PERFORMANCE EVALUATION OF RUBBER PRODUCERS' SOCIETY POOTHRIKKA, ERNAKULAM DISTRICT

By

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(2018-15-005)

THESIS

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2020

DECLARATION

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I hereby declare that the thesis entitled **"Performance evaluation of Rubber Producers' Society Poothrikka, Ernakulam district"** 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 for any degree, diploma, associateship, fellowship or other similar title, of any other university or society.

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CERTIFICATES

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Certified that the thesis entitled **"Performance evaluation of Rubber Producers' Society Poothrikka, Ernakulam district"** is a record of research work done independently by **Ms. Amrita Anand (2018-15-005)** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, fellowship or associateship to her.

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Introduction

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INTRODUTION

Indian economy is highly dependent on agriculture and for centuries it has been the main influencing factor behind shaping the culture and outlook of the people of India, hence we could say agriculture is the backbone of Indian economy. Categorically rural India is highly dependent on agronomics. Agriculture not only ensures food security, fodder and other raw-materials as feedstock for industries, it also serves as the source of livelihood for majority of the Indian population. Among the Indian population, 54.6% are engaged in agriculture and allied activities (census 2011) and contributes 17.4% to the country's Gross Value Added (GVA) for the year 2016-2017 at current prices. (Department of Agriculture, Co-operation & Farmers' Welfare, Government of India).

Hevea brasiliensis or rubber tree is one among the important plantation crop which is the major source of natural rubber. Natural latex producing plants not just limited to one species but found in over 2000 species of plants belonging to 311 genera of 79 families. The other minor source of natural rubber includes *Manihot glaziovii* (Euphorbiaceae), *Ficus elastic* (Moraceae), *Parthenium argentatum* and *Taraxacum kokasghyz* (Compositae).

Hevea brasiliensis introduced to India during the year 1873 by British and has been commercially cultivated in India since 1902. It is a sturdy, tall, quick-growing tree reaching 18-30 meters in height with a straight trunk producing branches 3-5 meters from above the ground and forming a spreading or conical canopy. It is a tropical tree crop grown over the region between 10° South and 8° North latitudes. The optimum ecological requirements consists of fairly distributed annual rainfall of not less than 200 cm, a warm, humid climate (21° to 35°C) and a well-drained deep loamy soil. It can be grown up to an altitude of 450 to 600 metres from sea level.

Rubber tree has almost all the attributes and characteristics of a forest species and it is ecologically beneficial too. It purifies atmosphere through carbon sequestration and improves soil properties through addition of organic matter, keeps

the soil cool, enriches fertility, porosity and water intake/retention capacity. If adequately supported the tree has an economic life span of 25-30 years though it could live up to 100 or more years. The gestation period of the crop is six years and will start yielding from seventh year onwards. The yield gets stabilized four years later in terms of economical viability. The economic product of the rubber tree is the latex present in the latex vessels which run parallel to the cambial tissue in the bark. The latex is obtained by a process called tapping, which is a process of controlled wounding of the bark and sap is collected in small containers. The natural rubber produced is chemically processed to convert into a storable and marketable form for industrial use. The peak season for harvesting rubber tree in India is from October to January and the lean period is during monsoon. In addition to yielding latex, the tree is a vital source of timber, honey (indirect influence) and rubber seed oil etc.

Rubber production and consumption

The world total rubber production expanded by 1.9% during 2018, and deteriorated by 1.3% in 2019, mainly driven by decline in production by major producing countries such as Thailand, Indonesia and Malaysia (International Rubber Study Group (IRSG)). Persistent low prices during the last five years have discouraged the small farmers in adopting good agro-management practices. And also, outbreak of the pestalotiopsis disease in the above mentioned countries has considerably affected rubber production.

India is on fifth position in global ranking in terms of Natural Rubber (NR) production accounting for 4.8% of the total world production and holds third place in NR productivity during 2018, succeeding Vietnam and Thailand. Natural Rubber (NR) production in India during 2018-19 was 651,000 tonnes which registered a negative growth of 6.2% compared to a slight positive growth of 0.4% during 2017-18. Inconsistent or unprecedented weather especially, impact of the excessive rains and floods in major NR producing state of India ie., Kerala, the consequent high level of incidence of Abnormal Leaf Fall disease, lack of skilled labourers, grower's reluctance in harvesting, poor maintenance of trees in response to the low NR prices etc. affected the production of NR in India during the year ended March 2019. Even though the tappable area was 640,000 hector during 2018-19, only 448,000 hector

was contributed to the NR production during the year. Consequently, the average yield, measured in terms of production per hectare of tapped area, declined during 2018-19 to 1,453 kg/ ha as against 1,458 kg/ha in the previous year. During 2018-19, the country had produced 66% Ribbed Smoked Sheet (RSS), 18% Technically Specified Rubber (TSR) and 12% latex concentrates of the total 651,000 tonnes.

Consumption of NR is primarily located in Asia Pacific region with China, India and Thailand being the largest consumers. World consumption of rubber in 2019 declined by 0.5% to 29.0 million tonnes from 29.2 million tonnes in 2018. India continued to be the second largest consumer of NR in 2018 with a share of 8.9% of world consumption. The country has consumed 1,211,940 tonnes of NR in 2018-19, up 9% from the quantity of 1,112,210 tonnes consumed during 2017-18.

Import and export of Natural Rubber

Global imports of rubber declined by 3.6% to 22.2 million tonnes in 2019 from 23.0 million tonnes in 2018. India imported 582,351 tonnes of NR during 2018-19 compared to 469,760 tonnes imported during 2017-18 (Directorate General of Commercial Intelligence & Statistics). Import has increased by 24% in 2018-19 as compared to the previous year. Block rubber is leading the import with 81% share. International low price in comparison to the domestic product is the driving factor behind increase in import of block rubber attributed with shortage in the domestic market. Among the source countries of imports of NR into India, Indonesia dominated with a share of 42% in the total volume imported during 2018-19, followed by Vietnam (20%), Malaysia (11%) and Thailand (10%).

The exports of rubber declined to 21.5 million tonnes during 2019 from 21.9 million tonnes in 2018. Thailand and Indonesia are the world's largest exporters of NR, accounting for 59% of the global supply. In 2019, Thailand and Indonesia exported 82% and 74% of their NR produced respectively, mainly to their neighbouring countries in Asia Pacific region. Unpleasant relative prices prevailed in the international market kept exports of NR in India unattractive. The volume of exports came down to 4,551 tonnes during 2018- 19 from 5,072 tonnes during 2017-18. The main form of rubber exported from India was block rubber (96%).

The Rubber Board

The Indian Rubber Board was constituted under the Rubber (Production and Marketing) Act, 1947. The purpose and vision behind the formation of the Indian Rubber Board was to promote production of natural rubber and rubber industry of the country. The fundamental principle behind the formation of such a body was based on identification that there is a high prospect for producing natural rubber and related fine products, which will eventually help to self sufficiency and generate more jobs thus help to give thrust to improve GDP of the country. Hence such an organization driven by technically qualified machinery could help the farmers to take benefit of knowledge sharing and understanding advantages of modern ways of cultivation from the experts.

The Act evidently defined the role of the Rubber Board in the development of the industry and the Board was assigned with the important task of implementing various development schemes. One of the prime advantages of having a common platform is that all the members are sharing their time tested and proven knowledge with other community members and help to implement best practices. Currently Board is helping farmers with the help of modern infrastructure and informs them adequately on all related topics to boost rubber farming and production.

Rubber Producers' Society (RPS)

The Indian plantation sector is dominated by small holdings, which account for almost 88% of the total rubber production in the nation. Taking into account of the very large number of small holdings and the very low staff strength of extension machinery in the Rubber Board (Rubber Board is a statutory body established by Central Government with an aim to improve rubber industry in India), individual approach for modernization and improvement was not practical in terms of financial viability.

The rubber marketing co-operatives promoted by the Rubber Board from early 1960s could not effectively reach the large number of farmers who were mostly confined to the villages due to the political and beurocratic control. So Rubber Board advanced the arrangement of grass root level associations at the village level called Rubber Producers' Societies (RPSs), so as to convey proper innovation to boost the

profitability and creation of small holdings to meet the increasing need for NR. RPS was formed in the lines of Anand Milk Union Ltd., Gujarat to promote group approach among the rural small holders (Varrna, 1978).

Rubber Producers' Societies are voluntary self help associations of small growers of natural rubber, registered under the 12th Travancore Cochin Literary, Scientific and Charitable Societies Act of 1956, functioning on a model bylaw drawn and circulated by the Rubber Board and envisaged to work as non-profit making institutions bestowing specialized and logical ability to the individuals for the overall improvement of the area and specifically for the economic and social welfare of the small cultivators of rubber. RPS are the village level associations of small rubber growers formed to act as self-help groups to do whatever possible for the progress and development of rubber cultivation and all of its allied activities.

The distinguishing features of the RPSs:

1. Operates in small compact areas having a radius of 2 to 3 kilometres.
2. The membership is in the range of 50-200 and is limited to small rubber growers having rubber holding situated inside the operational zone of concerned RPS.
3. Functions non-politically and with democracy. Managerial issues are overseen through a chosen director board headed by a President. The directors are to be elected by rotation by the members of RPS. This body oversee and guide all operational topics.
4. The General Body meetings are conducted once in three months to take policy decisions and to analyse the performance and progress of the implementations. The General Body ought to quite far meet in member's holding and ought to talk about technical and development issues of intrigue and concern. The Field Officer of the Rubber Board also takes part in these meetings.
5. The accounts of the RPS are audited annually by designated Chartered Accountants and it should be presented to the director board and General Body from time to time.

6. Should not engage regular employees. Anyone engaged for any assistance should work on a fair commission paid on the basis of performance excellence.

Objectives of RPS

The objective of the RPS will be administered on a principle as a non-profit making organization pointed toward outfitting technical and scientific expertise to the members for the overall improvement of the region and specifically for the economic and social welfare of the small rubber farmers. Without prejudice to the generality of the above mentioned objectives, following shall be stipulated as the aims and purposes of the society:

1. To spread information on the most recent enhancements in development of rubber tapping, assortment and handling of latex and scrap rubber.
2. To go about as an operator of the concerned state Government and of the Rubber Board for actualizing extension programs and development activities.
3. To guarantee extreme profitability and returns of the small farmers by serving as an connecting link between the farmers and the society.
4. To organize collective marketing of latex and scrap of the members through collection centres and thereby to demonstrate the economics of collective marketing and distribute the benefit so derived to the member rubber growers.
5. To arrange for and carry out leaf and soil analysis and other tests aimed at maximization of the utility value of inputs in the rubber holdings and thus assist in cost reduction in their operations.
6. To organize other welfare and educational programmes for the benefit of the members.
7. To keep liaison with the Rubber Board and the Processing Societies and also to obtain technical guidance on agricultural processing and marketing of rubber as and when necessary.
8. To raise necessary funds by way of admission fees, subscription from members, donations, loans and advances from members, public, bank and

other financial institutions, co-operative societies, Rubber Board and Government, and,

9. To do such other things including acquisition of immovable and movable properties as are incidental and conductive to the attainment of the above objectives.

The main functions and activities of the RPSs:

1. Assist in transfer of technology to members.
2. Undertake common marketing of the rubber, grade-wise and at remunerative prices.
3. Establish and run common processing facilities of latex that help members to upgrade the quality of rubber.
4. Promote and assist group approach for new planting, replanting, productivity enhancement, availing of bank finance, Rubber Board grants etc.
5. Raise nurseries and supply high yielding planting materials to the members.
6. Receive supplies of various inputs from Rubber Board and other possible sources and distribute among eligible members.
7. Participate in joint ventures of RPSs undertaken on regional basis, with or without Rubber Board assistance, for furthering common interest of members.

As on 31-3-2018, there are 2459 RPSs formed and functioning under the patronage of Rubber Board, which plays an unparalleled and significant impact in the modernization process of the rubber holding sector. Phenomenal involvement of RPS has been helping the farmers in many ways such as appropriate selection of planting area and saplings with high yield, professional management of crops, apt and adequate usage of chemical or natural pest control application, efficient marketing ensures better price for the product etc, this could be elaborated further. RPS distributes plantation to the small growers at reasonable prices and also ensures adoption of critical agricultural operations not only by growers themselves but also RPS undertaking the job such as prophylactic spraying and micron spraying for

disease control, besides the aim of community processing and marketing. RPS with its limited resources finds it difficult to manage the exorbitant cost incurred by the high technology and investment required for the rubber processing and marketing. To ensure such infrastructure development they had to sail the boat in alternative channels such as Public Private Partnerships, Rubber Board took the initiative and valiant effort to set up seven processing companies in the predominant rubber growing areas in Kerala. These are functioning as private limited companies promoted both by Rubber Board and RPSs of concerned areas with majority equity participation by the Rubber Board.

1.1 Statement of the problem

While marketing agriculture produce, Indian farmers get only a very small portion of the value of the produce. A major part of the value is eaten up by the middlemen or money-lender. The preponderance of small rubber growers makes the sector vulnerable to exploitation by middlemen eventually results in price fluctuations and also difficulties in gaining access to technology and information. Lack of availability of timely and adequate credit, rapid rise in the wages of labourers and increase in the price of fertilisers are the other major problems faced by the small rubber growers. Ultimately this situation forces the farmers to get away from the rubber cultivation. Majority of small farmers are not having enough financial resources or reserves to manage the market dynamics influenced by the middlemen or market leading corporate companies.

Innovative and scientific institutional arrangements are necessary to improve design and induction of ecologically and socially sustainable agricultural systems. Institution is an integral and constructive instrument for economic development. Change is the rule of life, hence institutional support built upon a community basis would help empowering the framework of small farmers to manage adequate market strengths and also this would help farmers to get a realistic margin. There are various forms of interventions made by the government in organising agricultural marketing by the adoption of various administrative and legislative measures. Rubber Board is one such initiative made by Indian government to promote production of rubber and rubber industry of the country. But due to the very large number of small holdings and

the very low staff strength in the Rubber Board, individual approach for modernisation and improvement was not practical. Hence the Board promoted Rubber Marketing Co-operatives during 1960s. Political and bureaucratic control hindered the self-help concept in co-operative sector. In order to solve this, the Rubber Board promoted formation of small voluntary associations of small growers registered under the 12th Travancore Cochin Literary, Scientific and Charitable Societies Act of 1956 called the Rubber Producers' Societies (RPSs) in 1986. In this context, the present study is a modest attempt to investigate the performance of Rubber Producers' Society (RPS) Poothrikka, a successful organisation. The study was carried out with the following objectives.

