than the physical component, there by lowering the investment in physical assets.

Taneja (1988) established that the average income per household was highest for farm house holds and lowest for labour household in the rural Punjab. The disparity among farm households was reported to be greater than that between non-farm households. He got a positive relationship among the number of earners in a

household, family size, level of education, and age of household head and average income.

Paul(1989) observed that household income was found to be influenced by family size, number of farmers in the family, age of the chief-earner and his level of education.

Panikar(1992) conducted a study among the sample house holds of Kerala and Tamil Nadu and found out the absorption of high proportion of savings in unproductive or less productive assets. Lack of profitable investment opportunities or lack of awareness of such options in various sectors like agriculture, household industries etc. may also act as a deterrent on higher investment by the rural house holds. The study concluded that pattern of disposition of savings in the less developed countries is an equally, important aspect which deserves attention of planners and policy makers.

Onyenwaku and Ozoh(1992) conducted a study designed to investigate savings behaviour of rural house holds in Anambra state of Nigeria. According to them, household income, farm size, farming experience and proximity to a bank to be positively and significantly associated with rural savings while loan volume and household size showed negative but significant relationship with savings. In contrast no significant relation ships were found to exist between rural savings and such factors as education, age and membership of co-operative associations. The marginal propensity of rural households to save was calculated as 0.62 and the income elasticity of savings of the rural house holds in the state was computed as 2.53 which implies that there is a

high level responsiveness of rural house hold savings to change in rural income.

A study on the consumption pattern of households in Kallur village of Thrissur by Bhagilal(1993) revealed that salaried people spent income more on consumption of food articles where as agriculturist's spent more on non-food items. There existed a direct relationship between house hold size and families total expenditure and an inverse relationship between household size and per capita expenditure.

Rao and Bathaih (1993) noticed that net income per farm increased and family labour income per hectare decreased with increase in size group.

Mani et al (1996) conducted a study based on secondary data relating to broadly seven variables, viz, gross domestic savings, gross domestic capital formation, gross fixed capital formation, gross capital formation in agriculture, institutional flow of credit gross cropped area and gross domestic product in agriculture. Their analysis revealed that public, private and co-operative sectors are emerging as major source of capital formation. They also pointed out that per hectare investment availability is much lower than prescribed norms.

Singh and Kaur (1996) observed high per hectare investment on machinery and equipments and irrigation structure on the small and medium farms which indicates over investment because of the indivisible nature of their assets in relation to the area under command.

Sharma (1996) conducted a study in Utter Pradesh during 1994-95 and

reported that in terms of percentage of farm households reporting short term and long term investment expenditure, more than 80 per cent of the farm households invested in milch animals. They gave next priority to seed (in short run) and land levelling and repair of tractors (in long run). More than 90 per cent of short term investment is in terms of feed. About 70 per cent of the total long term investment is on irrigation tanks, followed with 11, and 8 per cent of total long term investment respectively on bullock and land levelling.

Bhuvaneswari and Alagumani (1996) in Tamil Nadu found that the factors influencing net capital formation showed that farm size, subsidy, owned fund, borrowed fund and net income positively influence net capital formation.

Srivastava et. al. (1996) established a significant relationship between the size of holding and family income of the farmers and also between income and consumption level of family. The income of the farmers affected the total savings of the family and investment pattern, and large farmers invested their surplus income largely in non agricultural assets, e.g. gold, bank deposit, luxurious articles, etc., where as the small farmers invested their little savings only in the agricultural sector in order to generate more income.

Hebbel et. al. (1996) found that savings by rich or older households may be driven by the desire to leave bequests to heirs, so that within a certain income range, higher income will be reflected primarily in higher saving leading to larger bequests.

In the above paragraphs we have reviewed the concepts and issues relating to savings and investments, the extent and pattern of savings and investment and the determinants of savings and investment. It is seen that majority of the studies were held in northern parts of the country and also relating to food crops and hence it is felt that it is appropriate to carry out a study on savings and investment behaviour of rubber farmers in Kerala.

CHAPTER III

MATERIALS AND METHODS

MATERIALS AND METHODS

The study Savings and Investment Behaviour of Rubber Cultivators is a Micro level Analysis in Meenachil taluk of Kottayam district, Kerala. It is an attempt to find out the extent and pattern of savings and investment of rubber cultivators and also to probe into the factors influencing their savings and investment decision. The present chapter explains how the study has been carried out.

Study period

The reference period of the study was September 1996 to August 1997. The field investigation for the study was carried out during September- October,1997.

SAMPLING PROCEDURE

Study area

Kerala state is having the virtual monopoly of rubber production in the country (94 per cent). In the state, rubber plantations are spread over Kottayam, Ernakulam, Idukki, Pathanamthitta and Thiruvananthapuram districts. Eventhough the plantations are spread over these districts, a major share is contributed by Kottayam district alone (24 per cent). Kottayam district consists of 11 blocks and the rubber plantations are dominated in Erattupetta(16.2 per cent), Kanjirappally(19.6 per cent), Uzhavoor(13.8 per cent), Lalam(11.3 per cent) and Pampady(10 per cent) blocks. These

rubber dominated blocks are spread over three taluks viz. Meenachil,Kanjirappally and Kottayam. Among these three taluks, the small rubber growers are dominated in Meenachil taluk (average size of holdings 0.55 hectare). Further this taluk is dominated by rubber plantations (41 per cent of the area of rubber plantations in the district) and the clear evidence is that the Rubber Board has two regional offices in this taluk. Also this is the only one taluk having two Rubber Board regional offices in the state. Hence Meenachil taluk was selected for the study.

Selection of villages

As mentioned above the Rubber Board is having two regional offices at the Meenachil taluk located at Meenachil and Erattupetta. There are 17 villages under the controll of Meenachil Office and 10 villages under the control of Erattupetta Office. Hence attaching higher weightage to villages under Meenachil Office, because of the large number of villages under the control of this office, three villages were selected under the control of Meenachil Office and two villages under the control of Erattupetta Office. The villages randomly selected under the control of Meenachil office were Vayala,Valavvor and Kurichithanam and the villages selected under the controll of Erattupettta office were Bharanamganam and Theekoy.

Selection of Respondents

The Rubber Board has a definite standard for classifying rubber cultivators. Accordingly those farmers having holdings upto 5 hectare(ha) is

defined as small growers and those who are having holdings above 5 hectare are treated as large growers. Since the present study is on small growers, large growers are excluded. For the purpose of the present study, the small holders are suitably classified into three groups as follows.

Class S1- Less than 1 ha

Class S2- Between 1 ha and 2 ha

Class S3-Between 2 ha and 5 ha

Spread over five villages viz. Vayala, Valavoor, Kurichithanam, Theekoy and Bharanamganam, 50 cultivators were selected at random from each group and thus the total sample constitute 150 respondents. Eventhough 80 per cent of small growers has an area less than 1 ha, the sample size from each group is fixed so as to make comparisons easy, eventhough this is a limitation of the study.

Working definitions of concepts

The topic exclusively deals with concepts like household, expenditure, income, savings and investment. The definition of these terms considerably vary in diffferent studies and to some extent in situations. Hence the following working definitions are formulated for the purpose of the present study.

Household

Household is one which consists of a group of persons usually living together for not less than six months and taking principal meals from one kitchen(NCAER).

Farm income

Farm income includes income from rubber (sale of rubber sheets, latex and sub products), non rubber crops like coconut, paddy, tapioca, banana, pepper, vegetables etc. and livestock and poultry including sale of milk, egg, residuals, sale of animals, birds etc.,

Non farm income:

Non farm income includes income from household industries, trade, hiring out productive assets like rubber roller, sale of wood, wages and salaries etc.

Gross income:

Gross income of a cultivator household consisted of farm income and non farm income.

Farm Expenditure

It comprises operating costs by way of labour(hired and family labour), material costs such as seedlings, fertilizers, pesticides, livestock maintenance expenditure and operational charges of farm equipment s.

Net farm income

Net farm income is derived by deducting the farm expenditure from gross farm income.

Operating farm Expenditure

It includes, labour (hired and family labour), material cost, fertilizer, pesticide, rent, land revenue, irrigation charges etc.

Consumption Expenditure

Data on consumption expenditure including food and nonfood items were collected. In the case of food grains, quantity purchased from rationshops and open market, food and non food items, including rice, tapioca, wheat, pulses, sugar, oil, milk, egg, meat, fish, vegetables, outside dining, bakery expenses, clothing and footwear, education expenses, fuel and lighting, travel, medicine, tobacco, liquor, tax, donations and all other possible items were included along with the normal expenses.

Savings

It is the residue of income after consumption. It was calculated by deducting household consumption expenditure from the net house hold income. Hence S=Y- C where,

S= savings,

Y= income and

C= consumption expenditure.

Propensity to consume

Ratio of average expenditure to average income of household (C/Y)

Propensity to save

Ratio of average savings to average income of household.(S/Y)

Marginal propensity to consume(MPC)

MPC is the ratio of the change in level of aggregate consumption to the change in the level of aggregate income. It refers to effect of additional income on consumption.

Marginal propensity to save(MPS)

MPS is the ratio of the change in level of aggregate savings to the change in the level of aggregate income. It refers to effect of additional income on saving.

Investment

Conceptually investment is defined as the addition to the stock of capital. Eventhough this is a precise definition considerable difficulties were experienced in specifically defining investment and hence for the purpose of the present study, investment is stated as the acquisition and creation of resources to be used in production or for income generation.

Analytical tools and techniques

The data collected from 150 respondents were tabulated and occasionally bivariate tables were prepared. Percentages, Indices and Linear regressions were also used for the study. The Indices used includes,

a. Priority index
b. Influence index

The regression models employed are.

a. Saving
b. Consumption

} Keynesian approach

Preference in Financial assets.