1.2 Objectives of the study

(i) To analyse the functions and services provided by Rubber Producers' Society

(ii) To examine the financial performance of the society

(iii)To study the problems faced by the society

1.3 Scope of the study

This study helps to understand and benchmark the functions and services provided by Rubber Producers' Society Poothrikka to its member farmers. More importantly, rubber farmers can be guaranteed better income and better standard of living by the support of RPS. Input supply, production process and marketing of rubber can be positively promoted and protected by RPS and finally the producers' will be ensured with better income. Further, the study enabled to examine the financial performance of selected RPS. Particularly, the Executive Committee Members of the society will have a better understanding of the various indicators of financial performance of RPS which in turn will help them in prudential decision making for improving financial viability and sustainability of the same. Moreover, the study will identify the problems faced in production, procurement, processing and marketing of rubber, political and legal issues faced.

1.4 Limitation of the study

Like other research studies, this study entitled "Performance evaluation of Rubber Producer Society Poothrikka, Ernakulam district" is also having limitations. The study includes only financial dimensions of performance of Rubber Producers'

Society. Due to constrain of time, resources and COVID-19 pandemic outbreak, the study was confined to one RPS in Ernakulam district. Only simple statistical techniques are used for the study. The qualitative dimension of the study includes the opinion of members of management and employees collected through structured interview schedules. And also the ratio analysis was limited to certain selected financial ratios. Only the important and relevant problems of Rubber Producers' Societies are considered for the study.

1.4 Organisation of the thesis

The report of the study is organised in five chapters. The first chapter provides a brief introduction along with the global and national scenario of Natural Rubber, Rubber Board, Rubber Producers' Society, statement of the problem, objectives, scope, and limitations of the study. In second chapter, some pertinent reviews are presented in relation to the study objective which provides theoretical and conceptual orientation. The third chapter details the methodology adopted in the process of investigation and analysis. The empirical results pertaining to the study are presented in fourth chapter followed by the last chapter which summarises the findings and conclusion.

CHAPTER II

Review of Literature

CHAPTER II
REVIEW OF LITERATURE

Review of literature aim is to provide a background for all scientific investigations. This chapter is proposed to provide available literature on the subject so as to furnish and establish a theoretical framework for the study, as well as to develop analytical tools based on the ideas, concepts and methods of various researchers. Review of literature connected with rubber industry, Rubber Board, impact of institutional support to rubber farmers along with the problems faced by institutions and famers in plantation sector were collected and presented below;

2.1 Rubber industry

Abraham (2001) in his doctoral thesis work attempted to have an appraisal of the problems and future of rubber based industries in Kerala. He has observed that, though the lion share (90%) of the natural raw rubber in the country is produced in Kerala, only a small share (10%) has been utilized as industrial raw material within the state. Lack of proper planning cited as one of the major reasons for failure of many of the rubber based industries.

Sathyaraj (2002) in his 'Diagnostic Study of SME Rubber Cluster at Kottayam' opines that it will be difficult to set up large scale industrial units causing environmental pollution in Kerala due to high population density, top literacy, highly environment sensitive and vigilant people. Consequently he proposes promotion of establishment of small scale rubber based units with high tech final products. Among the causes of failures/weakness, inability to avail working capital on account of failure of producing a proper business plan containing statistical estimations has been pointed out as a major factor.

Rajesh (2005) examined the economics of rubber based industries in Kerala and identified eight categories of problems encountered by rubber based industries in Kerala. It has been pointed out that 46% of the enterprises experienced managerial problems among other problems such as financial problems (86%), marketing problems (70%), and raw material problems (67%).

Emmanuel (2008) analysed problems and prospects of rubber industry in Kerala and observed that Kerala has been the first state in India to start rubber planting at Thattekad during 1902; the first rubber based industry was Trivandrum Rubber Works started during 1935. Only less than 15% of it is used by industries in the state, despite the fact that Kerala accounts for 90% of natural rubber production in the country. The consumption of rubber industry was not growing in Kerala to any remarkable portion in spite of governmental promotional activities was also one among his conclusion. Number of rubber industries consuming more than 1000 tonnes per year in the state has been less than fifty.

George (2011) in his study on 'Growth, structure, strength and weakness of Kerala economy', has observed that Kerala has failed to establish rubber based industrial units though rubber has been a major agricultural raw material produced in Kerala. The principal markets of tyre and other rubber goods lay outside the state and majority of Industrial units flourished outside Kerala. Another main point George described was that, there wasn't much contribution in value addition in terms of export oriented fine products. Industries in Kerala miserably failed to produce any positive outcome with reference to the Central Government Export Import policy benefits. This was primarily due to the fact that Kerala's export business being mostly agricultural produces and agro based industrial products with little import content.

Muthusamy and Sundararajan (2019) assessed the performance of rubber exports during the period of 2010-11 to 2017-18. The researchers found that the export potential of rubber products from India was huge. The study examined that the exports of rubber from India jumped to 650 tonnes during April 2018 to October 2018. The price of NR in India had been ruling high over international market prices since December 2013. But, the share of India in rubber exports market was calculated paltry as 1.48 % whereas China's was 6 %. The authors also analysed an increasing trend in export income from Natural Raw Rubber due to the low prices in the world market.

2.2 Rubber Board

Varghese and Jayaprakash (2006) attempted to illustrate overall performance of Rubber Plantation Development Scheme under the 10^{th} plan period. They pointed

out that the schemes under the 10th plan have given utmost importance to the expansion of rubber cultivation area through new planting especially in non-traditional areas and productivity augmentation. Further to that, the plan also pushed other extension activities like training for achieving economic viability of rubber production through promotion of additional income generation and its adoption. The article finally tries to portray the outcome level study.

James (2008) had made commendable studies on the scientific research facilitated that are available in India in natural rubber cultivation. The author highlights the contributions of Rubber Research Institute of India (RRII) to natural rubber industry. He points out the fact that the RRII has made a remarkable break-through in developing the R&D strategy, especially at developing new clones which suits the agro climatic conditions of the country. The author is of the view that this scientific innovation had an important consequential properties imbibed on the fine product manufacturing and productivity of sector concerned. He concluded with an emphasize on the need for coordinating applied field research and basic science approach.

Swaminathan (2008) outlined emerging opportunities and major challenges of agriculture extension especially in the case of rubber cultivation. He highlighted the phenomenal growth registered in rubber production by adopting high yielding varieties in rubber and latest agro-management practice as Rubber Revolution. To maintain this high index of production and productivity a continuous support of Research and Development as well as recommend providing dynamic support. Pare also discusses importance on application of biotechnology and genetic engineering and threats of climatic conditions in natural rubber cultivation. In conclusion the author arguably pointed out significance of partnership among scientists, extension staffs, growers, financial institutions and policy makers to overcome the challenges faced.

Venugopal (2008) gives the resource profile of the small grower's from the angle of sustainability and they focus on inter regional variations in the agro management and marketing practices, productivity and the changing trend in the plantation cycle. The study deals with the question whether there are any significant

variations in resources, in productivity and in the longevity of plantations. The study has been conducted on a base line survey and collected data from three villages under three Regional Offices of Rubber Board (Nedumangad, Moovattupuzha and Thalassery). It is empirically proved that inter-regional variations exist in the adoption of cultural practices like disease management, discriminatory fertiliser application and crop harvesting systems. The authors suggested that a holistic approach from the part of the rubber board in the matter of resource management will go a long way in the effective management of resources.

Viswanathan and Shivakoti (2008) gave an overview of the integrated farm livelihood system in both traditional and non-traditional regions. The authors have found that small holders in traditional as well as non-traditional regions have different perceptions about rubber integrated farming livelihood. They also identify the differences in region specific variables and some policy shift in the adoption of an integrated system. The major policy constraints in the execution of the integrated system have been the monoculture system in the traditional region whereas the non-traditional regions have been much more different because they follow a flexible farming structure. So the study concludes with some recommendations to be followed in traditional regions.

George *et al.* (2009) portrayed the real picture of uniqueness of NR plantation industry in India. It deals with management strategies towards reducing the immaturity period of rubber. They identified various agro management strategies to significantly reduce the gestation period of rubber such as identifying clones with yield and unique growth, appropriate and timely planting with preparation and maintenance of leguminous ground cover, soil water conservation through slit pits and contour farming, nutrient management through proper weeding and mulching thus reduce additional cost for artificial fertilizers. Subsequently there are some other factors like biotic and abiotic factors influencing gestation period. The study cited many different experimental cases conducted by Rubber Research Institute of India (RRII) and proved that immaturity period reduction could be attained through early tappabilty realization by use of qualifying selected planting materials of the suitable clones and by exercising agronomic practices and disease management methods.

Hariharan (2009) attempts to sketch out the 50 years of extension efforts made by the Rubber Production (RP) department of Rubber Board to accomplish the task of expansion of rubber cultivation in India. The all-round success of the RPD scheme under the extension umbrella of the RP department rests with the services such as extension management, determination, dedication, service mentality, behavior of the extension officers and their ability to manage the farmer's problem. This paper also explains how dissemination of technology, accompanied by other components such as supply of inputs at concessional price and distribution of equipment, provision of training and finance under one package could bring surprising results in rural development. He also examines various challenges thrown up during the implementation of various schemes and their operation.

Sebastian *et al.* (2009) highlighted the importance of theme based human resources development programmes implemented by Rubber Board. He tried to evaluate the training programmes like seminars, group meetings, annual campaigns; tappers training influenced the plantation management, productivity, quality of produced, technology adoption and skill development. A survey was conducted in Kerala and applied stratified random sampling method to locate the area of study and has taken two targeted groups, small holders those who attended the training programmes and growers who had no exposure to such training programmes. The study found that there is a significant variation among the two targeted groups regarding the productivity and showed 13 percent increase among those who attend the training programmes conducted by Rubber Board.

Varghese *et al.* (2009) observed that the implementation of Rubber Plantation Development (RPD) scheme has brought about faster expansion of area under rubber in India. In this study extent of financial and technical assistance provided under scheme for new planting and replanting is evaluated. The authors focused and delved into a thorough analytical study with regard to the growth and productivity of rubber and compared the degree of awareness and achievements of scheme among the participant's and nonparticipants. Accordingly, an evaluation of the effectiveness of the scheme is made by the authors. It has been observed that the RPD scheme as a means to provide extension support is still relevant. The survey reveals that there is a

potential gap in growth and productivity attained by the participants and nonparticipants of the scheme. Primary beneficiaries of the scheme are found to be predominating in the course of adoption of agro-management practices. He recommends that effective strengthening and conclusive implementation could be achieved by the extension machinery of the Board.

Chandy *et al.* (2015) assessed the trajectory of rubber planting subsidy in India and tried to evaluate the usefulness of Rubber Plantation Development (RPD) schemes on area expansion there by achieving self-sufficiency in production, in addition analyzed the achievements and challenges faced by the Scheme. The author outlines the progressive historical background of development of the planting schemes under the RPD scheme of the Rubber Board and attempted to classify the achievements of RPD scheme in four phases. In support of that the author also compared the Indian planting assistance policy packages against other foreign rubber producing countries. The study has concluded that the RPD has made a significant role in area expansion of plantation / rubber cultivation in Kerala.

2.3 Impact of institutional support for rubber farmers

Krishnakumar (2009) examined the impact of trade liberalisation and its effect on Indian agriculture especially in Natural rubber sector. For the transformation of Indian natural rubber sector, he recommended two effective mechanisms in view of reaping best results to achieve self-sufficiency and market efficiency through research and extension activity. In his opinion, rubber sector is the one which succeeded in integrating research and development through 'Group Approach'. This model of Agro business include: progress in quality and value addition; supporting development of integrated supply chains and empowering producers' organisations to operate with commercial viability. The study concluded with a remark on the present opportunities and challenges faced by Rubber Producers' Society by executing extension machinery to empower planters. He pointed out that growing demand for extension as well as supporting mechanisms in grass root level forced by the impact of improved integrated supply chain and growing uncertainties in the world market. Considering the present status quo Rubber Board introduced a participatory-group approach, named as Rubber Producer's Societies (RPS). This was considered as a revolutionary

land mark in the extension strategies of Rubber Board and evolved to provide a wide range of rural services.

Nath (2010) in his book 'Economics of Rubber Plantation - A Study in Northeast India' focused on the rubber plantation development in Goalpara District in Assam. In the study the author has made a comparative study on the trends of area, production and productivity of rubber cultivation of Goalpara District with other non-traditional areas and other traditional areas. He also scrutinized the institutional composition of rubber production in terms of size of holdings and organisation of production. Supply Response Model was used to study to examine the economics of rubber plantations at the firm level. He estimated the cost, revenue, net business income and return on investment to identify the profitability of cultivation. He found that strong institutional support eventually resulted in increase in new farmers and higher participation of growers.

Anuja *et al. (*2012) did study aspects of Rubber Producer Societies (RPSs) on furnishing services for input delivery, treatment and marketing of Natural Rubber. Focus of the study was on the rubber planters of Kerala, categorically members of RPSs with small footprint cultivation area. Exploratory and analytical methods were used in the study. Identified key services provided by RPSs to the farming community using Factor analysis technique. RPSs instrumented in effective transferring of new technologies generated by the Rubber Board. The study found RPS beneficiaries enjoyed a favorable input, processing and marketing costs against non-beneficiaries. RPS appointed marketing channels helped member farmers to make better income by eliminating middlemen exploitation. A comparison has revealed that RPSs facilitated in getting better prices for their member farmers. Quality improvement, uniformity of rubber sheets and labor reduction were the key enablers in achieving higher productivity as facilitated by Group processing. Community smoke houses provided by RPSs as part of common facility helped to reduce the cost of building individual smokehouses. Facilities furnished by RPS have been grouped under five major categories, which are namely marketing, financial, efficiency, infrastructural and social factors. Farmers obtained better prices with due respect to combined efforts in producing high quality latex sheets. Improved collaboration and knowledge sharing

within the farmer community through RPS platform promoted enhanced understanding of each other's strengths and weaknesses as an end result best practices are shared for their mutual benefits.

Balakrishnan (2013) observed influence of Rubber Producers Societies (RPSs) on rubber farmers in Kerala which focused on the cost and return of rubber production among farmers of Rubber Board promoted Rubber Producers' Society (RPS) with respect to non-members of RPS. The study identified that the member farmers of Rubber Producers' Society managed lesser cost of cultivation by 14% compared to non-members. Average cost of cultivation of rubber was around ₹ 62,500 per acre, of which labor cost contributed more than 50 per cent. The average gross return from rubber plantation was ₹1, 67,700/acre. RPS members benefited by reduced processing cost and output in comparison to the non member community. In addition, members have also derived better processing and marketing facilities through the RPSs. However transaction cost incurred by RPS members for getting benefits from Rubber Board was high and very marginally lower in comparison to non-members.

Hameedu (2014) analysed in his study role of Rubber Producers' Societies in Kerala that formation of RPS has improved the welfare of small rubber growers despite the fact that Rubber Producers' Society has its own limitations. Involvement of RPS improved the quality of rubber by uniformly implementing applied synergies. This has significantly enabled to increased income of the small rubber growers which ultimately improved their standard of living. The various schemes promoted by Rubber Board enhanced the production of natural rubber. RPS has provided a common platform for knowledge transfer as well as encouraged co-operative spirit and also provided quality and expert help at their finger tip as and when required.

Kharwal *et al.* (2018) accessed the role of RPSs in income enhancement of small rubber farmers in Kerala. The authors examined the cost of cultivation and returns. The results showed that the formation of RPS improved the socio-economic status of small farmers. The study found that the members of RPS got benefits in terms of lesser cost of cultivation by 14% compared to non-members. And the gross return was found around 10% higher for RPS members.

2.4 Constrains faced by rubber farmers

Joseph (2002) in his dissertation "Landowners and supply of Labour force to Salcra Plantations: A Case Study of Lemanak and Batu Kaya Oil Palm Estates, Sri Aman Division, Sarawak, presented that, at present Sarawak is recruiting foreign workers in plantation industry, particularly from Indonesia. In June 2001, 14,969 workers were from Indonesia out of 26,139 workers working in plantations. This data absolutely indicate that plantation sectors at Sarawak were facing shortage of workers so much that foreigners have to be recruited to work in plantations. Labour shortage issue occurred due to poor project management, choice of areas to be developed and incapability to provide lucrative wages and compensations compared to other labour sectors. Worker attitude and working preferences were identified as the other reasons for labour shortage.

Merlin (2002) in the thesis "Problems and prospects of tea plantation industry in Kerala" has analysed that poor or below par socio-economic conditions were prevailing among employees in tea plantations. Albeit the provision for fundamental facilities such as housing, potable drinking water, clean sanitation, recreation and travelling are mandatory, it has been observed that in few of the tea plantations such amenities were not properly established. Most of the estates are equipped with primary education facility, but higher education and technical education facilities are found to be missing. Female workers are suffering from undesirable working environment, such as extensive commuting to work place, absence of resting places, toilet facilities, lack of drinking water, etc. Plantations are very vast and in remote location where conveyance is a major problem. Field workers confronted attacks from snakes and leeches. Factory workers primarily had to manage health problems arising due to dust. It has been observed that adolescents within the family had to work in the field in order to support their families due to insufficient income generated by the parents. Subsequently their education was interrupted and never bloomed.

Viswanathan (2003) in his study deals with the dynamics of labour market, emerging issues and their implications in rubber small holdings in the 20th century. He assesses the inter-regional difference in remuneration, the nature of tapping and earning of tappers. The study revealed problems like the increase of part time farmers

in small holdings coupled with increasing reliance on hired labour and deficiency of skilled or experienced rubber tappers. Another issue was non-availability of adequate tapping opportunities due to a steady decline in the number of trees available for tapping and an increasing drift towards multiple grower dependence.

Mohanakumar (2005) explores the impact of the fall in price of plantation crops and market uncertainty on investment, employment and labour relations and recognizes some critical issues like piece rate for tapping, interest free advance payment of wages, employment opportunities for tappers after tapping hours and duration of service under a single farmer. The study considers post reform phase and categorically chose five areas of rubber growing regions in Kerala. The primary goal was to analyse the result of neo-liberalised integration of domestic natural rubber market in comparison with the international market. He examined how the farmers responded to situations due to uncertainties in price and its impact on investment. He has observed that regardless of the size of operation, farmers reduced tapping days by 8.59 percent due to the changes in net employment effect and the application of fertilisers in NR cultivation. The study wrapped with a conclusion that the domestic price of NR has been dynamically moving in accordance with the international market movement since 1991.

Ministry of Labour & Employment Labour Bureau, Government of India, 2008-09 identified poor economic status of rubber plantation labor force working in Tripura, particularly female workers. Nearly 50 percent of employed women were either on temporary or on casual basis, against an all-India level of meager 7 percent. In Tripura, only 15 percent of plantation workers were eligible for housing whilst an all-India level stays above 75 percent. In the state of Tripura, average daily earning of rubber plantations workers is the lowest against other states. Other fringe benefits or remuneration given to the workers are also minimal with reference to other states.

Ajokporise and Akpere (2010) investigated the constraints of rubber production in Sapele Local Government Area of Delta State, Nigeria. They randomly chose one hundred and twenty rubber farmers from 12 assorted villages within the Local Government Area. Data was evaluated through stratified and random sampling method. The study revealed that 68.3% of the participants cultivated rubber between

3–5 hectares of land and they sell rubber product to the rubber factories in Sapele. Unprofessional or destructive tapping, ageing and conversion of the rubber farms to arable farms are the main threats faced by rubber cultivation. The study exposed that 93.3% of rubber farmland has been converted to arable crop farm; 84.2% of rubber trees were used for firewood; 81.7% destroyed by poor tapping and 41.7% accounted for aging of existing trees. The authors recommended to initiate an education campaign involving public participation thus generate awareness on using rubber trees for firewood and conversion of rubber plantations to arable crop land. Local government should come out with a suitable encouragement program to stop all of the above mentioned destructive methods.

Sajeena (2010) in her thesis "Production and marketing of rubber in Kanyakumari district", revealed that important factors which influenced the dynamic growth were namely captive domestic market and relatively remunerative price enjoyed by the crop during the study period. The study helped to expose that the major influencing factors affecting the feasibility of rubber producers' were steady increase in cost of the production, instability of price and shortage of skilled labour.

Dey (2011) conducted a study on the topic 'An economic analysis of production and marketing of rubber in Tripura' with objectives to estimate the growth in area, production and productivity of rubber in Tripura, to estimate cost and returns in rubber plantation, to assess financial viability of investment in rubber plantation, to estimate the price spread under existing major channels of rubber marketing and to document constraints in production and marketing of rubber in the study area. The methodologies used for the study were tabular presentation, growth rate analysis and financial feasibility analysis. The results revealed that an encouraging positive and significant growth in area and production was witnessed in both districts and state as a whole, whilst productivity was found to be increasing but non-significant. Non-availability of skilled tappers, higher initial investment, non-availability and high cost of fertilizers, high fluctuation in prices and high cost of transportation were found to be the main challenges confronting the cultivators. The framers who wish to establish rubber plantation, will be enticed to investment in rubber plantation if financial

feasibility is guaranteed, might even go a step ahead to borrow for establishing the plantations at the current rate of interest from financial institutions.

Deepa *et al.* (2015) in their paper "Innovation and Development: The case of Natural Rubber", has presented that key issue faced by the owners on the scarcity of skilled tappers. Propagation of Low Frequency Tapping (LFT) was adopted as and when labour shortage started to impinge productivity. In this method, rubber trees are tapped in a reduced frequency rather than the traditional daily tapping method. By adopting LFT method would as well help in addressing the dryness of tapping plate. Another idea was to develop and implement mechanization of rubber tapping in order to overcome the issue of labour shortage.

Ferdous *et al.* (2015) in their study on "Malaysian oil palm industry: Prospect and Problem" has identified that the inadequate number of workers employed in the oil palm plantation gives birth to complexities related to both economic and social factors regardless of the fact that the support extended by the Malaysian government via development initiatives with multiple purposes for guaranteed growth of the plantation industry. According to a 2012 report, the total labour pool includes approximately 491,000 workers; out of which majority is originating from Indonesia. Land labour ratio in the plantation sector is 10.9: 1 ha (1 worker for 10.9 ha). In recent years, insufficient land labour ratio is reported to create negative impact in palm cultivations, especially in those plantations which rely on traditional hand harvest method. Thus, an unnecessary loss is evident in the chain of palm production caused by the unrecoverable fruits left in the tree mainly because of workers' deficit. 80 percent of Malaysia's palm oil workforces are Indonesians, rest of them are Indians and others.

Giroh *et al*. (2013) analysed the labour efficiency and constraints of latex utilization pertaining to small rubber farmers in the Niger Delta Region of Nigeria. Primary data was collected from 300 rubber farmers using purposive and random sampling techniques. Data collected were evaluated using descriptive statistics, Likert scale and labour productivity model. Result of the analysis revealed that wage tapping and share arrangement accounted for 43.33 percent and 36.33 percent respectively. Labour productivity analysis revealed a yield of 826,434.31 kg dry rubber per year

and gross income of 81, 949,226.18 naira (Nigeria currency) per year while the output per man day was 22.58 kg. Wage per man a day was 377.78 naira, while an average plantation owner reaps 1,860.56 naira after adjustments were made to wages and other costs of operation. The major challenges experienced by the rubber farmers included were shortage and high cost of labour, inadequate credit, very low rubber prices and poor storage facilities. Authors recommended that enablers to overcome these issues is to form co-operative societies and associations to allow them access production credit from commercial and Nigerian Agricultural Co-operative and Rural Development Bank (NACRDB) for rubber production.

Irfan *et al.* (2015) in their study on "Extension and Training Sub System", Rubber planters main challenge was to find well trained tappers as a result of better pay guaranteed by Real estate sector enticed most of the labor force. Rubber Board encouraged labor bank repository established via RPS in order to avoid this issue, where registered workers will obtain occupational training in all the required skills related to rubber plantation. However labor bank did not eliminate the issue of trained labor force shortage due to ineffective realization of the idea. The Rubber Board has introduced various welfare programmes and services to improve their living conditions as a solution to resolve the reluctance of youth in taking up plantation labor.

Mathiraj and Bindu (2015) studied the problems faced by Natural Rubber planters, a study conducted in five districts in Kerala. The districts selected for the study was Kollam, Kottayam, Ernakulam, Kannur and Pathamanamthita. Political interference, difficulty in finding labours, heavy competition, lack of financial resources, inability to market the product etc., were found to be the major problems faced by the rubber cultivators in Kerala.

Sanyal *et al.* (2015) in their study on "Socio-economic condition of rubber plantation workers- A synoptic study", has indicated that the nature of work is physically demanding and very tough. They are mostly engaged in 8 to 10 hours of physical work. Underdeveloped surroundings did not provide any alternative choice of employment to improve their lifestyle thus remained in a deprived social well

being. They are succumbed to leading pathetic life and also their children are deprived of proper education facilities with courtesy to low wages existed in the region. Poor family income forced women to do tapping jobs. They are neither having job satisfaction nor leading a happy life, since it is hard to manage household tasks and hard labor involved in the plantation work.

Shanmugavadivu and Kavitha (2015) conducted a micro level study about the problems of small rubber producers' in Kodanchery panchayath, Kozhikode. The aim of the study was to identify various problems encountered by the small rubber growers, to provide appropriate suggestions to improve natural rubber production and to scrutinize the assistance provided by Rubber Board. The principal data was collected by conducting direct interview using structured questionnaire and the analysis was done on the basis of simple percentage and range analysis. Price fluctuation, increasing cost of production, unavailability of skilled labour and concerns with rubber trees were the major predicaments observed by the authors. The study recommended government intervention as a preventive measure to halt the fluctuations in price, subsequently Rubber Board and NABARD should purchase directly from the farmers thus avoiding middlemen to ensure better price to farmers.

Joseph and Ajithkumar (2016), in their study on "estimated cost and return on investment of natural rubber production in Kerala". The study highlighted a few of the important aspects of the unprecedented phenomena of price crash, productivity and production. Pertaining to farmers with less than two hectares of farm land and entirely dependent on rubber farming for their livelihood is likely to be below poverty line considering. State support for the sector appears to be on the declining trend even when there is a stiff competition on the account of increasing import. Primary data collected from districts- Kottayam and Thiruvananthapuram, showed difference in operating and Supply chain cost and total cost on similar quantity of rubber produced. The study also imparted different cost structure by taking into account of income from inter crop, subsidy received, income from the sale of rubber wood and finally the interest on the land value used for crop growing. The resulting ratio of return on investment is greater than one in both the above mentioned districts. The net total income estimated per acre was ₹ 5685 and ₹ 4343 correspondingly in Kottayam and

Thiruvananthapuram. The study recommended to guarantee advantageous prices by leveraging cost minimization, high throughput and improved quality by enhancing R&D, extension of training and developmental activities of the Rubber Board.

Raju (2016) highlighted the inconsistency of natural rubber prices in India and found that annual average price of natural rubber has shown high instability in the last fifteen years from 2000 to 2015. This fluctuation of price in the domestic market was mainly due to the influence of instability in the prices in the international market and the real price of natural rubber have declined mainly in the last couple of years. The non-rewarding prices have negatively affected the planting decisions and production in India. The study evidently stated that the instability is higher in the open trade regime. The analysis of co-efficient of variation showed that the fluctuation in price was very high during the one and half decade. In recent years, Governments efforts failed to establish good results in price stabilization programmes. The decline in Petrochemical prices and the consequent decrease in the price of synthetic rubber was another main reason for the slump in natural rubber prices in the international market. Therefore the study suggested that a farm income stabilization programme is essential for the long run growth of the rubber plantation sector.

Zaw and Myint (2016) depicted common agricultural practices of natural rubber industry in Myanmar and identified major constraints of the industry. Low productivity and inferior quality were recognized as the two major weaknesses which hinders development of the industry. The major causes of the below par productivity observed by the authors in Myanmar were due to reasons like, still planting seedlings and unproven cultivars, outdated planting recommendation, lack of planting legume cover crop, lack of regulations to control private nurseries, implementation of high frequency tapping system, limitation of tapping days, no adoption of improved tapping systems and lack of systematic panel management system. The product sharing payment system also created low productivity and high production cost. The study suggested rubber rehabilitation project collaborating government and private sectors to benefit all stakeholders, especially smallholders.