This was found out by constructing a Preference Index. Six priority instruments were identified and listed in the schedule. Then the respondents were asked to rank them, according to the order of priority they would liked to attach. A score of six was assigned to the item for which the respondents has given Ist rank, a score of five for the second rank and so on. These values were tabulated by using a priority index.

Factors Influencing Savings or Investment

The factors influencing savings or investment decisions were found by using an influence index.

The data for this were collected on a five point scale for each saving or investment avenue. The following are the weight attached to the scale choices. strongly agree (2), Agree (1), No opinion (0), Disagree (-1), Highly disagree (-2).

Based on the weight attributed, the level of influence of each saving or investment avenue was determined by constructing an influence index.

CHAPTER IV

RESULTS AND DISCUSSION

RESULTS AND DISCUSSION

In the earlier chapters we have seen that household savings play an important role in deciding the course of economic activities. In this chapter an attempt is made to determine the extent of savings and investment generated among 150 sample respondents of rubber cultivators spread over Meenachil Taluk of Kottayam district. Since savings is treated as residue of income after expenses and the discussion has to resume on estimation of income and expenses, it is appropriate to assess the socio-economic conditions of sample respondents in the three cultivator groups as the socio-economic profile has a direct bearing on savings and investment behaviour.

Demographic Characteristics

Savings and investment behaviour to a large extent are influenced by the basic characteristics relating the members of the households such as age, sex, family size, level of education etc. Table 4.1 gives the family size and the age composition of the members in the respondent households. The average family size of the respondent groups S1 and S2 is between 5 and 6, but in S3 it is above six. As per the age composition in all the three groups, above 50 per cent of the members in the respondent households are in the age group of 15-60. It is also observed that among the groups S1,S2 and S3, 30 per cent, 29 per cent and 26 per cent respectively come under the age group of below 15 years. Again it is clear that the number of members above 60 years of age is

Table 4.1 Age composition of the members of sample households

Group	Up to 15 Years	15-60 years	60 years and above	Total	Average family size
S1	78 (30.35)	146 (56.8)	33 (12.85)	257 (100)	5.14
S2	84 (29.06)	160 (55.36)	45 (15.58)	289 (100)	5.78
S3	80 (26.49)	164 (52.98)	58 (21.53)	302 (100)	6.04

Note : Figures in parenthesis expresses percentages to total.
Source : Field survey

highest in group S3 (21.53 per cent) and lowest in group S1(12.85 per cent). The differences in distribution of different age groups in S1, S2 and S3 may be due to the differences in family size. It may be inferred that in S1 group of cultivators, family size is lowest (5.14) and proportion of children is highest (30.35 per cent). This may be due to the nuclear nature of the families with husband, wife, two or three children and in some cases grand parents also. Among different groups, in group S3 below 15 age category constitute the lowest, while above 60 age category constitute the highest. A possible reason for this may be the presence of some traditional, non n uclear, undivided families with matured but unmarried children in this group. This may be a reason for the higher holding size of this group. In the case of group S2, 29 per cent belongs to below 15 age category and 15 per cent belongs to above 60 age category. The inter group differences in age composition is important in the context of the present study because it has a strong bearing on the proportion of earners and non earners in these households.

Earners and Dependents

The ratio of earners to dependents among the samples is highest in cultivator group S2 (3.25) and lowest in cultivator group S1 (2.56). The ratio is slightly higher than the lowest, in group S3 (see table 4.2). It can also be noted from the table that while 2 8 per cent of the members in group S1 are earners , only 23.53 per cent and 26.16 per cent are earners in group S2 and S3 respectively. This means that with the highest percentage of earners, the group S1 has to support only the lowest percentage of dependents. However among the dependents, the proportion of below 15 years of age category is highest in this group(see table 4.1). Hence, the nature of expenses to be

Table 4.2

Earners and dependents in the sample households

Particulars	S1	S2	S3
Total members	257	289	302
Earners	72	68	79
Dependents	185	221	223
Ratio of earners to dependents	2.56	3.25	2.82
Proportion of earners to total members	28.02	23.53	26.16

Source : Field survey

Table 4.3

Age wise distribution of earners in sample households.

Age group	S1	S2	S3
!5-25	4 (6)	5 (7)	5 (6)
25-35	15 (22)	16 (24)	18 (23)
35-45	23 (31)	21 (31)	21 (26)
45-60	21 (29)	19 (28)	24 (30)
60 and above	9 (12)	7 (10)	11 (15)
Total	72 (100)	68 (100)	79 (100)

Note : Figures in parenthesis expresses percentages to total.
Source : Field survey

incurred would also be different. Moreover it can be inferred that the inter group variations in the savings and investment behaviour would have been affected by the composition of different age groups discussed.

Another interesting fact is that the earners are skewed to higher age categories(see table 4.3). It is because of higher proportion of students among the lower age group. As observed from table 4.3, above 80 per cent of the earners in all the three groups come under the age category of 25- 60. But in all the three groups, compared with the below 25 years age group earners, above 60 age group earners are more (see table 4.3) because of higher proportion of students in the former group. It may also be recalled that in the state of Kerala, the worker participation rate among the younger age groups is lower, thanks to higher enrolment rates in educational institutions especially at the higher level of schooling as well as high retention rate in such institutions(Economic Review 1996).

Level of Education

The level of education affects savings and investment behaviour because of its influence on occupation, income as well as the awareness, incentives and motivations for saving. Among the three cultivator groups, all the respondents were literates and above 75 per cent of them had high school education (see table 4.4). It is clear from the table that in group S1 and S2, 14 and 12 per cent of the family heads respectively are highly qualified and they are graduates or above, but the respective share come only to 8 percentage in group S3. However, notable differences between

Table 4.4

Level of education of family head in sample households

Literacy	S1	S2	S3
Up to 7 th	4	7	6
	(8)	(14)	(12)
8 th to 12 th	39	37	40
	(78)	(74)	(80)
Graduate and above	7	6	4
	(14)	(12)	(8)

Note : Figures in parenthesis expresses percentages to total.
Source : Field survey

the groups in levels of education of the family heads were not seen. Eventhough this may be a factor which affects savings and investment, it may not be of much help in explaining the inter group differences.

From the above discussion on socio-economic characteristics the sample households maintained higher level of literacy, low family size, low dependency ratio and higher schooling. However, there existed some inter-group variations on most of these parameters, between the cultivator groups. Since these variables have some influence on the savings and investment behaviour of the respondents, this socio-economic profile would be of some use in realising the objectives of the study. Hence whenever required, a reference would be made to this profile in the subsequent parts of the analysis.

Income Composition

Obviously, one of the crucial determinants of savings is the level of income of the households. Other things being the same, higher the income, greater will be the saving. However, income of households is one of the most difficult parameter to be estimated, especially in the case of rural households. The estimation problems are compounded when it comes to the sources of income such as income from cash crops, food crops ,livestock and poultry, household industries or other categories of self employment. Here an attempt is made to estimate the gross farm income and net household income of the sample cultivators belonging to different groups.

Table 4.5

Composition of average annual Income of sample households

Figures in Rs.

Group	Average net farm income	Average net non farm income	Average total net income
S1	59,977	19,086	79,063
	(76)	(24)	(100)
S2	76,487	13,436	89,923
	(85)	(15)	(100)
S3	1,36,342	26,883	1,63,225
	(84)	(16)	(100)

Note : Figures in parenthesis expresses percentages to total.
Source : Field survey

For the purpose of the study, all possible sources of income such as income from rubber, non rubber crops, non farm activities and other external sources were covered. Gross income from rubber was calculated by using data on area under cultivation, average number of plants (tapping and non tapping), average number of tapping days, gross output, sales, price per unit, addition to stock, etc. Details of costs like tapping labour (hired and family labour), other labour, input material cost such as seedlings, fertilisers, pesticides, processing inputs like formic acid, irrigation charges and other expenses, land revenue, transportation charges etc. were collected. The net income from rubber cultivation was computed by deducting all relevant cost items from the gross income from rubber. Similarly the net income from non rubber crops and non farm activities were also obtained. Net income from non farm activities and other external sources were collected by interviewing the respondents. Net income from non farm activities include wages, salaries and other earnings. Thus the total net income from all sources were derived.

The net income composition of the sample households can broadly be classified into farm income and non farm income. It may be observed from table 4.5 that the major source of income of all the sample cultivator groups is farm income which contributes to more than 75 per cent of the net income irrespective of the groups. The net income of the sample households were Rs. 79063, Rs. 89923 and Rs 163225 respectively in groups S1, S2 and S3. Of this amount, 76, 85 and 84 per cent were contributed by farm sources respectively in group S1, S2 and S3., which means that the share of nonfarm income in the total income of the rubber cultivators is relatively negligible. However its significance cannot be overlooked because the

Table 4.6

Compostion of average annual net farm income of sample households

Figures in Rs.

Group	Rubber	Other crops	Livestock and Poultry	Total farm income
S1	53,649	4,904	1,424	59,977
	(89)	(8)	(3)	(100)
S2	64,715	10,747	1,025	76,487
	(85)	(14)	(1)	(100)
S3	1, 18, 764	13,742	3,836	1,36,342
	(87)	(10)	(3)	(100)

Note : Figures in parenthesis expresses percentages to total.
Source : Field survey

differences in the levels of this income has affected the differences in the levels of total income between the sample cultivator groups. For example, the group S2 has a much higher income than group S1, but the net income of the group S2 is not higher by the same magnitude. This has occured because group S1 could manage a higher non farm income than group S2. Just like the farm income, the non farm income is also highest in group S3, but its percentage share in their total income is only 16 per cent. Against this, the percentage share of non farm income in group S1 is as high as 24 per cent. In short it can be stated that the nonfarm income has some influence on the level of total income among groups.

The composition of farm income of the rubber cultivators reveal that, rubber is the largest contributor which respectively contributes 89 per cent, 85 per cent and 87 per cent respectively in groups S1, S2 and S3(see table 4.6). The other components of farm income include crops like coconut, pepper, banana, tapioca, paddy etc, and livestock and poultry contributed only a minor portion into the net farm income (8 per cent in group S1, 14 per cent in group S2 and 10 per cent in group S3). Livestock and poultry contribute the least to the total net farm income (three per cent in group S1 and S3 and 1 per cent in group S2). Therefore it may be inferred that rubber is the single most important crop which determines the farm income of the cultivators.

Since almost 90 per cent of the farm income was determined by rubber and since our focus is to study the extent of savings among the rubber cultivators, an analysis of the income generation by rubber is felt quite essential because such an analysis would reasonably explain the influences of income factors among the savings level of different cultivator groups. It is also seen from table 4.6 that there are wide

Table 4.7

Average area, cultivation intensity and tapping intensity of sample households

Group	Average area under rubber cultivation (in ha)	Average number of rubber plants per hectare (cultivation intensity)	Average number of tapping days per year (tapping intensity)	Average price per kilogram
S1	0.69	500	107	43
S2	1.01	482	104	43
S3	2.03	436	101	43

Source : Field survey

variations between the three groups in their net income from rubber. This variation is primarily due to the size of cultivation in each group. It can be seen from table 4.7 that the average size of rubber cultivation is 0.69, 1.01 and 2.03 hectares respectively for group S1, S2 and S3. Hence, it is rationale that net income from rubber is highest for S3 followed by S2 and S1 and probably this variation in the size of cultivation is the major reason for the variation in the net income from rubber. However, there are other factors also which explain this variation and among them the major factors are yield factors, cost factors and agroclimatic conditions. Hence the inter group differences in these factors are to be further probed into. So the gross income from rubber and the various cost of rubber cultivation are separately collected and analysed. For enabling effective comparative analysis the income and expenditure of rubber cultivation are estimated hectarewise and plantwise.

Table 4.8 provides per hectare and per plant details. The per hectare and per plant gross income are highest for group S1 (Rs.93856/- and Rs 187.7 respectively) It is the result of higher number of plants per hectare(cultivation intensity) and higher number of tapping days per year(tapping intensity) earned by this group(see table 4.7 and 4.10). The per hectare and per plant gross income in group S2 are similar to that of group S3 and they are considerably lesser than that of group S1. The minor differences in per plant income between S2 and S3 may be due to differences in the cultivation and tapping intensity obtained by the two groups.

Moreover gross expenses would definitely have a bearing on the net income from rubber. The per hectare expenses were Rs. 16104/- and 16598/- respectively for groups S1 and S3. But for group S2 it was Rs. 13485/-. This difference can be

Table 4.8

Per hectare and per plant rubber income of sample households

Figures in Rs

Group	Gross income per hectare	Gross income per plant	Gross expenses per hectare	Gross expenses per plant	Net income per hectare	Net income per plant
S1	93,856	187.7	16,104	32.21	77,752	155.49
S2	77,579	160.95	13,485	27.98	64,094	132.98
S3	75,392	172.92	16,598	38.07	58,794	134.85

Source : Field survey

explained only after analysing the composition of farm expenditure. Hence, an analysis of expenditure composition become inevitable and is analysed in a later part of the study. Table 4.8 reveals that the per hectare and per plant net income of the different cultivator groups are different. The differences are due to the variations in per hectare and per plant gross income as well as gross expenses. The per hectare gross income was found declining with increase in the size of holding ie. it is highest in group S1 followed by groups S2 and S3. The per plant gross income also was highest in group S1, but is lowest in S2. This means that the per plant yield is higher in group S3 compared to group S2, but because of the cultivation intensity the latter has managed to get higher per hectare yield. Against this, the group S1 has obtained highest yield per plant, highest per hectare yield and highest cultivation intensity.

Though there were some differences in the per hectare gross expenses, the per hectare net income has shown a pattern similar to that of gross income, that is, the per hectare net income has also declined with increase in the size of holding. The per hectare and per plant gross expenses were lowest in group S2 followed by groups S1 and S3. However this low per plant gross expenses has not much helped the group S2 because that might have affected their per plant yield which made their per plant gross income and net income to be the lowest among the groups. Hence it may be concluded that smaller cultivator group (S1) is showing highest efficiency. Efficiency is more or less declining with the increase in size of holding. If the perfomance of group S1 is any indication, group S2 can improve their perfomance by increasing their per plant expenses(probably in the form of fertilisers, pesticides, manure etc,) which would result in higher yield per plant. Group S3 can improve their performance

Table 4.9

Farm expenditure composition-Rubber of sample households

Figures in Rs.

No	Item	Group S1 Per hectare	Group S1 Per plant	Group S2 Per hectare	Group S2 Per plant	Group S3 Per hectare	Group S3 Per plant
1	Labour expenses	11,936	23.87	9,705	20.13	13,038	29.9
2	Input expenses	4,168	8.33	3,780	7.84	3,560	8.17
3	Total expenses	16,104	32.2	13,485	27.98	16,598	38.07

Source : Field survey

by increasing their cultivation intensity and reducing the expenses per plant. However inferences can be derived only after analysing the expenditure composition.

As mentioned in the preceeding paragraphs, the kind of agro management is a decisive factor in determining per hectare and per plant income. Table 4.9 indicates differences in per hectare input expenses of different groups. Among the groups the input expenses are highest for group S1, which indicates that the farmers of S1 group are spending more for inputs like fertilisers, pesticides and rainguard etc,. Definitely these are the contributing factors for higher per hectare gross income and net income. Hence it may be inferred that small cultivators are more concerned about the agromanagement conditions which is essential for income maximisation.

The per hectare labour expenses was lowest in group S2 compared to group S1 and S3. The reason is that this group of farmers were considering rubber cultivation as their major livelihood. They employed more of family labour for tapping, processing and fertiliser applications and this resulted in lower labour expenses. The family size of this group was higher compared to group S1 (see table 4.1). In an undivided family property male members take up the tapping work and females assist them. But in group S3, it was observed that, the involvement of family members in agricultural operations was less compared to other groups. Most of the S3 group farmers engage one or more labourers on a full-time basis for assisting them in agricultural operations and for household works, thereby incurring higher labour expenses. It can thus be summed up from the above analysis that input expenses was highest for group S1 and lowest for group S3 which may be due to economies of large scale operations. Family labour involvement was highest for group S2.

Table 4.10

Average number of tapping days per year of sample households

Days	S1	S2	S3
Blow 90 days	9	11	14
	(18)	(22)	(28)
90-120 days	25	32	34
	(50)	(64)	(68)
above 120 days	16	7	2
	(32)	(14)	(4)
Total	50	50	50
	(100)	(100)	(100)

Note : Figures in parenthesis expresses percentages to total.
Source : Field survey

From the foregoing analysis it can be generalised that rubber is the major source of income for rubber cultivators. Hence income from rubber may be a major contributor which determines the extent of savings. Therefore, looked at from the income side factors, the variations in area, expenditure and management of rubber cultivation together would explain the variations in the savings between the three groups. In the preceeding section an attempt is made to examine the consumption pattern of the sample respondents.

Consumption Expenditure Pattern

As mentioned earlier, savings is the residual income after consumption needs are met. Therefore to know the factors affecting the savings, determinants of consumption cannot be overlooked. Various theories have been attrributed on consumption behivour. Among the approaches, the most popular are Keynesian approach (1936) Relative Income Hypothesis (Duesenberry, 1952), Permanent Income Hypothesis (Freidman, 1955) and Life Cycle Hypothesis (Modigliani, Bumberg and Arod, 1958). According to Duesenberry, the consumption pattern and its size are determined by (i) the consumption of certain type of goods required by physically and socially generated needs, (ii) these needs can be satisfied alternatively by a large number of qualitatively different kinds of goods, (iii) these different kinds of goods have qualitative variations and ranking which form household scale preference. Freidman distinguished income into permanent income and traitory income and consumption expenditure into permanent consumption expenditu and transitory consumption expenditure. Permanent consumption expenditure related to permanent income

Table 4.11 Average annual consumption expenditure of sample households

Figures in Rs.

Items	S1	S2	S3
Food	21,752 (42.46)	25723 (36.5)	41081 (38)
Clothing	5242 (10.2)	7354 (10.5)	11650 (10.8)
Fuel and Lighting	1124 (2.2)	2116 (3.01)	5260 (4.89)
Education	8650 (16.9)	12634 (16.97)	17530 (16.3)
Travel	4382 (8.6)	6571 (9.35)	9618 (8.9)
Medicine	2640 (4.8)	2635 (3.72)	3150 (2.9)
Social ceremonies	2943 (5.7)	4712 (6.7)	6418 (5.96)
Taxes	452 (0.9)	1318 (1.87)	1682 (1.56)
Others	4217 (8.24)	8413 (12)	11220 (10.42)
Total	51222 (100)	70291 (100)	107609 (100)

Note : Figures in parenthesis expresses percentages to total.
Source : Field survey

and transitory consumption expenditure was related to transitoary income. Life cycle hypothesis shows the consumption expenditure behaviour over the life span of an individual. But the earliest approach is the psychological law of Keynes, which stated that when income increases consumption also increases but less than proportionately. Accordingly he formulated consumption function which is stated as C=a+bY; similarly saving function is stated as

S = a1+ b1Y, where

Y = income,

C= consumption and

S=savings

a and a1 respectively are autonomous consumption and autonomous savings. b and b1 respectively are marginal propensity to consume and marginal propensity to save. The consumption expenditure pattern and saving behivour is primarily analysed in the succeeding paragraphs adopting Keynesian methodology.