Karunakaran (2017) reported that Kerala held a very dominant position reference to farmland area and production of rubber. Growth trend analysis of area in Kerala exposed cropping model change from food crops to rubber. Area and yield response models were applied to analyze it in terms of lagged area, lagged yield, expected price of the crop, anticipated price of the competing crop, projected yield and price risk, average annual rainfall, trappable area, etc. The result revealed that price variable (expected and forecasted price of competing crop) is the major determining factor in addition to tapped area for crop selection. In the yield response decision, past years yield and rainfall were the significant variables. The area response and yield response of rubber shows that area under rubber was price responsive. The author found that price unpredictability is the major problem faced by the farmers in Kerala and thus recommended to implement a scheme that assure minimum support price of ₹ 150 per kilogram for natural rubber sheets produced and government should provide more incentives to entice and protect the small rubber growers and also halt the import of natural rubber; if not farmers will swing from rubber to other crops.

Ali and Manoj (2018) examined the problems and challenges faced by small farmers in Kerala. The primary data for the study was collected from 40 rubber growers of 'Nellikuzhi' and 'Paipra' panchayath in Ernakulam district through structured questionnaire using random sampling technique. The study revealed that tje falling price of rubber is the major problem affecting the life and livelihood of many farmers. And also the study emphasised the need for reviewing the policy of the government to rubber sector on an urgent basis.

2.5 Research gap

Majority of the earlier studies were related to the constraints faced by the plantation farmers in general. A few studies were focusing on the role of RPS in providing services to rubber farmers. However, specific studies related to the financial performance evaluation of RPS were absent. Therefore, the present study was an endeavour to cover these lacunas.

CHAPTER III

Materials and Methods

CHAPTER III
MATERIALS AND METHODS

The study entitled "Performance evaluation of Rubber Producers' Society Poothrikka, Ernakulam district" has been carried out with the objectives of analysing the functions and services provided by Rubber Producers' Society, to examine the financial performance of the society and to study the problems faced by the society. This chapter deals with the portrayal of the study area, the sampling procedure followed and techniques used for data analysis, which are presented as follows.

3.1 Concepts used in the study

3.2 Locale of the study

3.3 Sources of data

3.4 Selection of the sample

3.5 Critical variables for the study

3.6 Statistical tools used for the study

3.1 Concepts used in the study

The major concepts used in the study are explained below:

3.1.1 Rubber Board

Statutory body constituted by the Government of India, under the Rubber Act 1947, for the overall development of rubber industry in the country.

3.1.2 Rubber Producers' Society (RPS)

Rubber Producers' Society is the small voluntary association of small growers registered under the 12th Travancore Cochin Literary, Scientific and Charitable Societies Act of 1956.

3.1.3 Dry Rubber Content (DRC)

DRC is defined as the mass in grams of rubber present in 100 g of latex.

3.1.4 Ribbed Smoked Sheets (RSS)

Ribbed Smoked Sheets are coagulated rubber sheets processed from fresh field latex sourced from well managed rubber plantations adopting modern processing methods. The higher grades, RSS 1X, RSS I, RSS II and RSS III are

mainly used for manufacture of products for medical, pharmaceutical and engineering. The lower grades of RSS IV and V are generally used for the manufacture of automobile tyres, re-treading materials and all other general products.

3.1.5 Rubber Production Incentive Scheme (RPIS)

Rubber Producers' Incentive Scheme (RPIS) was launched by the Government of Kerala on July 4th, 2015 in collaboration with the Rubber Board and Producers' Societies to help farmers who are facing financial difficulties due to the sharp fall in rubber prices.

3.1.6 Effluent Treatment Plant (ETP)

Effluent Treatment Plant cleans industrial effluents and contaminated water and makes it reusable for additional purposes.

3.1.7 Input services

Services provided by the RPS to its member farmers to have a better output (production). It includes the sale of seedlings, fertilizers, pesticides, rain guarding, shells etc.

3.1.8 Ratio analysis

Ratio analysis is a quantitative method of gaining insight into a firm's liquidity, operational efficiency, and profitability by studying its financial statements such as balance sheet and income statement. It is a systematic use of ratios to interpret the performance and status of a firm.

3.1.9 Administrative problems

Administration refers to the group of individuals who are in charge of creating and enforcing rules and regulations, or those in leadership positions who complete important tasks. Any hurdles that come in the process of administration are considered as administrative problems.

3.1.10 Structural problems

Structure is the framework within which an organisation functions. The internal as well as external factors which hinder the framework are considered as structural problems.

3.1.11 Functional problems

Problems which may occur while carrying out the functions of the society are called functional problems. Functional problems of the selected RPS include production, procurement, processing and marketing related problems.

3.1.12 Political issues

For the study, the problems faced by the society related to politics are termed as political issues.

3.1.13 Legal issues

The issue arises due to the violation of act and rules prescribed in the byelaw of the society are termed as legal issues.

3.1.14 Human resource problems

Human resource can be defined as the set of people who make up the workforce of an organization, business sector, industry, or an economy. Any problems which affect the work force of the society is termed as human resource problems.

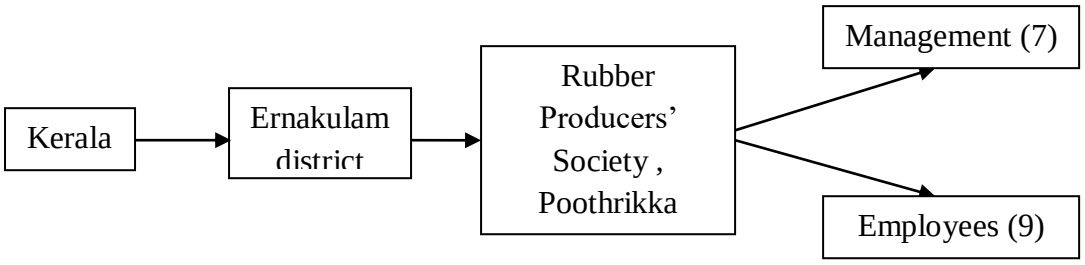
3.2 Institution selected for the study

The institution selected for the study is Rubber Producers' Society Poothrikka in Ernakulam district of Kerala.

3.3 Sources of data

Both primary and secondary data were used for the study.

3.4 Sample design



The study was confined to Ernakulam district of Kerala. Both primary and secondary data were collected for the study. Primary data were collected using a structured interview schedule from all the 7 executive committee members

(management) and employees (9) of the society during the month June-July 2020. The responses to the questions of 3rd objective were plotted on a five point Likert scale. The scale used the responses such as strongly agree, agree, moderately agree, disagree and strongly disagree. The scores assigned to these ratings were 5, 4, 3, 2 and 1. Secondary data were collected from the annual reports of the society from the year 2008-09 to 2017-18. Ratios, CAGR, growth index, percentage analysis and indices were used in the study.

3.4 Critical variables for the study

Objective wise variables used for the study are listed below:

- **To analyse the functions and services provided by Rubber Producers' Society**
  a) Profile of selected institution
  b) Organisational structure
  c) Production activities
  d) Procurement activities
  e) Processing activities
  f) Marketing activities
  g) Schemes and policies of the society
  h) Training and information provided
  i) Other services
  j) Social benefits rendered by the society
- **To examine the financial performance of the society**
  a) Current assets
  b) Closing stock
  c) Loans and advances
  d) Cash in hand
  e) Cash at bank
  f) Investments
  g) Current liabilities
  h) Quick assets
  i) Opening stock
  j) Gross profit

k) Net sales
l) Net profit/loss
m) Direct expenses
n) Indirect expenses
o) Fixed assets
p) Total assets
q) Working capital
r) Debt
s) Grants and subsidies
t) Equity
u) Share capital

- **To study the problems faced by the society**
  a) Socio-economic profile of executive committee members and employees
  b) Administrative problems
     i) Related with executive committee meetings
     ii) Related with GB meetings
     iii) Related with audit
  c) Structural problems
  d) Functional problems
     i) Related with production
     ii) Related with procurement
     iii) Related with processing
     iv) Related with marketing
  e) Political issues
  f) Legal issues
  g) Human resource related problems

3.6 Statistical tools used for the study

The analysis of the collected data was conducted with the help of statistical tool like financial ratios, CAGR, growth index, percentage analysis and indices.

3.6.1 Financial ratios

Sl. No	Name of the ratio	Formula
1.	Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$
2.	Quick ratio	$\frac{\text{Quick assets}}{\text{Current liabilities}}$
3.	Gross profit ratio	$\frac{\text{Gross profit}}{\text{Net sales}} * 100$
4.	Net profit ratio	$\frac{\text{Net profit/loss}}{\text{Net sales}} * 100$
5.	Direct expense ratio	$\frac{\text{Direct expenses}}{\text{Net sales}} *100$
6.	Overhead expense ratio	$\frac{\text{Indirect expenses}}{\text{Net sales}} *100$
7.	Total asset turnover ratio	$\frac{\text{Net sales}}{\text{Total assets}}$
8.	Fixed asset turnover ratio	$\frac{\text{Net sales}}{\text{Fixed assets}}$
9.	Inventory turnover ratio	$\frac{\text{Net sales}}{\text{Average inventory}}$
10.	Working capital turnover ratio	$\frac{\text{Net sales}}{\text{Working capital}}$
11.	Debt-equity ratio	$\frac{\text{Debt}}{\text{Equity}}$

3.6.2 Compound Annual Growth Rate (CAGR)

Compound annual growth rate (CAGR) is the rate of return that would be required for an investment to grow from its initial value to its end value, assuming the profits were reinvested at the end of each year of the investment's lifespan.

$$\text{CAGR} = \left(\frac{\text{End value}}{\text{Initial value}}\right)^{\frac{1}{\text{Number of years}}} - 1 \quad * 100$$

3.6.3 Growth index

$$\text{Growth index} = \frac{\text{Present value} - \text{Base value}}{\text{Base value}} * 100$$

3.6.4 Percentage analysis

Percentage distribution of respondents in different categories on all variables was worked out by dividing the frequency in each category with total number of respondents and multiplying it by 100.

3.6.5 Index

For the analysis of problems existing in the selected RPS, problems/constrains indices were calculated based on a five point Likert scale. The formula is as follows:

$$\text{Index} = \frac{\sum_{i=1} \sum_{j=1} S_{ij}}{\sum \text{Max} S_j}$$

i = respondents

j = problems/constrain

S_j = Score of j^{th} factor

S_{ij} = Total score of j^{th} factor of the i^{th} respondent

$Max.S_{ij}$ = Maximu score for the j^{th} factor

Based on the index obtained, the results were compared to a standard derived:

Scores obtained	Problems/Constrains category	Colour classification
0-20	Negligible	
21-40	Tolerable	
41-60	Risk	
61-80	Severe	
81-100	Chronic	

Based on the above materials and methods, the objectives of the study were analysed and discussed in Chapter IV.

CHAPTER IV

Results and Discussion

CHAPTER IV
RESULTS AND DISCUSSION

The following section deals with the results and discussions on the topic "Performance evaluation of Rubber Producers' Society Poothrikka, Ernakulam district" undertaken with the following objectives:

(i) To analyse the functions and services provided by Rubber Producers' Society

(ii) To examine the financial performance of the society

(iii)To study the problems faced by the society

As a prelude to study the functions and services provided by RPS, brief profile of selected RPS is given below.

4.1 Profile of RPS Poothrikka

Rubber Producers' Society Poothrikka is situated in Ernakulam district of Kerala state, India. The objectives of the society are work for prosperity and agricultural development, socio-economic condition of the rubber growers inside the locale, without any intension of profit making. It got registered on January and started functioning on 27th of March 1990 with register number ER 26/90. Jurisdiction of the RPS covered Poothrikka and Maneed grama panchayats of Kunnathunaadu thaluk. The society was doing the activities such as input supply at lower rate, spraying, soil testing with the help of rubber board etc., from 1990, collection of latex since 1999 and sheet processing from the year 2002.

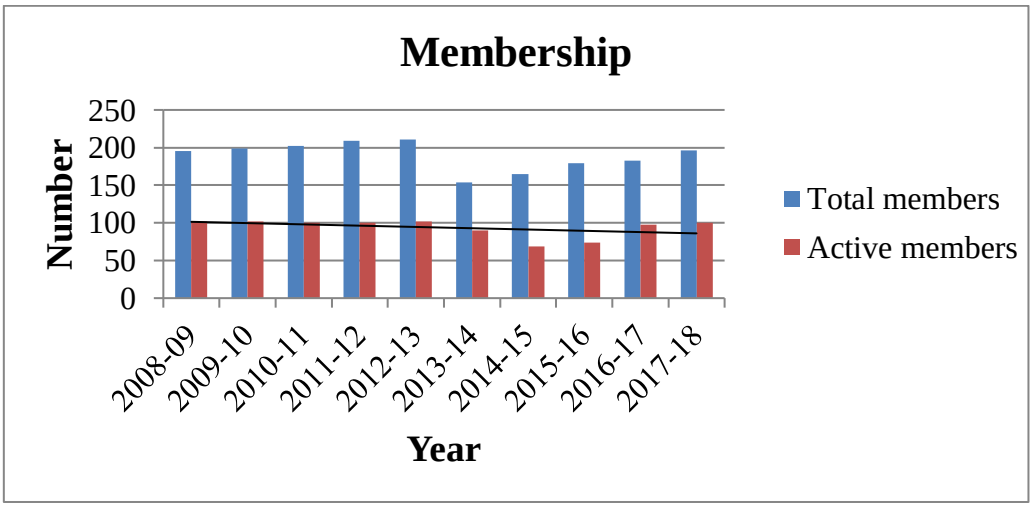
Any cultivators who possesses or having lawful right on a minimum area of 0.20 ha of rubber inside the region of activity and who consents to sell the item through the society can be a member of the society. The individuals who are interested to turn into a member of the society are ought to apply in the recommended structure transmitting ₹2000 as membership charges and ₹100 as yearly subscription. The individuals should transmit the membership ahead of time in April consistently. The individual will be excluded and stops to be a part on the off chance that he/she looses the legitimate right on minimum area and neglects to dispatch yearly subscription fee for 2 years.