The consumption expenditure of any household includes expenditure on food and non food items such as rice, tapioca, wheat, pulses, sugar, oil, milk, egg, meat, fish, vegetables, outside dining, bakery expenses, clothing and footwear, education expenses, fuel and lighting, travel, medicine, tobacco, liquor, tax and all other possible items of the respondent group shows a steady increase with the increase in their level of income (see table 4.11). Table 4.11 indicates that food expenditure was the major

item in the consumption basket of rubber cultivators. In all groups, food expenses constitute the major share. The average per capita food expenditure of the sample respondents shows that the food expenditure was highest for group S3 (Rs. 6583/-) and lowest for group S1(Rs.4183/-). The results show a direct relation to their income. Higher the income, higher will be the food expenses. This was due to the changes in food habits. For example, it can be found that people who were purchasing cheap fish once in a week purchase costly fish twice or more in a week when their income increases.

Clothing is one of the basic needs of the human being and an essential expenditure which varied in volume from household to household. In our sample, clothing expense constitutes 10 per cent of the consumption expenditure of the households. The per capita clothing expenses of the households shows that for S1 group it was lowest and for S3 group it was 1.8 times that of the S1 group. It indicates that the income factor influences expenditure in clothing.

Fuel and lighting expenditure of the households comprise electricity charges, cost of Liquified Petroleum Gas (LPG), kerosene, wood and other fuel expenses. The results indicate that this expense was highest for group S3 compared to groups S1 and S2. The asset or equipment holding pattern of S3 group shows that majority of them have LPG connection and they consider it as a status symbol. Even some farmers who were having biogas plant and dairy animals opted for LPG. Use of modern electric kitchen gadgets are also a reason for high fuel and lighting expenses.

Education expenses of children formed a major item in the consumption expenditure of rubber cultivators which vary from 16 to 17 per cent of their total expenditure. The per head education expense is lowest in S1 followed by S2 and S3. It means that higher the level of income of the group, higher will be their per head educational expenses. It was observed from the field survey that the rubber cultivators are having a tendency to send their children to unaided schools which imposes heavy expenditure. The rush towards professional education requiring capitation fees, higher tuition fee and higher maintenance cost have added to the expenses on education in a big way.

Travelling expenditure of the rubber cultivators comprises the expenses incurred by way of hiring taxi, fuel expenses of owned vehicles, vehicle road tax, insurance, expenditure on repair of owned vehicles, bus fare, train fare, air fare etc,. Table 4.11 indicates that the average travelling expenditure was highest for group S3 Rs.9618. But the percentage share of this expense in total consumption expenditure was highest for group S2(9.35 per cent).

The medical expenditure figures of the respondent groups do not show much difference. The factor which influences this expense is the health conditions of the respondents and not income or saving. Hence it can be inferred that the medical expenditure is not very much related to the income of the respondent groups.

Expenditure on ceremonies are incurred by way of arranging or attending receptions, presenting gifts in connection with religious and family functions etc,. This

Table 4.12

Average savings of sample households during the reference period

Group	Average Income	Average consumption expenditure	Average Savings	Percentage of savings
S1	79,063	51,222	27,841	34
S2	89,923	70,291	19,458	23
S3	1,63,225	1,07,609	60,616	36

Source : Field survey

expenses vary from 5 to 7 per cent among different groups. Group S3 spend 2 times more than group S1 and 1.5 times than group S2. The expenses on social ceremonies as a percentage of total consumption expenditure (6.7 per cent) was highest in group S2 compared with the other two.

The taxes and other fees include land tax , panchayath building tax, water tax, other registration fees, license fees etc,. These expenses show a direct relationship with the level of income and size of holding. The rest of the expenses are together taken as 'other expenses' which include, entertainment expenses including liquor and cigarette, interest payment and all other expenditures not listed in other heads. This category of expenses was lowest for group S1 (Rs.4217 or 8.2 per cent). But in the case of S2 it was two times higher than S1 and that constitute 12 per cent of their total consumption expenditure. In the case of group S3 the expenditure under this head was highest compared to S1 and S2, but its proportionate share in the total expenditure was less than that of group S2 (see table 4. 11). The foregoing analysis of the expenditure side factors revealed that the income and consumption expenditure are directly related.

Having analysed the net income and consumption expenditure and their respective composition, it would be appropriate to workout the net savings level of the sample respondents groups. Savings is considered here as the residual income after consumption.

The extent of savings of the different cultivator groups are presented in table 4.12. The results revealed that among the different groups, the extent of savings is

Table 4.13

Average propensities to save and consume of sample households

Group	Household income (Rs)	Household consumption Expenditure (Rs)	Average propensity to consume	Average propensity to save
S1	79,063	51,222	0.66	0.34
S2	89,923	70,291	0.77	0.23
S3	1,63,225	1,07,609	0.64	0.36

Source : Field survey

different and is not proportional to the size of holdings. Though the S2 group is big in terms of land holding, their extent of savings is lesser than S1. However the extent of savings of S3 group is 2 fold and 3 fold that of S1 group and S2 group respectively. It means that this disproportionality is seen only with the case of S2 group. This is due to high earners to dependents ratio and the huge consumption expenditure of the S2 group (in comparison with S1) and is not due to any reduction in net income. In fact, the increase in the net income of the cultivator groups is directly proportional to their size of holdings. When the S1 group has opted to save 34 per cent of their income, the S2 group has saved only 23 per cent of their income. Compared to the former the group (S2) had a higher income level of only around Rs. 10000; their consumption expenditure is higher by almost double their amount, and this bring down their net savings to a lower lelel than the former. However, S3 group has saved 36 per cent of their net income which is the highest percentage of savings among the three groups. Though their consumption expenditure was comparatively higher, their income was proportionately higher so as to generate sizeable net savings.

Propensity to Consume and Save

The magnitude of consumption and savings can be determined only after estimating the average and marginal propensities to consume and save, which are presented in table 4.13. It is seen that the average propensity to consume is highest for group S2 while there exist no notable differences between groups S1 and S2. On the other hand, in the case of average propensity to save, it is maximum in group S3 and lowest in group S2.

Table 4.14

Marginal propensity to save of sample households

Group	MPC	R^2	MPS	R^2
S1	0.662	0.84	0.338	0.642
S2	0.614	0.865	0.386	0.724
S3	0.421	0.676	0.579	0.629

Source : Field survey

It can be noted from table 4.13 that among the farmer group S2, saving is 23 per cent which is less than that of S1 and S3. It means that the group S1 has higher propensity to save (0.34) than group S2(0.23). High demonstration effect of S2 group may be a factor for lower savings. To quote some earlier studies, NCAER has estimated the net saving net income ratio for all rural households during 1962 at 4.7 per cent. On the basis of two subsequent surveys (1968-69 and 1970-71) NCAER has estimated the average rate of savings as 3 per cent and 5.9 per cent respectively. The State Planning Board conducted a study on household savings and investment in Kerala, and estimated the average savings of rural households to be Rs.355.46 as against Rs.927.9 per urban household and overall average of Rs.450.19 per household. The aggregate savings of all households worked out to be over Rs. 436 crores. The report also contains information on cosumption expenditure which is estimated at Rs. 57.75 and Rs.65.25 per capita per month in rural and urban households respectively, assuming the average size of rural households to be 5.7(1981 census). Total consumption expenditure in rural households during 1977-78 worked out to Rs 1394.39 crores. The total savings of all rural households being estimated at Rs. 340.48 crores (125.48 crores by way of saving in financial assets and Rs. 215 crores as investment in physical assets), then the aggregate income of all rural households in the state would comes to Rs. 1734.87 crores, assuming that income is the sum of consumption and saving. If so , the saving income ratio would come to 19.63 per cent. A recent study on rural household savings and investment of Kerala and Tamilnadu (Panicker, 1992), estimated savings based on both income account method and balance sheet method and the results revealed that in the former method, savings range from Rs. 652 in Tamilnadu to Rs. 5690 in Kerala, while the latter falls in the range of Rs. -926 in Tamilnadu to Rs. 786 in

Table 4.15

Motivations for savings of sample households

Figures in percentages

Item	S1	S2	S3
For meeting contigencies	24	21	18
Education of children	36	41	34
Ceremonies	10	8	13
Building up houses	20	18	14
Others (Including bequeathing assets)	10	12	21
Total	100	100	100

Source : Field survey

Kerala. The difference in estimates may be due to under reporting of income or over reporting of consumption expenditure or both. The estimates show that the average propensity to save is seen to be moderately high (19.8) in one of the Kerala villages.

Marginal Propensity to Consume and Save

Table 4.16 presents the values of marginal propensity to consume (MPC) and marginal propensity to save (MPS) for different groups S1, S2 and S3. The computation established the identity that MPC + MPS = 1. It is also obeserved that in the case of group S3, the value of MPS is unusually high because group S3 has large area under their control and as a consequence of large holdings, their income is already high in comparsion with groups S1 and S2. As a result of this, any income earned by the farmers of group S3 is diverted to various saving channels.

Motivations for Saving

In the above paragraphs we have examined the extent of savings by the rubber cultivators and seen that the magnitude of savings by the rubber growers are reasonably high compared to national or state averages. Hence it is appropriate to examine the motivations behind savings which is attempted here. The desire to save may be the result of a variety of motivations. The underlying presumption is that savings is not a chance variable, a mere residue of income over consumption expenditure, but the outcome of a deliberate decision making from the part of the saver. The motivations include a felt need to set aside a portion of current earnings to ensure a steady flow of income in the future, to offset a fall in income anticipated, to acquire

Table 4.16

Composition of investment of sample households

Figures in Rs

Item	S1	S2	S3
Agricultural Production Investment	4332	3059	8614
	(18.5)	(16)	(15.2)
Other Production Investment	2458	1937	4328
	(10.5)	(10.12)	(7.5)
Non income Generating Investment	6322	5514	12816
	(27)	(28.8)	(22.3)
Financial Investment	10,303	8614	31654
	(44)	(45)	(55)
Total	23,416	19124	57412
	(100)	(100)	(100)

Note : Figures in parenthesis expresses percentages to total.

Source : Field survey

more assets, to meet educational and marriage expenditure of children, and also to meet various contingencies in the future.

The householders motives behind saving were examined by raising a few questions on the purpose of their saving and their priorities. The purposes listed included purchase of land, putting up houses, education and wedding of their children, bequeathing assets to their spouses and children, saving for emergencies, provision for old age etc. From their responses, five items, viz. education of their children, ceremonies, putting up houses, saving for emergencies and bequeathing assets to spouses and children where emerged as the principal motivations for saving (see table 4.15).

In group S1, 36 per cent prefer to save for the education of their children, 24 per cent save to meet emergencies, 20 per cent revealed that their motive was putting up or maintenance of houses. In the case of group S2 and S3 also higher priority was for education of their children, ie., 41 and 34 per cent respectively. Also, in S3 group 21 per cent said they give priority for bequeathing assets to their spouses and children. However, on the whole, provision for education contributed the principal motivations for saving in a large proportion of house holds in the study area.

Composition of Investment

It can be observed from table 4.16 that among the groups S1, S2 and S3, financial assets is the major form of disposition of savings. Non income generating investments like investments in household durables and other physical assets constitute 27,28.8 and 22.3 per cent respectively among the three groups S1, S2 and S3. Agricultural

Table 4.17

Preference for savings in financial assets of sample households

(scores)

Items	S1	S2	S3
Bank deposits	84	82	86
Post office savings	68	66	57
Chit Funds	75	78	81
Non Bank Finance Companies	56	52	61
Shares/ Debentures	16	18	24
LIC/Mutual funds	33	37	30

Note : Maximum Score Obtainable : 100
Source : Field survey

production investment was highest among the group S1 (18.5 per cent). Thus, the rubber cultivators prefer to invest more in financial assets irrespective of their size of holdings. Another important inference is that among the three groups non income generating investments contribute more than 20 per cent of their total investments.

Preference for Financial Assets

From the point of view of mobilisation of savings from the rubber cultivators, the disposition of savings in the form of financial asset is essential. Table 4.17 indicates the preferences in financial assets. It can be observed from table 4.17 that the preference score obtained was maximum for bank deposits. Among the S1 group farmers, chit funds and post office savings got next preference. S3 group cultivators' preference was slightly different from the other two groups since they preferred to deposit in non banking financial companies or other similar institutions (preference score 61). It may be concluded that irrespective of size of holding, highest preference was for bank deposit and least for share/debentures.

Factors Influencing Investment Decision in Financial Assets

Investment decision of the households in financial assets were influenced by a number of factors, the major being rate of return, safety and procedural convenience, availability of products, service of staff and relationship with the institution offering products. In this study an attempt is made to analyse these factors on an institution wise and factor wise basis. The data for this were collected on a five point scale for

Table 4.18

The Influence Index of the factors influencing investment decisions in financial assets

Sl No.	Factors	Co-operative bank Influence Index	Commercial bank Influence Index	Chit Fund Influence Index	Post Office Savings Influence Index
1	Rate of Return	+ 62	+38	+26	+22
2	Safety	+41	+73	--20	+54
3	Procedural Convenience	+58	+44	--14	+26
4	Availability of products	+57	+50	+24	+33
5	Service of Staff	+60	+52	+32	+87
6	Relationship with the institution	+40	-12	+31	--27
	Overall Index	+53	+41	+13	+32

Source : Field survey

each investment avenue and the following are the weights attached to the scale choices.

Strongly agree (2), Agree (1), No opinion (0), Disagree (-1), and Highly disagree (-2).

Based on the weight attributed, the level of influence of each investment avenue was determined by constructing an Influence Index.

$$I = \frac{\sum_{i=1}^{k} I_{pq}}{\sum_{i=1}^{k} I_{pq\max}} \times 100$$

where,

I = influence index of factor p's influence on Savings / Investment

I_{pq} = The influence score of the factor / parameter `p' influencing saving or investment avenue `q'

I_{pqmax} = Maximum influence score obtainable

K = Sample size

Table 4.18 highlighted that the overall influence index for the identified parameters obtained was maximum for co-operative banks (53) and least for chit funds (13). In commercial banks and post office savings, it was 36 and 28 respectively. The difference in the value of influence index was due to the influence of each parameter in investment decisions. Hence a detailed parameter wise analysis was also done.

Rate of return

From table 4.18 it was revealed that rate of return was a major factor which influenced investment decision making in financial assets. Higher the return, higher would be the investment preference. The institutions offering financial products considered in this study are co-operative banks , commercial banks, chit funds and post office savings. Co-operative banks offer highest interest rate when compared to commercial banks and post office savings. Co-operative banks are permitted to offer 1 per cent rate higher than that of other similar institutions. A direct comparison of the rate of return of chit funds with other deposit avenues is not attempted on account of the variations in the rate of return between different types of chit funds.

The respondents were aware of the interest rate differences and different products available. From table 4.18, it is seen that the influence index obtained for the rate of return parameter was maximum in co-operative banks (53) and lowest for post office savings (22). The index obtained for commercial banks and chit funds were 38 and 26 respectively. A notable percentage of the respondents were neutral towards the influence of rate of return. Altogether it may be inferred that rate of return is a major parameter which influenced saving disposition decision in favour of co-operative banks compared to commercial banks, chit funds and post office savings.

Safety

Together with the rate of return, safety aspect (risk) also affects investment decisions. It is generally believed that commercial banks and co-operative banks

constitute the least risky investment opportunity. It is clear from table 4.18 that the influence index obtained for safety parameter was highest in commercial banks(73). Moreover the study results revealed that majority of the respondents were negatively influenced by this factor towards investing in chit funds(-20). Against this, the respondents were positively influenced by this factor in preferring post office savings as an investment avenue.

Procedural Convenience

Savings of individual income in the form of financial assets seem to be quite inevitable in meeting one's future financial needs. However preference towards any financial institution is determined among other things, by the simplicity of procedures relating to the acceptance and withdrawal of their investment. Similarity in procedures were also found in commercial banks and co-operative banks. Table 4.18 highlights the fact that the respondents consider procedural simplicity as a factor influencing their savings disposition decisions. Testifying this, the study revealed that the respondents have only low preference towards savings in chit funds due to the procedural inconvenience factor. It was understood that chit funds insists on surety for disposal of amount due only with considerable delay. Regarding procedural convenience the results revealed that a meagre share of respondents gave 'no-opinion' towards procedural convenience as a factor influencing investment decision. This may be due to the lack of awareness about the procedures.

Availability of Financial Products

Availability of financial products will definitely be a factor influencing investment decision in financial assets. Financial products refer to the various types of instruments (viz. savings bank, current account, term deposits etc.) available for investment. People save their residual income for meeting future and unexpected needs. So based on the requirements of the customers, appropriate products should be designed by the financial institutions. Hence banks are offering current deposits, savings bank deposits and term deposits. Also the chit funds offer a range of products , which varies in amount payable and periods of payment ie daily, weekly or monthly. It can be observed from table 4.18 that more than 50 per cent of the respondents opined that their institutional preference was influenced by the availablity of products in each of the competing instituions. The value of influence index range from 57 in co-operative banks to 24 in chit funds. However, the results also indicates that a countable portion of respondents remain on this factor in prefering chit funds and post office savings to dispose off their savings (see table 4.18) It can be concluded from the above analysis that the availability of products positively influence the investment decisions in all the selected institutions.

Service of the Employees

Service and attitudes of the employees of a financial institution was found as an important factor influencing the institutional preference of the respondents. The pleasing manners and committed behaviour of the employees towards their

customers would serve as a sort of indirect promotional technique in favour of the particular financial institution. Table 4.18 reveals that the influence index obtained was highest for post office savings (87) and lowest for chit funds(32). With regard to post office savings, service of Grahmin Mahila Pradhan Agents created a positive influence in the minds of the respondents to prefer this investment avenue. The employees of commercial banks who are residents of the area and co-operative bank employees were familiar with the respondents and this must have exerted some influence on these respondents in selecting their investment avenue. This would have helped the influence index to move positively in favour of co-operative banks (index value 60). Similarly in commercial banks and chit funds also, the service of the staff positively influence the respondent's investment decisions and the respective index values are 52 and 32(see table 4.18).

Relationship with the Institution

Table 4.18 indicates the influence of the relationship with the institution in saving disposition decisions. If a particular household had transaction with an institution, and the institution maintains regular contact with him, then there is a natural possibility that his investment decision may fall in favour of that particular institution. It is clear from table 4.18 that co-operative banks maintain a very good relationship with the customers (influence index 40), but the influence score obtained for post office savings and commercial banks are negative in this regard.

Table 4.18 reveals that the overall index was highest for co-operative banks(53) and the commercial banks rank second (41). But the index was least for

chit funds. The results reveal that all the selected influencing parameters have positively influenced the respondents investment decision in favour of co-operative banks. However the rate of return had significant influence on investment decisions in banks and the relationship with the institution had the least influence.

Coming to the commercial banks the relationship with the institution negatively influenced the respondents saving disposition decisions. Safety consideration was the highest influencing parameter in investment decisions in favour of commercial banks. Rate of return seems to be an insignificant influencing parameter in this case. The other parameters namely the service of staff, procedural convenience, availability of products etc. also have only lesser influence in the respondents investment decisions to go in favour of commercial banks. The composite influence index obtained for chit funds was the lowest (13). It was due to the negative influence of parameters like procedural convenience and safety considerations (especially in the case of private chit funds). Availability of different types of chit funds , service of staff and the relationship with the institution have positively influenced the respondents investment decisions and the respective index values are 24, 32, and 31 respectively.