Table 4.1 Membership of RPS Poothrikka from 2008-09 to 2017-18

Year	Total members	Growth index	Active members	Growth index
2008-09	195	100	102	100
2009-10	199	102	102	100
2010-11	202	104	100	98
2011-12	209	107	100	98
2012-13	211	108	102	100
2013-14	154	79	90	88
2014-15	165	85	69	68
2015-16	179	92	74	73
2016-17	183	94	98	96
2017-18	196	101	100	98
CAGR	**0.06**		**-0.22**	

Source: Annual reports of RPS Poothrikka from 2008-09 to 2017-18

Fig 4.1 Membership of RPS Poothrikka from 2008-09 to 2017-18



It is evident from the table 4.1 and figure 4.1 that; the number of active members is half the number of total members which signifies that not all the members are actively participating in measuring latex in the society. The change in collection pattern made by the society from 2013-14 (limited to latex) affected the decline of membership. And also the unpleasant whether and unpredictable decline in the price of rubber during 2014-15 affected the production of latex and hence the number of active members in the corresponding year. Despite of the declining trend shown in

figure, the number of active members is increasing from the year 2015-16 which is a good indication of performance.

4.1.1 Infrastructure

To ensure livelihood security to the small growers, building up of technological infrastructure is essential for processing and marketing of rubber. RPS Poothrikka has adopted the concept of community processing or group processing to ensure the quality for the natural rubber after primary processing. To realize group processing and marketing, RPS require infrastructure such as own land, water, electricity, office-cum-latex collection centre, latex collection equipments, group processing centers etc.

Table 4.2 Infrastructure facilities of RPS Poothrikka

Sl. No.	Item	Extent/Quantity	Written Down Value as on 31/03/2017 (₹ in lakhs)
1.	Land	20 cents	1.13
2.	Building	3500 sq. ft.	17.78
3.	Computer	1	0.03
4.	Dish and vessels	350+	0.61
5.	Furniture and fittings	10+	0.84
6.	Plant and Machinery (including ETP)	5+	12.37

Source: Audit report of RPS Poothrikka of 2016-17

Table 4.2 describes the infrastructure facilities of RPS Poothrikka. The society has all facilities which concludes that RPS Poothrikka is self-sufficient enough to carry out its functions without depending on external help.

4.1.2 Effluent Treatment Plant

Effluent Treatment Plant or ETP of the society cleans the contaminated water from the processing and manufacturing unit in order to reuse the water for the activities in the society. RPS Poothrikka is the only RPS in Ernakulam district with ETP and was officially inaugurated on February 1, 2016.

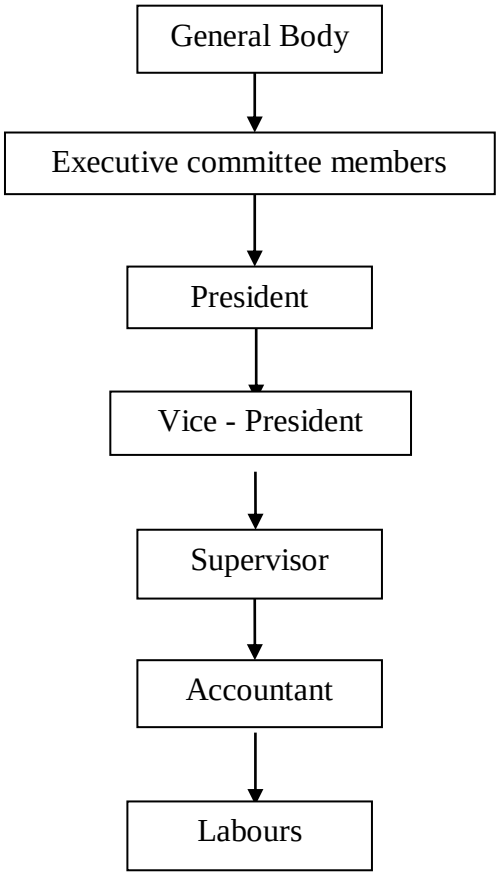
4.1.3 Biogas Plant

Biogas Plant of RPS Poothrikka was the by product of ETP. Sheet Processing Effluent (SPE) by Ribbed Smoked Sheet (RSS) processing unit, Crepe Rubber Effluents (CRE) by Crepe Rubber (CR) unit and Latex Concentrate Effluent (LCE) by Latex Concentrate (LC) unit etc., are allowed to pass through the inlet into the bottom of the digester. Since there is no oxygen in the digester, the waste water ferments and produces biogas. The gas gets collected in the floating gas holder or in the gas storage dome of the plant and the gas formed is used for the activities of the society. The project total costs ₹ 18 lakhs.

4.2 Organisational structure of RPS Poothrikka

The organizational structure in RPS is designed to develop it as a voluntary, democratically controlled and independent, free and viable organisation. The organizational structure of RPS is enabling in character, facilitating achievement of the given organizational objectives.

Fig 4.2 Organisational structure of RPS Poothrikka



The ultimate authority of RPS vests with the General Body followed by the Executive committee members (5), President, Vice-president, supervisor (1), accountant (1) and labours (7). Field level Extension Officer of Rubber Board is the Rubber Board nominee of the society and her presence is compulsory for all the executive committee meetings. As on 31-03-2018, the society has 244 rubber growers as members.

The results and discussions were studied under three different heads as follows:

i) Functions and services provided by RPS
ii) Financial performance of the society
iii) Problems faced by the society

4.3 Functions and services provided by RPS Poothrikka

The working of RPS was studied on the basis of the different functions performed by the RPS. Functions are those activities which serve the purposes for which RPS are formed. They are the basic functions that should be performed by the RPS for their survival and success. The major functions are specifically laid down in the bye- laws of RPS. For the study, functions and services are confined to production, procurement, processing and marketing activities, schemes and policies of the society, training and information provided, other services provided and social benefits rendered by the society.

Fig 4.3 Major functions of RPS Poothrikka

4.3.1 Production

"Agricultural production means the production of any grass or crop attached to the surface of the land, whether or not the grass or crop is to be sold commercially". Also production is an activity carried out under the control and responsibility of an institutional unit that uses inputs of labour, capital, and goods and services to produce outputs of goods or services.

The main crop from a rubber plantation is latex, a milky white dispersion of rubber in water, which is harvested by the tapping process. The functions undertaken for the enhancement of latex production can be defined as production functions. For this purpose the society is entrusted with the supply of estate inputs to the member farmers. The inputs distributed by the society include polythene and adhesive for rain guarding, plastic cups, knife, panel-protecting materials, acids, golden touch etc. The society procures these estate input items from private dealers such as Vembanadu Rubbers and PVT traders. This ensures the supply of quality materials to the small growers at a considerably cheaper rate. The various estate input items thus distributed are:

a) Rain Guarding Materials

Rain guarding materials assists with tapping of rubber trees during rainy days and because of rain guarding about 15% of increment in productivity can be guaranteed. Materials like polythene sheets, adhesives, the tapping shades are supplied to the member farmers by RPS Poothrikka.

b) Tapping accessories and cultivation equipment

RPS Poothrikka is supplying the following tapping accessories and cultivation equipments to the member growers.

i) Supply of latex collection cups

The increased flow of latex from modern high yielding varieties of trees, demand an increase in the capacity of the latex collection cups. The use of coconut shell for collection of latex creates quality problems also thus the distribution of latex collection cups is implemented to popularise the use of plastic latex collection cups of 650 ml capacity to overcome these drawbacks and to facilitate cleanliness of field latex and to reduce scrap percentage.

ii) Supply of tapping knives

The objective of supplying tapping knives is to help the small growers to increase the return from their plantations through modernization of the crop harvesting technique.

iii) Supply of cup hangers

The aim of distributing cup hangers is to encourage the member growers to switch over to better harvesting techniques by using better cup hanging devices.

iv) Acid

The small rubber growers usually process latex into Ribbed Smoked Sheets. Formic acid or acetic acid for coagulation is supplied to the members by the society. The quantity of acid required for satisfactory coagulation depends on various factors like the amount and type of anticoagulant used, duration of coagulation, the season and the nature of the latex.

v) Tapping shades

During the rainy season tapping can be carried out by fixing taping shades above the taping cut. By fixing a suitable channel on the trunk just above the tapping cut, flow of water through the main trunk is channeled out.

Table 4.3 Sale of estate inputs from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Input sale	Growth Index
2008-09	3.38	100
2009-10	3.47	103
2010-11	3.57	106
2011-12	4.06	120
2012-13	2.74	81
2013-14	3.31	98
2014-15	2.51	74
2015-16	1.66	49
2016-17	2.55	75
2017-18	2.94	87
CAGR	**-1.42**	

Source: Annual reports of RPS Poothrikka from 2008-09 to 2017-18

Fig. 4.4 Sale of estate inputs from 2008-09 to 2017-18

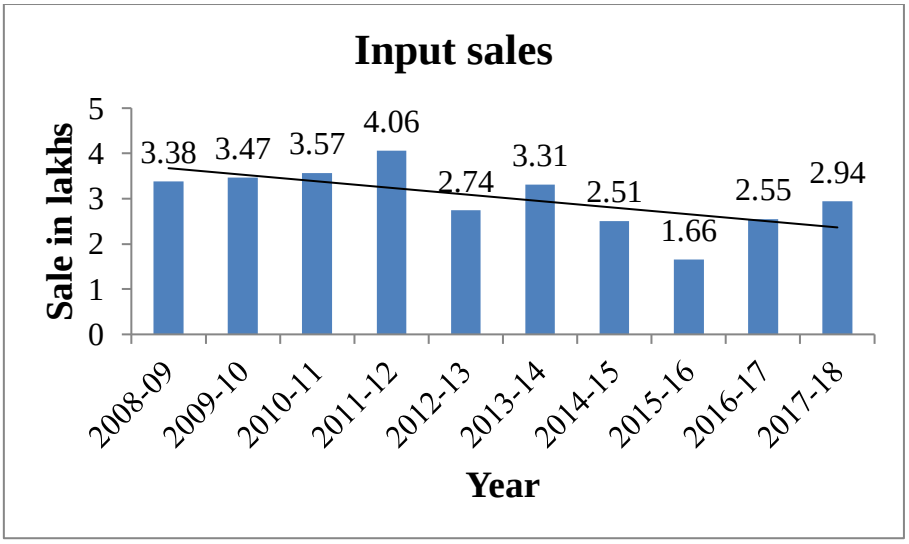


Table 4.3 and figure 4.4 shows the sale of estate inputs of RPS Poothrikka from the year 2008-09 to 2017-18. The declining trend of sale in the figure reflects the lack of interest members have in rubber cultivation. During the year 2011-12, the society put shades to 15000 rubber trees and this is evident in the input sales of the year. The decline in the production of rubber due to unpleasant weather condition and price crash during 2013-14 & 2014-15, discouraged the members from buying inputs for cultivation in the succeeding years. The introduction of Rubber Producers' Incentive Scheme (RPIS) in July 2015 gave the farmers a hope in rubber cultivation and this is seen in the increased sale of estate input for the last two years.

4.3.2 Procurement

The action of procuring or collecting latex, sheets, scrap etc. is one of the major functions carried out by RPS in general.

a) Nature of collection facilities

Rubber Producers' Society Poothrikka collects only latex from its members for the past 6 years. The latex is collected in the premises of the society. For this purpose the society has appointed a collection agent. Collection of latex is carried out in every day except Sunday. Pricing is done based on DRC calculated. Fig 4.5 flowchart shows the pre-processing operation of latex.

Fig 4.5 Pre-processing operation of Latex

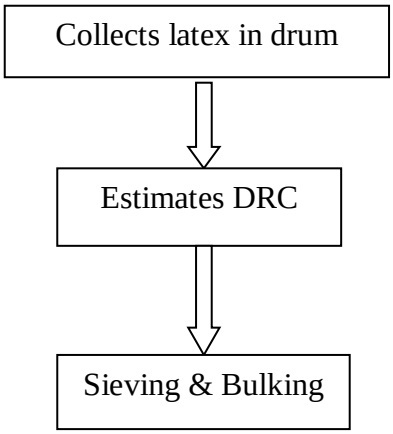


Table 4.4 Procurement of RPS Poothrikka from 2008-09 to 2017-18

(Qty. in kg.; Amt. in Rs. Lakhs)

Year	Latex procured (Qty.)	Sheet procured (Qty.)	Total procurement (Qty.)	Simple Growth Index	Amount
2008-09	312273	12379	324652	100	96.09
2009-10	286526	10037	296563	91	116.80
2010-11	265103	8029	273132	84	187.03
2011-12	305366	7617	312983	96	232.09
2012-13	274456	3382	277838	86	160.01
2013-14	239158	--	239158	74	129.52
2014-15	175657	--	175657	54	66.26
2015-16	182749	--	182749	56	66.44
2016-17	314384	--	314384	97	123.36
2017-18	303383	--	303383	93	126.23
CAGR	**-0.32**				**3.07**

Source: Annual reports of RPS Poothrikka from 2013-14 to 2017-18

Fig 4.6 Procurement of latex by RPS Poothrikka from 2008-09 to 2017-18

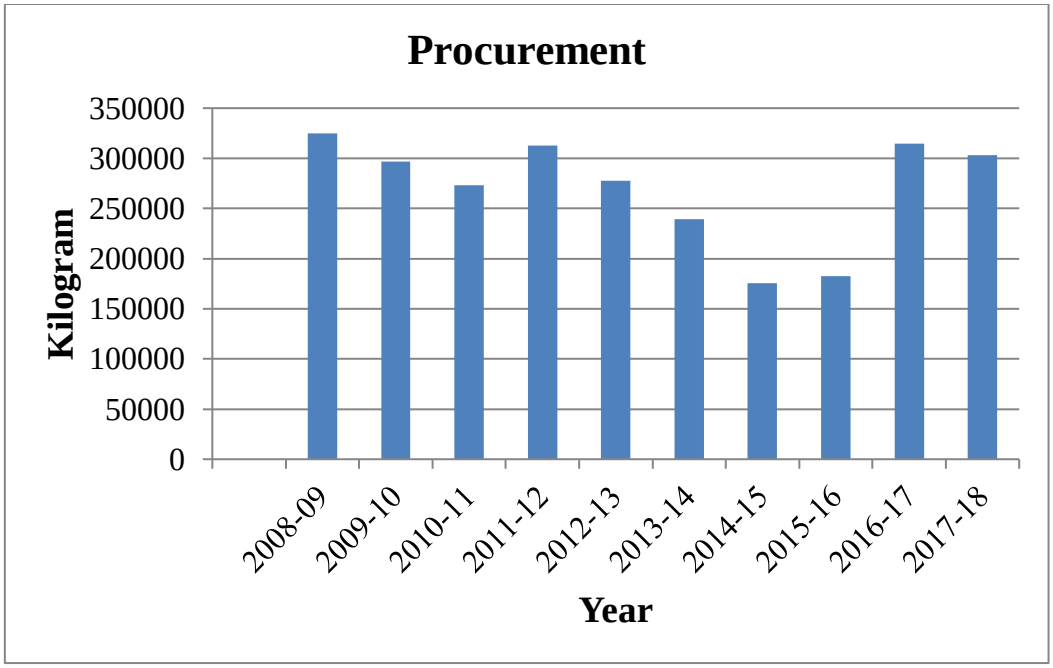


Table 4.4 and figure 4.6 gives the data about the total quantity of latex and sheets procured by RPS Poothrikka from the year 2008-09 to 2017-18. From the year 2013-14, the society stopped the collection of RSS and scraps from member growers and was limited to latex. The CAGR calculated for quantity of latex procured was -0.32 and amount was 3.07 percent. The unpleasant weather especially, impact of the excessive rains in Poothrikka, the consequent high level of incidence of abnormal leaf fall disease, member's reluctance in cultivation and poor maintenance of trees in response to the low prices which reduced the number of active members affected the production during the years 2014-15 & 2015-16. Increase in procurement during the last 2 years was due to the introduction of RPIS which imparted a hope in growers about the price contributed to the positive compound annual growth rate.

b) Determination of Dry Rubber Content and pricing

The standard method for the determination of DRC of latex is based on the British Standard (1972). Briefly, the method involves acid coagulation of a known weight of latex and heating over a steam bath until a clear serum is obtained. The coagulum is thoroughly washed and placed in an oven at 70°C overnight before reweighing. The method gives good reproducibility of results and is accurate.

Fig 4.7 Process for determination of DRC

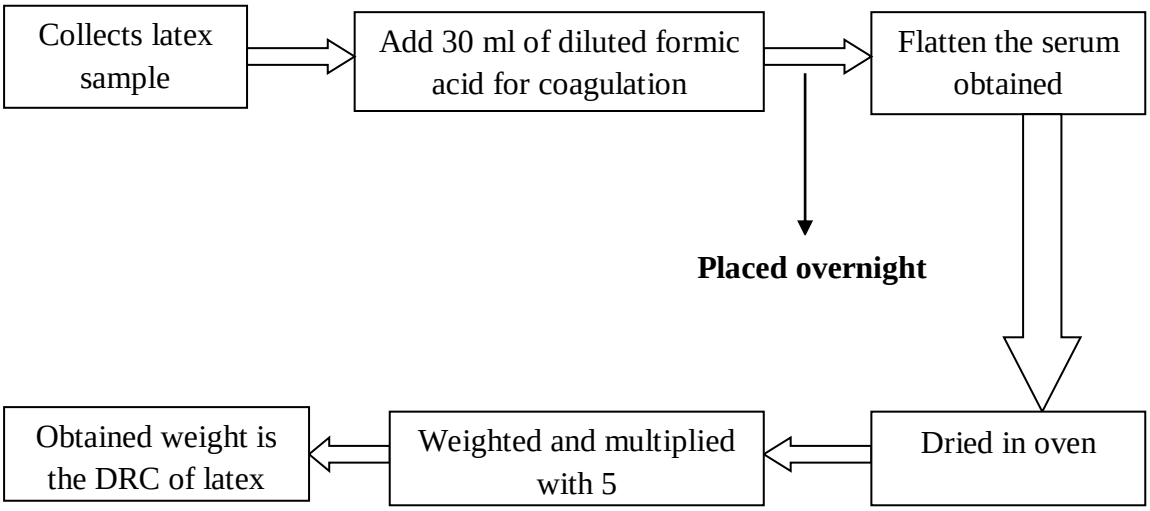


Table 4.5 A member's sample statement from 01-03-2020 to 31-03-2020

Sl. No	Date	Latex Quantity	DRC (%)	Dry weight	Rubber Board's price	Rate after commission	Amount payable (₹)
1.	02-March-2020	15.50	34.00	5.27	115	95	500.65
2.	05-March-2020	15.50	30.50	4.57	115	95	434.15
3.	06-March-2020	14.50	34.00	4.93	115	95	468.35
4.	07-March-2020	19.00	34.50	6.55	115	95	622.25
5.	11-March-2020	12.50	35.50	4.43	115	95	420.85
6.	13-March-2020	14.50	36.00	5.22	115	95	495.90
7.	17-March-2020	12.00	34.00	4.08	115	95	387.60
Total		**103.00**		**35.05**			**3329.75**

Source: Latex collection record of RPS Poothrikka

Each member's DRC and Dry Weight are noted and total is being calculated for a whole month. An amount of ₹20/kg will be reduced from the selling price as commission and balance is credited to the farmer's account.

Dry weight is calculated using the formula,

$$\text{Dry weight} = \text{DRC} * \text{Latex quantity}$$

$$\text{Amount payable} = \text{Dry weight} * \text{Rate after commission}$$

4.3.3 Processing

Processing refers to a series of mechanical or chemical operations on latex in order to change or preserve it. The functions carried out by the society to convert latex into sheets are defined as processing functions. Since RPS Poothrikka collects only field latex, the members transfer the latex immediately after tapping to avoid pre-coagulation. After taking samples of latex from each grower for measuring DRC, it is processed as RSS 1X and RSS IV sheets by the society. Processing in RPS Poothrikka is carried out on contract basis since 01-05-2013.

4.3.3.1 Making sheets

The collected latex is diluted with sodium sulphite @ 1:2 or 1:1 depending on the latex concentration to prevent mould formation and to make sheering and drying easier by removing impurities. It is left undisturbed for about 15 minutes to sediment and then transferred to the pans. Four liters of latex is filled in each clean and dried pan for making approximately one and half kilogram of sheets.

Sodium bisulphate is used to remove the black spots in the sheets and formic acid as coagulants. After coagulation, the coagulum is removed from the trays and thoroughly washed in running water. They are sheered in a sheeting battery. Mould growth on sheet rubber can be prevented by treating the freshly machined sheet in a dilute solution of Para Nitro Phenol (PNP).

4.3.3.2 Smoking and grading

The sheets then are kept in the smoke house where the temperature is maintained between 40°C and 60°C. Four days of smoking is generally sufficient under normal conditions. RPS Poothrikka has 2 smoke houses with a capacity of 1500 sheets per day. The completely dried sheets are removed to the packing shed where they are carefully inspected and graded according to the standards of IS-15361-2003. This standard provides for six grades of ribbed smoked sheets, viz., RSS 1X, RSS I, RSS II, RSS III, RSS IV and RSS V. Visual grading system is the technique adopted

by RPS Poothrikka. Ungraded or lowest quality sheets are called Lot rubber. Proper quality ensurement is extremely important on the grounds of maximum profit realisation.

4.3.4 Marketing

Agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumers. The sheets after grading are packed in bales of 50 kg. In international market bale weight is usually 111.11 kg. The grades are marked on the bales and marketed. The society is marketing latex, Ribbed Smoked Rubber and lot sheets after processing to private trading companies such as EMGEE Rubbers, Mambilil traders etc., since the price offered by dealers of Rubber Board are not profitable. Payment is done by these private companies on 1st of every month.

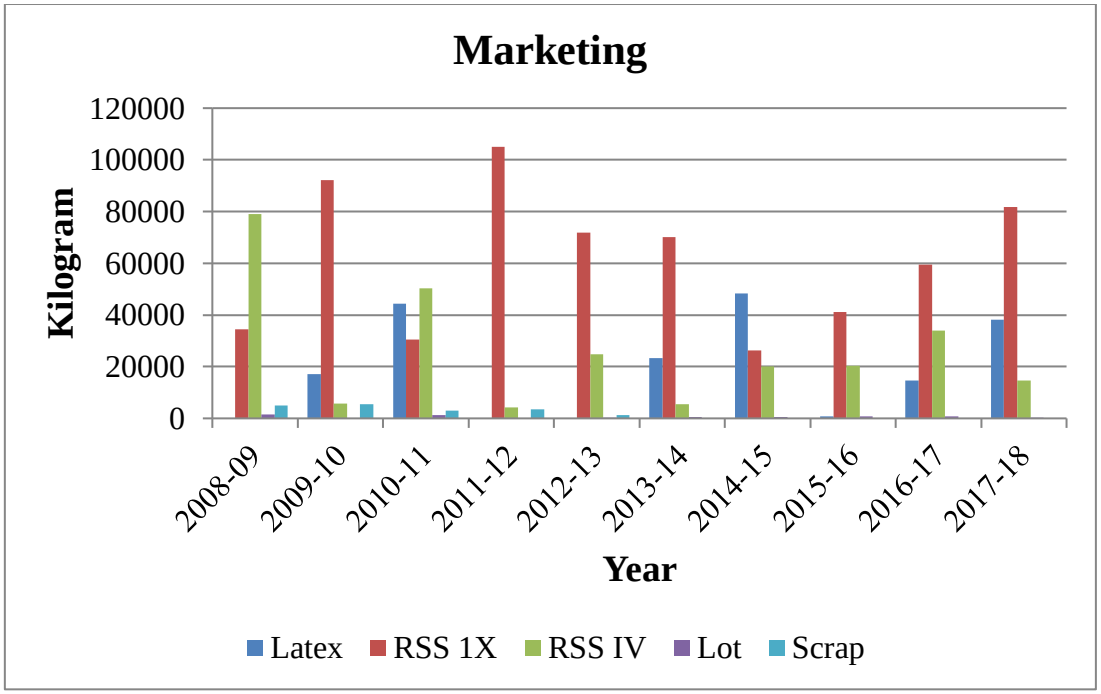
Table 4.6 Marketing of RPS Poothrikka from 2008-09 to 2017-18

(Qty. in kg.; Amt. in ₹ lakhs)

Year	Marketed as					Total (Qty.)	Growth index	Total (Amt.)
	Latex	RSS 1X	RSS IV	Lot	Scrap			
2008-09	--	34426	78986	1491	4900	119803	100	116.63
2009-10	17013	92103	5614	--	5491	120221	100	142.12
2010-11	44400	30563	50193	1221	2953	129330	108	196.81
2011-12	--	105122	4185	--	3432	112739	94	235.22
2012-13	--	71802	24883	344	1182	98211	82	180.19
2013-14	23257	70080	5377	440	--	99154	83	152.17
2014-15	48432	26253	19998	537	--	95220	79	83.90
2015-16	765	41076	20397	730	--	62968	53	77.31
2016-17	14653	59450	34002	707	--	108812	91	146.60
2017-18	38231	81742	14638	326	--	134937	113	147.72
CAGR						**1.33**		**2.66**

Source: Annual reports of RPS Poothrikka from 2013-14 to 2017-18

Fig 4.8 Marketing of RPS Poothrikka from 2013-14 to 2017-18



Above table 4.6 and figure 4.8 shows the quantity of rubber marketed as latex, RSS 1X, RSS IV and lot sheets from the year 2008-09 to 2017-18 by the society. It is clear from the above figure that the society is concentrated in the marketing of RSS 1X since it ensures more profit. The CAGR of the society for the last 10 years is 1.33 which shows an increased performance of marketing. During the year 2013-14, the average price for RSS 1X was ₹166.02 per kg which declined to ₹132.57 in the following year. This vast variation in the price of sheets pull the society backwards from marketing since profit was not promisable which makes them to hold the processed sheets.

4.3.5 Schemes and policies of the society

Scheme can be defined as a systematic plan or arrangement for achieving some particular defined goal or object whereas policy can be a set of rules or a formulated set of guidelines that guides the government or various departments of the government that how the particular action or task is being performed. The schemes discussed below are the ones adopted by RPS Poothrikka during the study period from 2008-9 to 2017-18.

4.3.5.1 Rubber Producers' Incentive Scheme (RPIS)

Rubber Producers' Incentive Scheme (RPIS) was launched by the Government of Kerala as part of intervention to support rubber farmers in the state during the low price period and to encourage rubber production. Farmers having a total area of 5 hectors are eligible, but the assistance is limited to two hectare with a production ceiling of 60 kg per hector per annum. Assistance is being provided for RSS IV and higher grades and latex. Under this scheme, the difference between the support price of ₹150 and daily reference price of RSS IV grade published by the Rubber Board would be credited to the bank account of the farmer on the basis of purchase bills furnished by the farmer through RPS and duly certified by the extension officers of the Board. As on 31-03-2018, 297 rubber farmers, including 101 members of the society, joined the scheme.

4.3.5.2 Schemes for establishing eco-friendly group processing facilities by RPS

1) Assistance for Establishing Eco-friendly Group Processing Centre by RPSs

   Financial and technical assistance are provided to RPS which own 20 cents of land for setting up fully fledged Eco-friendly Group Processing/Technology Transfer Centre. Under this scheme, RPS Poothrikka has been granted with an amount of ₹ 18 lakhs from Rubber Board for the construction of Effluent Treatment Plant (ETP) and biogas which got inaugurated on 1st February, 2016.

2) Scheme for purchase of sheeting battery

   RPS which has set up Group Processing Centre is eligible for financial assistance to purchase/ transportation and installation of Sheeting Battery. RPS Poothrikka installed its new Sheeting Battery during the financial year 2015-16 with the financial help of ₹ 1.5 lakhs granted by Rubber Board.

3) Scheme for Construction of Store Room for Storage of Sheets

   RPSs having group processing centres are provided with financial assistance to set up store room for storage of rubber sheets. Above schemes are implemented through the regional offices functioning in

Kerala, Tamil Nadu and Karnataka. Rubber Producers' Society Poothrikka received a grant of ₹ 2.90 lakhs from the Rubber Board for the completion of the store room with modern storage facility constructed for storage of grade 1X sheets.

4.3.5.3 UDAYA Self Help Group

Formation of Self Help Group helps to strengthen participatory extension among nominal growers as well as women growers. 'Udaya Swasraya Sangham' with 15 members used to function under RPS Poothrikka. The group works on the activities of the Rubber Processing Center, rain guarding of rubber trees during the rainy seasons, destruction of weeds etc. The group became dormant from the year 2013-14.