The respondents' post office savings decision was highly influenced by the 'service of the staff' especially that of Grahmin Mahila Pradhan Agents and the influence index obtained in this regard was 87. Compared to other institutions the rate of return, availability of products and relationship with the institution negatively influenced the investment decision in post office savings (see table 4.18)

In short it can be said that the overall index was highest for co-operative banks(53) and lowest for chit funds(13). It implies that the respondents favoured

Table 4.19

Possession of Modern Facilities in farm and houses of sample households

Items	S1 (No)	S2 (No)	S3 (No)
Agricultural related Investments			
Smoke House	11	17	44
Rubber Roller	22	42	50
Biogas plant	15	17	26
Water pump	41	37	46
Telephone	19	24	37
Durables			
Car/Jeep	2	10	23
Motor cycle / Scooter	18	32	36
Television	35	50	50
Dish antennae	1	2	28
LPG	17	32	46
Washing Machine	5	18	30
Refrigerator	26	34	50
Mixer/Grinder	40	50	50

Source : Field survey

investment avenues offered by co-operative banks the most and they had high inhibition in opting chit funds as an investment avenue.

All the parameters selected have positively influenced the respondents in making their investment decision in favour of co-operative banks. But in the case of all other institutions, at least one or more of the parameters have negatively influenced the respondents. However, as the overall index values indicate, the second best option of the respondents lies in investment in commercial banks followed by post office savings.

Possession of Modern Facilities

Before analysing the factors influencing investment decisions of the respondents in physical assets, it will be worthwhile to analyse the asset holding pattern. All the cultivators possessed land and owned residential buildings and hence these two were excluded from the present analysis. Another issue pertaining to physical assets is their valuation which is not considered in the present study. Table 4.19 indicates the asset holding or usage of modern facilities of the sample households. The agricultural related investments are smoke house for drying rubber sheets, rubber roller for processing sheets, bio gas plant and pump set for both irrigation and household consumption. In the cultivator group S3, 88 per cent households are having separate arrangements for drying rubber sheets. The rest mostly rely on traditional methods, and few of them directly sell the latex. But in group S1 and S2 there is no separate facility for drying sheets. They primarily depend on traditional methods.

Table 4.20

Influence index of different parameters in Investment decision in Land

Sl. No.	Parameters	Number of Respondents	Influence Index	Mean Score
1	Speculation	27	35	+0.7
2	As inputs	27	33	+0.66

Source : Field survey

Rubber roller is an important equipment for the conversion of rubber latex into sheets. In group S3 all the households possessed it, but in group S2, only 84 per cent households had rubber roller and in group S1, just 44 per cent households possessed (see table 4.19) The financial assistance and subsidy given by the Rubber Board may be a reason for acquisition of this asset. As far as group S1 farmers are concerned, the rubber roller is not a must, because they can use the roller of neighbours either freely or for a rent.

Bio gas plant is also a common form of reinvestment. The slurry coming out of the plant is a very good manure for plants in easily absorbable form and the bio gas is a very cost effective fuel. Among the respondents Group S1, S2 and S3 30, 34 and 52 per cent households respectively possessed this asset. Since this investment requires dairy animals, the investment in this asset depends not only on the income or savings but also on the viability of maintaining dairy animals.

Pump set is another agricultural related investment. It can be either used for irrigation or for household purposes. In groups S1 and S3, above 80 per cent of the households had pump sets. But in S2 the possession is less than the other two groups.

The field survey results show that possession of telephone among the rubber cultivators was highest in group S3 (74 per cent) followed by group S2 (48 per cent) and group S1 (38 per cent). Coming to the consumer durables, possession of automobiles among the respondents is on an average 23 per cent and the highest is in group S3 (46 per cent). Higher possession of two wheelers among the respondent

Table 4.21

Influence index of different parameters in investment decision in Livestock and other assets

Sl No	Parameter	Number of respondents	Influence Index	Mean Score
1	Family consumption (Milk, egg etc)	132	92	+1.84
2	Subsidiary Income	132	54	+1.08

Source : Field survey

groups indicates their affinity towards urban life style. It can be observed from table 4.19 that all the respondent households in group S2 and S3 possess television and mixer/grinder, however below 80 per cent of households in group S1 had the above assets. The possession of LPG connection was highest in group S3 (92 per cent) and lowest in S1 group (34 per cent). The results indicate that in group S3 a large number of farmers posses both LPG and bio gas plant. The reason behind this is the affinity of the S3 group towards urban life style.

Washing machine was more or less a common equipment among S3 group households and 60 per cent of them had it. But in S1 10 and 36 per cent respectively had this devise. It can be inferred from table 4.19 that 56 per cent households among the group S3 possessed dish antennae. In S1 and S2 groups possession of dish antennae was found to be very rare. Hence possession of durables was lowest in small cultivator group S1 and it was highest in group S3. In this group (S3) above 70 per cent of the households possessed most of the listed consumer durables. It can thus be concluded that higher the income higher will be the affinity towards modern facilities. An analysis of the factors influencing the investment decision in physical assets would probably help us to understand more motivations behind such investments. Such an attempt is made in the subsequent section.

Factors Influencing Investment Decision in Physical Assets

In this part of analysis, the parameters influencing investment decision in physical assets are discussed. The deciding parameters may vary from one physical

Table 4.22

Influence index of various parameters in Investment decision in Modern Kitchen Gadgets and Household durables

Sl No	Parameters	Number of respondents	Influence Index	Mean Score
1	Status	150	36	0.72
2	Utility	150	75	1.5
3	To Improve standard of living	150	61	1.22

Source : Field survey

asset to another. Hence an attempt is made to analyse the different parameters relevant to each type of asset. The relevent influence index was computed by using the following formulae.

$$P = \frac{\sum_{i=1}^{n} P_i}{\sum_{i=1}^{n} P_{i\max}} \times 100$$

Where

P = preference index

P_i = individual (i)'s preference score of each financial instrument

P_{imax} = maximum score obtainable

n = sample size

Land is the most important input for farmers. It was generally believed that the farmers have a tendency to invest more in land as a physical asset, but in the study area the high value of land was an inhibiting factor. The major influencing parameters (motives) identified regarding investment in land were speculation and production (land as input for cultivation). Among the sample, 27 households, invested in land during the recent past. The influence index obtained for speculation parameter was 35 and production parameter was 33 (see table 4.20).

Investment in livestock was mainly influenced by family consumption purpose and subsidiary income generation purpose. Among the respondents, 132

Table 4.23

Influence index of different parameters in Investment decision in Non farm assets and business

Sl No	Parameters	Number of respondents	Influence Index	Mean Score
1	Income Generation	28	7	1.4
2	Entrepreneurship	28	39	0.78

Source : Field survey

Table 4.24

Influence index of Various parameters in Investment decision in Modern Electric Goods.(T.V, Audio System etc.)

Sl No	Parameters	Number of respondents	Influence Index	Mean Score
1	Status	135	54	1.08.
2	Information or Education	135	65	1.3
3	Entertainment	135	53	1.06

Source : Field survey

households had investment in this asset. The family consumption parameter has the highest influence compared to subsidiary income generation parameter.(the influence index were 92 and 54 respectively see table 4.21)

Non farm assets and business refers to the subsidiary income generating activities undertaken by the households viz. trading, nonfarm enterprises, real estates, etc. Income generation and entrepreneurship motivation are the two parameters identified which influence the investment decision in these assets. Table 4.23 indicates that the influence of income generation parameter in investment decision of these assets was higher (70) compared to enterpreneurship motivation parameter (39).

Status, utility and urge to improve standard of living are the parameters which influence the investment decision in modern kitchen gadgets and household durables. Table 4.22 revealed that the above parameters influence the householders investment decision. The utility factor is having the highest influence(index 75) and status factor is having the least influence (36).

Investment decision in modern electric goods were driven by status, information and education and entertainment motives of the respondents. The influence index obtained was maximum for information and education and index value was more than 50 for all the parameters(see table 4.24).

As observed earlier, 35 households possessed personal vehicles. Their response indicated that the purpose of this investment were farm conveyance, income generation, status concern and personal use. The results show that the income generation

Table 4.25

· Influence index of Various parameters in Investment decision in Automobiles

Sl No	Parameters	Number of respondents	Influence Index	Mean Score
1	Farm Conveyance	35	43	0.86
2	Income Generation	35	-54	-1.08
3	Status	35	80	1.06
4	Personal Use	35	93	1.86

Source : Field survey

Table 4.26

Savings and investment relationship of sample households

Group	S > I	S = I	S < I
S1	19	8	23
	(38)	(16)	(46)
S2	23	14	13
	(46)	(28)	(26)
S3	29	12	9
	(58)	(24)	(18)

Note : Figures in parenthesis expresses percentages to total.
Source : Field survey

factor negatively influenced the investment decision (see table 4.25) The survey revealed that the status concern is having the highest influence in investment decisions in automobiles.

It can thus be concluded that investment decision in land was highly influenced by speculation parameter and the major motive for investment in livestock and other assets was family consumption. Income generation aspect lead the investment decision in non farm asset and business. Utility concern was a major factor which determine investment decision in modern kitchen gadgets and consumer durables. Status concern is also having influence in investment decision in automobiles and modern electric equipment's.

It is widely believed that savings is the main source of investment and in Keynesian methodology saving always equal investment. This aspect was also briefly examined (see table 4.26).

Saving and Investment Relationship

The basic monetary economics suggests that savings will be converted into investment either productive or non-productive. The compostion of investment by the sample respondents were already given in table 4.16.

It can be observed from table 4.26 that among the S1 group respondents, 46 per cent had less saving than investment, while 38 per cent invested less than what they saved. The difference in saving and investment may be due to borrowings and debt repayment. Among S2 and S3 groups, investment was less than savings. Hence, it may be inferred that higher the size of holding, investment would be less than savings.