4.3.6 Training and information provided by the society

Transfer of technology through RPS has its focus on boosting of production and productivity through short term and long term measures. Small rubber growers are not fully aware of the different aspects of rubber cultivation. The Rubber Producers' Society Poothrikka is taking a very important role in imparting training to their members. Training programmes such as root training, training for tappers, bee keeping etc., were arranged by the society for many years. The trainees, selected by RPS, are trained by the resource persons arranged by the Rubber Board. The trainees include executive committee members, members and family members of the growers and tappers.

4.3.7 Other services

The other major attempts of RPS include:

1) Honouring the best rubber growers and tappers:

RPS Poothrikka will honour the best grower and tapper in annual General Body. Honouring the best grower and tapper will motivate other members to actively participate in the production. These awards will inculcate a competitive spirit among the growers and tappers. Awards will invariably lead to better performance and production.

2) Awards/scholarships to children of growers and tappers:

The society has arranged the distribution of cash awards to children of growers / tappers in every year, who secure the highest marks in the public examinations.

3) "YUVA" Youth club:

The society formed the club with the objective of creating awareness regarding rubber cultivation to the younger generation between the age of 13 and 20. The club was inaugurated on 23rd December, 2008.

4) Medical camps

RPS Poothrikka conducted mega medical camps in co-operation with Kolencherry medical mission hospital during the year 2011-12 using the fund of RPS and Ambalamedu Chitt fund along with the donations collected from RPS members and distributed medicines and specs to the needy patients in free of cost.

5.3.8 Social benefits rendered by the society

RPS Poothrikka is expected to deliver certain social benefits to its member growers. The following are some of the social benefits rendered by the Rubber Producers' Societies Poothrikka.

1) Acting as a forum for discussion

RPS Poothrikka arranges meetings of growers usually in the society itself. In such meetings experts are entrusted to take classes on different topics where the members are free to interact with the resource person. These types of meetings help the growers to discuss their common problems and find solutions for the same.

2) Helping to uplift the standard of living

The participation in the training programmes conducted by the society will provide their members with more opportunities for income generation. This will help them to augment their standard of living by increasing the production or by starting a new venture which will go hand-in-hand with rubber cultivation such as bee keeping, plantain cultivation etc.

3) Acting as a nodal agency

The ordinary small rubber growers are reluctant to approach the government and the Rubber Board due to lack of experience and time. The RPSs can act as a nodal agency between the members, the government and the Rubber Board.

4) Local area development

The Rubber Producers' Societies can contribute to the development of the locality in which they function. RPS Poothrikka provides job opportunities and arranges medical camps for their members and others.

The primary objective of the study ie, to analyse the functions and services provided by Rubber Producers' Society Poothrikka was done under seven heads viz, production, procurement, processing, marketing, schemes and policies of the society, training and information provided, other services and social benefits rendered by the society. The objective was studied using the Simple Growth Index and Compound Annual Growth Rate for the year 2008-09 to 2017-18.

4.5 Financial performance of the society

Each business activity reflects in financial statements since it is a collection and organisation of data according to commonly acknowledged strategy of accounting. These are prepared from financial transactions, in a summed up structure which gives necessary information to those entities who are interested in interpreting and utilizing data. Financial statement consists of Trading and Profit and Loss account which depicts the results of the business and Balance Sheet which draws the financial position in terms of assets and liabilities. The most important objective of financial statement is to evaluate the profitability and financial position of the firm.

Performance evaluation of an organization is normally identified with how well an organization can use its assets, shareholder's equity and liability, revenue and expenses. The process of critical evaluation of the financial information contained in the financial statements in order to understand and make decisions regarding the operations of the firm is called "Financial Statement Analysis". According to John Myer, "Financial Statement Analysis is largely a study of relationship among the various financial factors in a business as disclosed by single set of statements and a

study of the trend of these factors as shown in a series of statements". It is basically a relationship study among various financial facts and figures given in financial statements, and the interpretation thereof to gain an insight into the profitability and operational efficiency of the firm to assess its financial health and future prospects.

Ratio analysis is a systematic use of ratios to interpret the performance and status of a firm. The ratios reveal the relationship in a more meaningful way so as to enable the management to take better investment and credit decisions and thus to improve the performance of the firm. On the basis of uses, or nature or purpose, accounting ratios can be classified into liquidity ratio, profitability ratio, activity ratio, solvency ratio etc.

The present study uses the following ratios for analysing the performance of Rubber Producers' Society Poothrikka.

4.5.1 Liquidity ratios

This ratio interprets the ability of a firm to meet the claims and obligations in the short run, usually in one year. It measures the capability of a firm to meet its short term debt obligations. Liquidity ratios are generally based on the relationship between current assets and current liability. It is an indicator of whether a firm's current assets will be sufficient to meet the firm's obligations when they become due. Generally, the higher liquidity ratios enjoy higher margin of safety that the company posses to meet its current liabilities. Liquidity ratios greater than 1 indicate that the company is in good financial health and it is less likely fall into financial difficulties whereas low liquidity ratio may lead to reduced rate of return, missing of profitable business opportunities etc.

4.5.1.1 Current ratio

Current ratio depicts the relationship between current assets and current liabilities i.e., firm's ability to pay its current liability from current assets. Current assets include cash and those assets which can be easily converted into cash within a short period of time such as marketable securities, bills receivables, sundry debtors, inventories, work in progress etc. Current liabilities are those obligations which are payable within a short period of time such as outstanding expense, bills payables,

sundry creditors, short term advances, dividend payable etc. A current ratio of 2:1 indicates that for every ₹1 in current liabilities, the company has ₹2 in current assets.

Current ratio is calculated by using the formula,

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current assets = Closing stock + Loans & Advances + Cash in hand + Sundry debtors + Bank accounts + Investments

Current liabilities = Sundry creditors + Sundry deposits + Advance form growers

Table 4.7 Current ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Current assets	Growth Index	Current liabilities	Growth Index	Ratio
2008-09	6.87	100	3.96	100	1.73
2009-10	7.94	116	4.20	106	1.89
2010-11	23.77	346	18.51	467	1.28
2011-12	6.19	90	10.14	256	0.61
2012-13	19.73	287	12.66	320	1.56
2013-14	31.45	458	16.82	425	1.87
2014-15	8.43	123	8.66	219	0.97
2015-16	11.47	167	8.99	227	1.28
2016-17	23.98	349	9.77	247	2.45
2017-18	18.85	274	5.60	141	3.37
CAGR	**11.86**		**3.92**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Fig 4.9 Current ratio of Current ratio of RPS from 2008-09 to 2017-18

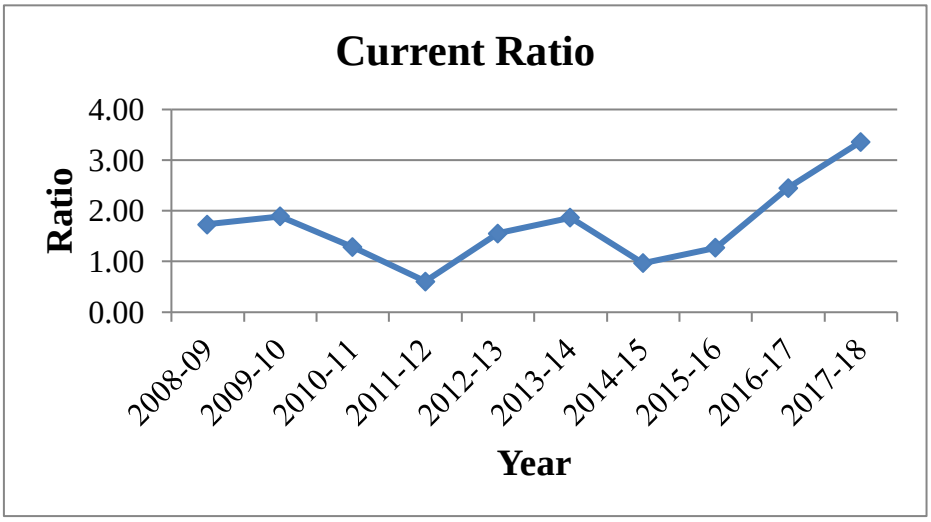


Table 4.7 and figure 4.9 show the current ratio for ten years from 2008-09 to 2017-18. It was observed that the current assets registered a CAGR of 11.86 and current liabilities of 3.92. The simple growth index of current asset and current liability of RPS Poothrikka observed were 274 and 141 respectively. Further, the current ratio ranged between 0.61 and 3.37 which implies that the current assets of the society are sufficient to service the current liabilities. Fire accident occurred in the year 2010 accounted for an increase in amount due to creditors and hence turned out to be a liability to the firm. On an average the ratio of Rubber Producers' Society Poothrikka was 1.7. Therefore it could be concluded that, the society is in a position to pay off its liabilities.

4.5.1.2 Acid test ratio/Quick ratio

Quick ratio establishes a relationship between quick or liquid assets and current liabilities. Since it indicates the company's ability to instantly use its near-cash assets (assets that can be converted quickly to cash) to pay down its current liabilities, it is also called the acid test ratio.

Quick ratio is calculated by using the formula,

$$\text{Quick ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

Quick assets = Current assets – Inventory – Prepaid expenses

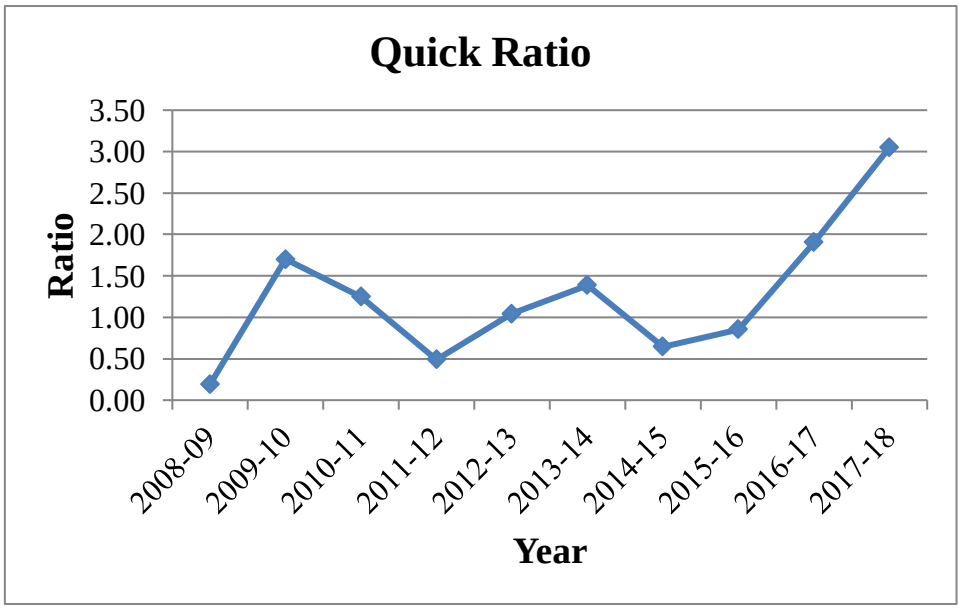
Table 4.8 Quick ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Quick assets	Growth index	Current liabilities	Growth index	Ratio
2008-09	0.76	100	3.96	100	0.19
2009-10	7.14	939	4.20	106	1.70
2010-11	23.12	3042	18.51	467	1.25
2011-12	4.96	653	10.14	256	0.49
2012-13	13.23	1741	12.66	320	1.05
2013-14	23.35	3072	16.82	425	1.39
2014-15	5.58	734	8.66	219	0.64
2015-16	7.67	1009	8.99	227	0.85
2016-17	18.60	2447	9.77	247	1.90
2017-18	17.07	2246	5.60	141	3.05
CAGR	**41.31**		**3.92**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.10 Quick ratio of RPS from 2008-09 to 2017-18



The table 4.8 and figure 4.10 depicts the quick ratio of the society from the year 2008-09 to 2017-18. It is clear from the table that the CAGR of quick assets and current liabilities are 21.31 & 3.92 during the course of study period. Likewise, the growth index of quick assets and current liabilities are 2246 & 141 respectively. On an average, the ratio was 1.25 which indicates that the society has ₹1.25 amount of liquid assets available against the ₹1 amount of current liabilities. This implies that the performance of the society is satisfactory since it is fully equipped with enough assets to be instantly liquidated to pay off its current liabilities.

4.5.2 Profitability ratio

Profitability is an indication of the efficiency with which the operations of the business are carried out. A lower profitability may arise due to lack of control over the expense. Profitability ratios are of great importance to investors as they measure how effectively management is generating profit from the assets and from owner's investments. Profitability ratios can be used to know whether company is making enough operational profit from their assets. Here profitability is calculated in relation to sales. The important ratios for measuring profitability of an organisation are gross profit ratio, net profit ratio etc.

4.5.2.1 Gross profit ratio

Gross profit ratio measures the relationship between gross profit and net sales revenue. It is a tool to evaluate the operational performance of the business. There is no norm or standard to interpret gross profit ratio (GP ratio). Generally, a higher ratio is considered better.