CHAPTER V

SUMMARY AND CONCLUSIONS

SUMMARY AND CONCLUSIONS

Savings is the impetus to economic growth. Savings of an economy can be from three distinct sectors, private corporate sector, public sector and household sector. Among the above three sectors, household sector is the major contributor and contributes more than 75 per cent of our domestic savings. Since the majority of the households are engaged in agriculture, the income earning potential of the households has a strong bearing on the formation of household savings in the country .The farmers who have turned to commercialsation of agriculture especially with commercial crops enjoy higher income. Among the commercial crops rubber is much popular and rubber cultivators possess a decisive role in Kerala economy . Eighteen per cent of the state agricultural domestic product was contributed by a single crop, rubber . The savings behaviour of this sector is therefore, very important among the factors that influence households savings behaviour. Hence a micro level analysis of savings and investment behaviour of rubber cultivators was taken up with following objectives.

1 To analyse the extent and pattern of savings and investment of rubber cultivators.

2 To examine the factors influencing their savings and investment decisions.

The study was confined to the rubber cultivators in Meenachil taluk of Kottayam district. The study period was Sept. 1996 to Aug 1997. The data were collected by administering a pretested structured schedule among 150 sample respondents. The respondents were classified in to three groups based on the size of holdings.

The groups are S1-below 1 hectare(ha), S2- between 1ha and 2ha and S3- between 2ha and 5 ha.

A multistage random sampling technique was employed with village as a unit. From 26 villages, three villages from the area of the Meenachil Regional Office of the Rubber Board and two villages from the area of operation of Erattupetta office were selected at random.

Tabular analysis was employed to examine the socio-economic features, income and consumption pattern of sample households. For analysing the savings and investment behaviour priority index and influence index were also computed. Linear regression models were used to estimate Marginal Propensity to Consume and Save.

The analysis of socio economic variables indicated that the average family size of the respondent groups S1 and S2 is between 5 and 6 and that of S3 is above 6. As per age composition, in all the three groups, above 50 per cent of the members in the respondent households were in the age group of 15-16. The number of members above 60 years of age is highest in group S3 (21.53 per cent) and lowest in group S1 (12.85 per cent).

The ratio of earners to dependents among the sample is highest in cultivator group S2 and lowest in cultivator group S1. The results revealed that while 28 per cent of the members in group S1 are earners only 23.5 per cent and 26 per cent were earners in group S2 and S3 respectively. This means that with the highest

percentages of earners, the group S1 has to support only the lowest percentage of dependents. The results revealed that above 80 per cent of the earners in all the three groups come under the age category of 25 to 60.

Among the three cultivator groups all the respondents were literate and above 75 percent of them had high school education. In group S1 and S2, 14 and 12 per cent of the family heads respectively are highly qualified and they are graduates, but the same percentage is only 8 in group S3. From the analysis of socio economic variables it may be established that higher level of literacy, low family size, low dependency ratio and higher schooling are prevelent among the respondent households compared to the national averages.

The composition of net farm income of the rubber cultivators indicates that farm income is the major component which contributes to more than 75 per cent of the total net income of the sample households. The net household income of the rubber cultivators are Rs. 79063, Rs.89923 and Rs 163225 respectively in group S1,S2 and S3. The difference in net income composition may be due to the variations in farm income. Livestock and poultry contributed least to the total net farm income. Therefore it may be inferred that the rubber is the single most important crop which determine the farm income of the cultivators.

The average size of rubber holdings were 0.69, 1.01 and 2.03 hectares respectively for group S1, S2 and S3. Hence, it is rationale that net income from rubber is highest for S3 followed by S2 and S1 and probably this variation in the size of cultivation may be the major reason for the variation in the net income from rubber.

The per hectare and per plant gross income were highest for group S1 (Rs.93856 and Rs 187.7 respectively) It was the result of higher number of plants per hectare (cultivation intensity) and higher number of tapping days per year (tapping intensity) earned by this group. The per hectare and per plant gross income in group S2 are similar to that of group S3 and they are considerably lesser than that of group S1. The minor differences in the per plant income between S2 and S3 may be due to differences in the cultivation and tapping intensity obtained by the two groups.

The per hectare expenses were Rs. 16104 and 16598 respectively for group S1 and S3 . But for group S2 it was Rs. 13485. These differences were due to the variations in per hectare and per plant gross income as well as gross expenses. The per hectare gross income was found declining with increase in the size of holding i.e. it is highest in group S1 followed by group S2 and S3. The per plant gross income also was highest in group S1, but is lowest in S2 and not in S3.

The average food expenditure of the sample respondents showed that the expenditure was highest for group S3 (Rs. 41081) and lowest for group S1 (Rs.21752). The results showed a direct relation to their income. Higher the income higher will be the food expenses. This was due to the change in food habits.

The per capita clothing expenses of the households showed that for S1 group it was lowest and for S3 group it was 1.8 times that of the S1 group. It indicated that the income factor influenced expenditure on clothing.

Education expenses of children formed a major item in the consumption expenditure of rubber cultivators which varied from 16 to 17 per cent of their total expenditure. The per head education expense is lowest in S1 followed by S2 and S3.

Travelling expenditure of the rubber cultivators comprised the expenses incurred by way of hiring taxi, fuel expenses of owned vehicles, road tax, insurance, expenditure on repair of owned vehicles, bus fare, train fare, air fare etc,. The average traveling expenditure was highest for group S3 (Rs.9618). But the percentage share of this expense in total consumption expenditure was highest for group S2 (8.9 per cent).

The expenses on ceremonies as a percentage to total consumption expenditure (6.7 per cent) was highest in group S2 when compared with the other two. This expense was lowest for group S1 (Rs.2943 or 5.7 per cent). But in the case of S2 it was 1.5 times higher than S1 and that constituted 6.7 per cent of their total consumption expenditure. Analysis of the expenditure side factors revealed that the income and consumption expenditure are directly related.

The extent of savings of different cultivator groups were Rs 27,841, Rs. 19,458 and Rs. 60,616 respectively in group S1,S2 and S3. The results revealed that among the different groups the extent of savings is different and is not proportional to the size of holdings. Though the S2 group is large in terms of land holding size their extent of savings is lesser than S1. However the extent of savings of S3 group is 2 fold and 3 fold that of S1 group and S2 group respectively. It means that this disproportionality was seen only with the case of S2 group. This is due to high earners to dependents ratio

and the huge consumption expenditure of the S2 group (in comparison with S1) but is not due to any reduction in net income. In fact, the increase in the net income of the cultivator groups is directly proportional to their size of holdings. When the S1 group has opted to save 34 per cent of their income, the S2 group has saved only 23 per cent of their income. Compared to the former, (S2) had a higher income level of around Rs. 10000/-. Their consumption expenditure is higher by almost double their amount, bringing down their net savings to be lower than the former. However, S3 group has saved 36 per cent of their net income which is the highest percentage of savings among the three groups. Though their consumption expenditure was comparatively higher, their income was equally higher to generate huge net savings.

Savings among the different groups are a reflection of the differences in the propensities to consume. The average propensity to consume is lowest among the biggest group of cultivators (S3) and second lowest among smallest group of cultivators (S1) The group S3 cultivators saved 36 per cent of their income which was contributed to a large extent by rubber farming.

Marginal propensity to save has been estimated by regressing saving, on house hold income, assuming linear relationship. The marginal propensity to save is 0.338 for S1 0.386 for S2 and 0.579 for S3.

From the responses of the cultivators, five items, viz. education of children, ceremonies, putting up houses, saving for emergencies, and bequeathing asset to spouses and children emerged as the principal motivations for saving. In group S1 36 per cent prefers to save for the education of children. For 24 per cent saving motive was for

meeting contigencies, while 20 per cent revealed that their motive was putting up or maintenance of houses. Among the groups S2 and S3 also, higher priority was for education of their children, the percentage shares being 41 and 34 respectively.

Saving and investment relationship among the S1 group respondents revealed that 46 per cent had less savings than investment, while 38 per cent invested less than what they saved. But in S2 and S3, above 45 per cent had savings higher than investment. It may be inferred that higher the size of holding lesser will be the investment.

Among the three groups, financial asset is the major form of disposition of savings. Non-income generating investments like investments in house hold durables and other physical assets constitute 27, 28.8 and 22.3 per cent respectively in the three groups S1, S2 and S3. The rubber cultivators prefer to invest more in financial assets irrespective of their size of holding. Another important aspect is that among the three groups non-income generating investments constitute more than 20 per cent of their savings.

From the point of view of mobilisation of savings the disposition of savings in the form of financial assets is essential. The preference score obtained for bank deposits was highest in all groups. Among the S1 group farmers chit funds and post office savings got next preference. In sum , irrespective of the size of the holdings, highest preference was for bank deposits and least for shares or debentures.

The major factors which influenced the savings decision of rubber cultivators were proximity, rate of return, safety, procedural convenience, availability of products, service of staff and relationship with the institutions. Rate of return was the major factor which influenced the savings decision in co-operative banks. Safety was the most important parameter which influenced the saving decision in commercial banks. Proximity and relationship with the promoters influenced the investment decision in chit funds. Service of Grahmin Mahila Pradhan agents and proximity to post offices influenced investment decision in post office savings.

The asset holding pattern of the respondents indicated that in S3 group all farmers owned rubber roller and 44 households had smoke house for drying rubber sheets. The number of persons possessing telephone, car/jeep, two wheelers, television, dish antennae, L.P.G connection, washing machine, refrigerator, mixer/grinder increased with increase in size of holding. Thus, higher the income higher will be the possession and usage of modern facilities.

The principal motivation behind purchase decision in dish antennae is social status and entertainment. Purchase decision of vehicles was influenced by status concern and personal use. Investment decision in livestock was mainly for family consumption and also for generating subsidiary income.

In short, income and savings increase with the size of holding. The respondents prefer to save more in the form of financial assets rather than physical assets. Among the financial assets they prefer co-operative bank deposits.

The disposition of higher proportion of savings of sample cultivators in non agriculture sector and possession of consumer durables were emerged as the major findings of the study. Obviously, diversification of savings to non agriculture sector leads to drainage of resources from this sector. Whatever be the motives behind the investments, high priority given to nonproductive assets and luxury goods is not desirable and it can be considered only as a part of demonstration effect. Lack of profitable investment opportunities or lack of awareness of such options in the various sectors like agriculture, household industries etc, may also act as a constriant for higher investment. Hence Government and other agencies should intitate the measure to channelise the savings of rubber cultivators in desried directions, especially for exploring the location advantage with compartive advantage.

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APPENDICES

SAVINGS AND INVESTMENT BEHAVIOUR OF RUBBER CULTIVATORS - A MICRO LEVEL ANALYSIS

GENERAL INFORMATION

1. Name and address

2. Family particulars

Sl No	Name of Members	Sex	Age	Educational Qualification	Occupation Main	Occupation Sub	Income Main	Income Sub

3. Land holding pattern

Category	Owned	Lease	Number of plants
Total Area			
Rubber			
Coconut			
Paddy			
Tapioca			
Banana			
Pepper			
Vegetables			
Others			

INCOME

1. Income from agriculture

Item	Main			Subsidiary			Total value		
	Qty.	Price/unit	/ Total	Qty.	Price/unit	/ Total	Qty.	Price/unit	/ Total
Rubber									
Coconut									
Paddy									
Tapioca									
Banana									
Pepper									
Vegetables									
Others									

2 Live stock and Poultry

Name of produce	Period	Total Production	Price/Unit	Total Value
Milk				
Egg				
Birds				
Manure				
Others				

Sale of Farm Assets

	Quantity	Value	Year of Sale
Land			
Wood/ Palms			
Livestock			
Others			

Custom Services of Farm Implements and Machinery

1. Rubber Roller

2. Other Implements

Non-Farm/Non Agricultural Income

Services

Wages

Business

Sale of household durables

Sale of land

Others

CAPITAL RECEIPTS

Sale of rubber wood

Sale of land

Sale of livestock

EXPENDITURE

INPUT COST

Crop	Seeds/ Seelings	Fertiliser/ Manure	Pesticides	Others	Total Value
Rubber					
Coconut					
Others					

Labour Cost

	Land preparation	Fertiliser application	Tapping& processing/ harvesting	Others	Family Labour	Total
Rubber						
Others						

Livestock Maintenance Expenditure/ month

Description	Feed cost	Veterinary aid	Labour cost	Total

Operational charges of farm equipments

HOUSEHOLD EXPENDITURE

Sl.No.	Particulars	Qty. in Kg per month	Rate /Unit	Total amount/ year Rs
1.	FOOD			
	Rice			
	Tapioca			
	Wheat			
	Pulses			
	Sugar			
	Oil			
	Milk			
	Egg			
	Meat			
	Vegetables			
	Fish			
	Others			
2.	Clothing& Footwear			
3.	Education			
4.	Fuel& Lighting			
5.	Medicine			
6.	Travel			
7.	Tobacco			
8.	Liquor			
9.	Tax			
10.	Others			

LOANS

Sl. No.	Agency	Date&purpose of borrowing	Amount	Interest	Amount Outstanding	Amount due

INVESTMENTS

Particulars	Mode of Purchase/ Construction	1994 June value	1994 June value	1995 June value	1996 June value	Present value	Other Maintenance cost
1. Land							
a. purchased							
2. Rubber rollers							
3. Smoke house							
4. Livestock							
a. Cattle:Cow							
Goat							
b. Poultry							
5. Cattleshed							
6. Pump house							
7. Pump/engine							
nos.							
8. Irrigation							
accessories							
9. Biogas plant							
10 Implements							
11. Others							

FARM PARTICULARS

1. Whether your plantation is registered Yes/No
   If yes, year

   _ _ _ _ _ _ _

2. Variety of rubber planted

3. Do you get subsidy for inputs
   a) planting material
   b) fertiliser
   c) rubber roller
   d) smoke house
   e) others

4. Nature of tapping — — frequency
   daily/once in two days/ once in three days

   Total days /year

5. Cost of tapping/100 plants and total cost

6. Whether you are preparing rubber sheets or selling sap directly Y/N
7. Is there any problem in processing ? list the problem

8. Do you have rubber roller? Yes/No

9. Do you have a smoke house? Yes/No

10. Are you a member of RPS ? Yes/No

11. Method and channel of sales
    Marketing society/Private traders/RPS

12 Do you agree, the present market price is adequate for a reasonable income?
   Highly satisfied/Satisfied/No opinion/Dissatisfied/Highly dissatisfied

Do you have savings in

		Yes/No	Specify savings during 1996-97
1.	Commercial banks SB,FD		
2.	Co-operative banks SB,FD		
3.	P.O. Savings		
4.	Shares/Debentures		
5.	Mutual funds		
6.	LIC		
7.	Chit funds		
8.	NBFC or Local banks		
9.	Others		

Do you believe that following parameters influence saving decision in the following:

Commercial banks		Strongly Agree	Agree	No Openion	Disagree	Strongly Disagree
1.	Proximity					
2.	Rate of return					
3.	Risk					
4.	Procedural conveience					
5.	Availability of products					
6.	Service of Employees					
7.	Relationship with the institution					
8.	Others					

(v) LIC or Mutual Funds	SA	A	NO	DA	SD
1. Tax saving					
2. Risk					
3. Return or yield					
4. Convenience					
5. Sevice of agents					
6. Others					

(vi) Chit Funds	SA	A	NO	DA	SD
1. Convenience					
2. Risk					
3. Return					
4. Service of Chitty promoter					
5. Others					

(vii) Among the following, which type of Chit funds you perfer ?

1. Private Yes/No
2. Co-operative Yes/No
3. KSFE Yes/No
4. Others Yes/No

(ii) Co-operative Banks	SA	A	NO	DA	SD
1. Proximity					
2. Rate of return					
3. Risk					
4. Convenience					
5. Availability of number of products (schemes)					
6. Service of bank staff					
7. Relationship					
8.Others					

(iii) Post office savings	SA	A	NO	DA	SD
1. Proximity					
2. Rate of return					
3. Risk					
4. Convenience					
5. Service of staff					
6. Service of GMP agents					
7. Others					

(viii) If you prefer ---------- funds, which are the parameters influence your investment decision?

		SA	A	NO	DA	SD
1.	Proximity					
2.	Convenience					
3.	Risk					
4.	Chitty agents					

(ix) Parameters which influence savings decision in private banks/NBFC's

		SA	A	NO	DA	SD
1.	Proximity					
2.	Convenience					
3.	Risk					
4.	Rate of return					
5.	Relationship with the banker					
6.	Others					

Parameters which influence investment decision in

(i) Land and other agricultural inputs

		SA	A	NO	DA	SD
1.	Speculation					
2.	As inputs					
3.	Others					

(ii) Investment in Livestock and other assets

	SA	A	NO	D	HD
1. Family consumption					
2. Subsidiary income					
3. Others					

(iii) Non farm assets and business

	SA	A	NO	D	HD
1. Income generation					
2. Entrepreneurship					
3. Others					

(iv) Kitchen and household durables

	SA	A	NO	D	HD
1. Status					
2. Utility					
3. Improve standard of living					
4. Others					

(v) TV and Dish Antennae

	SA	A	NO	D	HD
1. Status					
2. Information or Education					
3. Entertainment					
4. Others					

(vi) Car or Jeep (Automobiles)

	SA	A	NO	D	HD
1. Farm conveyance					
2. Income generation(Taxi service)					
3. Status					
4. Personal use					
5. Others					

Motivations for saving

Item	Priority
1. For meeting contingencies	
2. Education of the children	
3. Ceremonies	
4. Building up houses	
5. Bequething assets	
6. Others	

SAVINGS AND INVESTMENT BEHAVIOUR OF RUBBER CULTIVATORS - A MICRO LEVEL ANALYSIS

by

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ABSTRACT OF A THESIS

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ABSTRACT

The study entitled "Savings and Investment Behaviour of Rubber Cultivators - A Micro Level Analysis" was conducted with the following objectives.

To analyse the extent and pattern of savings and investment of rubber cultivators.

To examine the factors influencing their savings and investment decisions.

The study was confined to the rubber cultivators in Meenachil taluk of Kottayam district. The study period was Sept.1996 to Aug. 1997. The sample frame comprised 150 respondents and the respondents were classified into three groups based on their size of holdings. The groups are S1-below 1 hectare(ha), S2 between 1ha and 2ha and S3 between 2ha and 5 ha. The data collected from 150 respondents were tabulated and analysed

The study revealed that the extent of savings was highest for group S3 followed by group S1 and S2. The results indicate that the cultivation of rubber was the major source of income (almost 75 per cent of total income) in all the three cultivator groups considered for the study. Hence the size of rubber cultivation was the major income side determinant of extent of savings among the sample households. However the rate of savings showed a different pattern. The average propensity to save is lowest in

group S2 (23 per cent) and is highest in group S3 (36 per cent) closely followed by group S1 (34 per cent). Though the total amount of expenditure is highest in group S3, its extent and rate of savings are highest as it has managed a very high amount of net income. Despite having the lowest extent of net income the group S1 has achieved an appreciable rate of savings by controlling their total expenditure.

From the responses of the cultivators five items viz. education of the children, ceremonies, putting up houses, saving for emergencies and bequeathing assets to spouses and children were emerged as the principal motivations for saving. The savings was mainly disposed in the form of investments in financial assets. The other major form of disposition of savings was investments in nonincome generating assets like household durables and buildings. Among the financial assets bank deposit was the most preferred option of the respondents and co-operative bank deposits had an edge over others. Rate of return followed by safety and proximity were emerged as major parameters influencing the investment options in financial assets. Investment in non income generating assets was found increasing with the increase in the size of holding. Their personal use apart, status concern and demonstration effect were the prime motivations behind such investment.

The study established that though the savings is mainly generated from agriculture sector, (especially from rubber cultivation) such savings are not appropriately ploughed as investment in the same sector. Instead the savings is mainly disposed either as financial assets(a low risk low return option) or as unproductive investments.