Gross profit ratio is calculated by using the formula,

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}}$$

When gross profit ratio is expressed in percentage form, it is known as gross profit margin or gross profit percentage. The formula of gross profit margin or percentage is explained below,

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}} * 100$$

Table 4.9 Gross profit ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Gross profit/ loss	Growth index	Net sales	Growth index	Ratio
2008-09	3.88	100	116.67	100	3.33
2009-10	5.25	135	145.59	125	3.61
2010-11	6.03	155	200.38	172	3.01
2011-12	-1.93	-50	239.28	205	-0.81
2012-13	20.79	536	182.93	157	11.37
2013-14	15.47	399	155.48	133	9.95
2014-15	7.82	202	86.41	74	9.05
2015-16	7.04	181	78.97	68	8.91
2016-17	13.74	354	149.15	128	9.21
2017-18	5.61	145	150.66	129	3.72
CAGR	**4.18**		**2.88**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.11 Gross profit ratio of RPS from 2008-09 to 2017-18

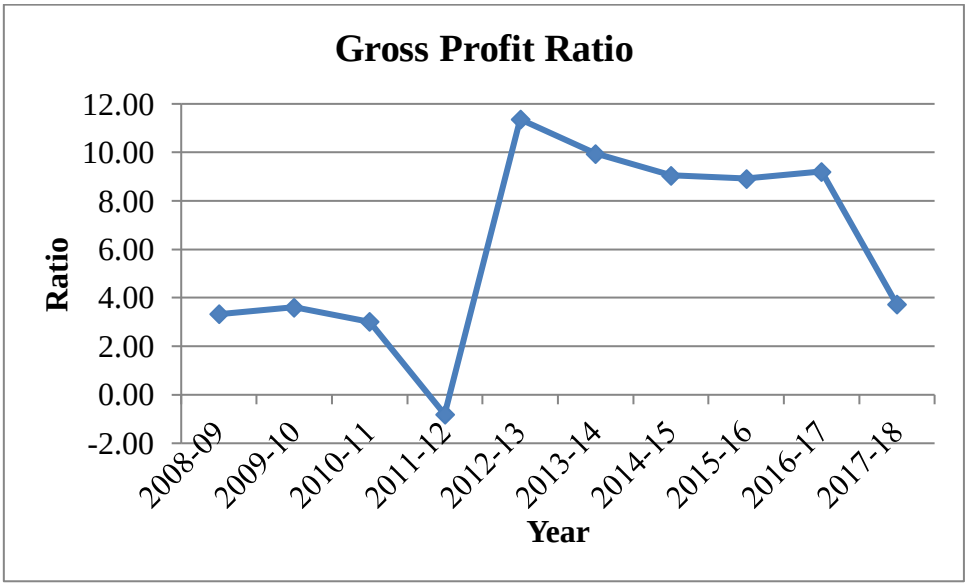


Table 4.9 and figure 4.11 exhibits the gross profit ratio of RPS Poothrikka. The ratio is positive for all the years except the year 2011-12 since the society doesn't make any profit due to the fire accident occurred in the preceding year. It is clear from the table that the CAGR of gross profit was 4.18 whereas the growth index was 145 respectively. Despite of the fluctuating ratios which ranges between -0.81 and 11.37, the positive figures picturised a considerable growth of the society from 2008-09 to 2017-18.

4.5.2.2 Net Profit Ratio

Net profit ratio measures the firm's overall profitability and efficiency of the management. It measures the relationship between net profit and net sales. The net profit is arrived after deducting administration, selling and distribution expenses from gross profit. Higher the ratio better is the profitability.

Net profit ratio is calculated as,

$$\text{Net Profit Ratio} = \frac{\text{Net profit/loss}}{\text{Net sales}} * 100$$

Table 4.10 Net profit ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Net profit/loss	Growth index	Net sales	Growth index	Ratio
2008-09	0.04	100	116.67	100	0.03
2009-10	1.50	3750	145.59	125	1.03
2010-11	-0.29	-725	200.38	172	-0.14
2011-12	-6.36	-15900	239.28	205	-2.66
2012-13	11.40	28500	182.93	157	6.23
2013-14	6.48	16200	155.48	133	4.17
2014-15	2.24	5600	86.41	74	2.59
2015-16	-0.54	-1350	78.97	68	-0.68
2016-17	5.70	14250	149.15	128	3.82
2017-18	-4.19	-10475	150.66	129	-2.78
CAGR	**-267.67**		**2.88**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.12 Net profit ratio of RPS from 2008-09 to 2017-18

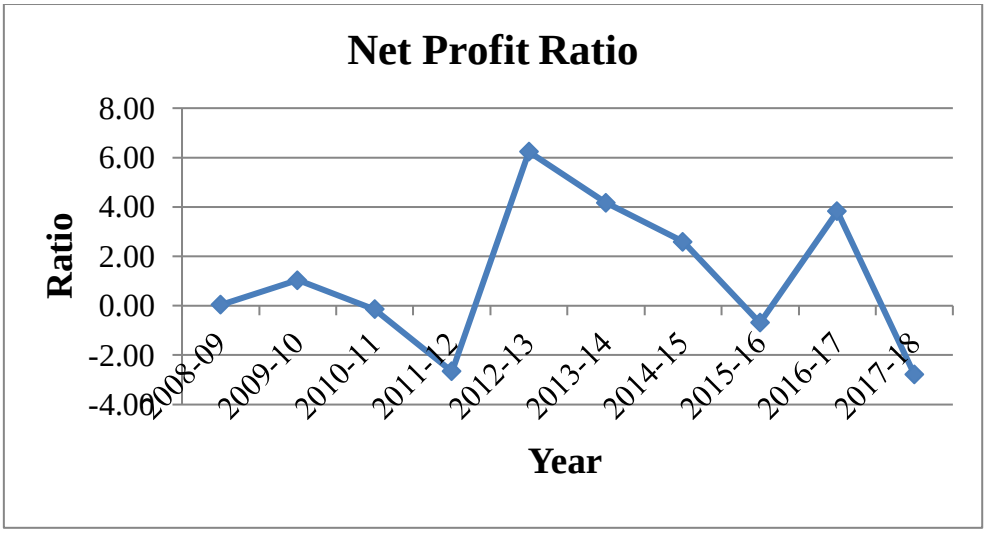


Table 4.10 and figure 4.12 presents the net profit ratio for 10 years which ranges between -0.14 and 6.23. The years showing a negative ratio had excess of expenditure over income thus faced net loss in the corresponding years. Though the society had loss, the management had tried to manage the balance by increasing the sales. Further, it is clear from the table that the CAGR and growth index of net profit are -267.67 & -10475. The negative CAGR for net profit is because of the net loss during the last year.

4.5.2.3 Direct expense ratio

Direct expense ratio is computed to show the relationship between direct expenses and net sales. The lower ratio signifies more profitability and higher ratio means less profitability.

Direct expense ratio is calculated as,

$$\frac{\text{Direct expenses}}{\text{Net sales}} * 100$$

Table 4.11 Direct expense ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Direct expenses	Growth index	Net sales	Growth index	Ratio
2008-09	3.88	100	116.67	100	3.33
2009-10	3.80	98	145.59	125	2.61
2010-11	6.92	178	200.38	172	3.45
2011-12	11.16	288	239.28	205	4.66
2012-13	9.64	248	182.93	157	5.27
2013-14	6.83	176	155.48	133	4.39
2014-15	6.04	156	86.41	74	6.99
2015-16	7.40	191	78.97	68	9.37
2016-17	11.33	292	149.15	128	7.60
2017-18	11.84	305	150.66	129	7.86
CAGR	**13.20**		**2.88**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.13 Direct expense ratio of RPS from 2008-09 to 2017-18

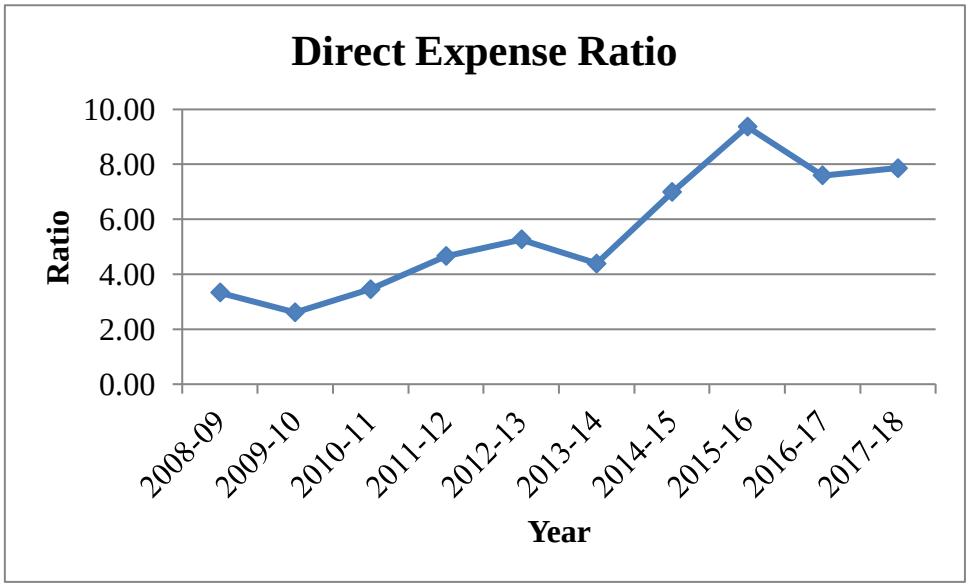


Table 4.11 and 4.13 explains the direct expense ratio from the year 2008-09 to 2017-18. It is clear from the figure that the ratio is showing an increasing trend

throughout the study period but maintained below 10 which signifies the profitability of RPS Poothrikka. The CAGR and growth index computed for direct expenses are 13.20 and 305 respectively.

4.5.2.4 Overhead expense ratio

Overhead expense ratio indicates the relationship between indirect expenses and sales. The low ratio indicates that the firm is minimizing its business expenses and hence higher profitability.

Overhead expense ratio is calculated as,

$$\frac{\text{Indirect expenses}}{\text{Net sales}} * 100$$

Table 4.12 Overhead expense ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Indirect expenses	Growth index	Net sales	Growth index	Ratio
2008-09	4.44	100	116.67	100	3.81
2009-10	5.44	123	145.59	125	3.74
2010-11	0.92	21	200.38	172	0.46
2011-12	3.88	87	239.28	205	1.62
2012-13	3.92	88	182.93	157	2.14
2013-14	6.83	154	155.48	133	4.39
2014-15	6.04	136	86.41	74	6.99
2015-16	7.40	167	78.97	68	9.37
2016-17	11.33	255	149.15	128	7.60
2017-18	11.84	267	150.66	129	7.86
CAGR	**11.51**		**2.88**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.14 Overhead expense ratio of RPS from 2008-09 to 2017-18

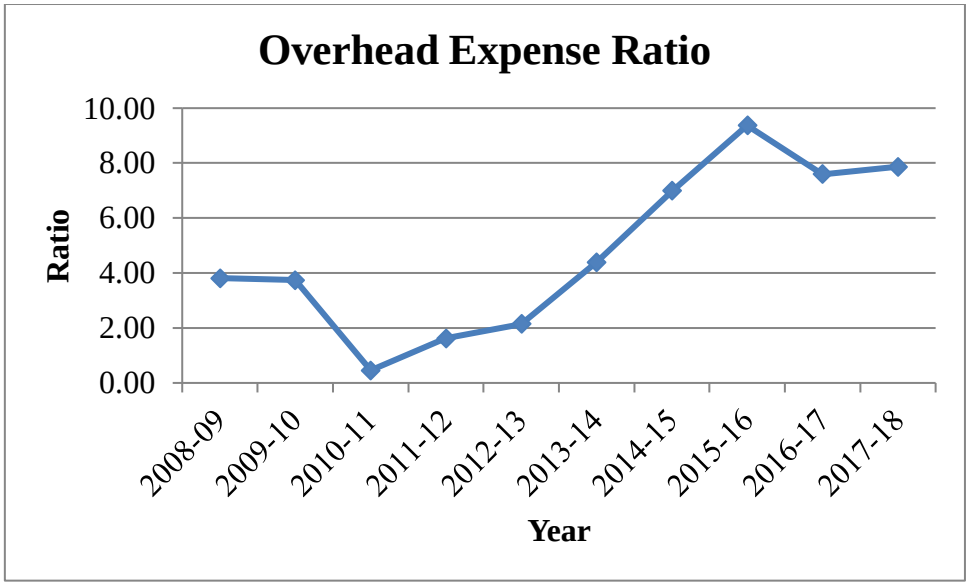


Table 4.12 and 4.14 shows the overhead expense ratio from the year 2008-09 to 2017-18. It is obvious from the figure that the ratio is showing an increasing trend throughout the study period but maintained a low ratio which indicated the profitability of the society. The CAGR and growth index computed for indirect expenses are 11.51 and 267 respectively.

4.5.3 Activity ratio

Activity ratios are used to gauge how efficient and effective a company's operations are. This ratio is often called "Assets Management Ratio" i.e. how efficiently the assets of the company are being used by the management to generate maximum possible revenue. Usually, this ratio indicates how much sales have taken place in comparison to various categories of assets. Further, it helps to understand how efficient the management of the company is.

4.5.3.1 Fixed asset turnover ratio

Fixed-asset turnover ratio is the ratio of sales to the value of fixed assets. It indicates how well a company uses its fixed assets to generate sales. A high ratio indicates efficient utilization of fixed assets to generate sales, whereas a low ratio indicates that the firm does not efficiently use its fixed assets.

Fixed asset turnover ratio is calculated as,

$$\text{Fixed asset turnover ratio} = \frac{\text{Net sales}}{\text{Fixed assets}}$$

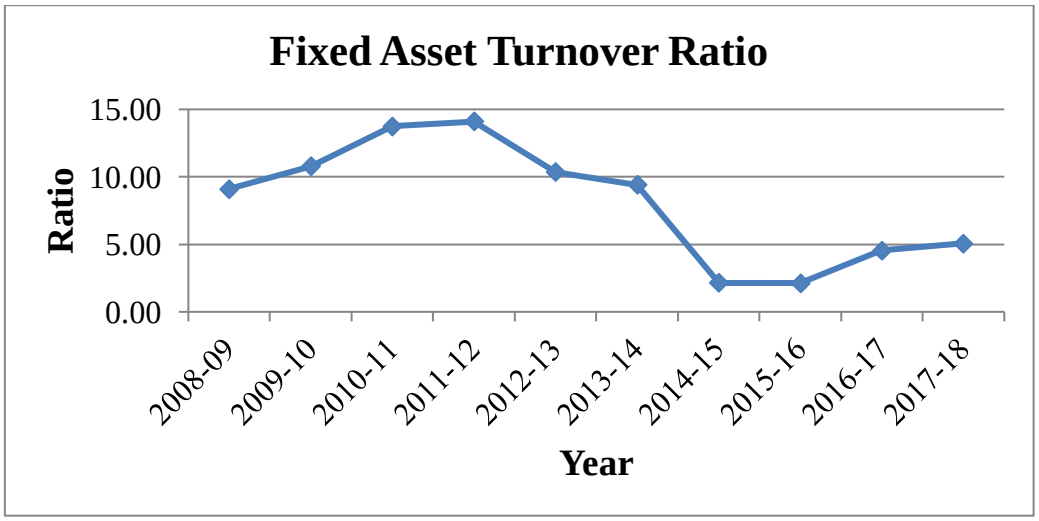
Table 4.13 Fixed asset turnover ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Net sales	Growth index	Fixed assets	Growth index	Ratio
2008-09	116.67	100	12.82	100	9.10
2009-10	145.59	125	13.50	105	10.78
2010-11	200.38	172	14.58	114	13.74
2011-12	239.28	205	16.98	132	14.09
2012-13	182.93	157	17.67	138	10.35
2013-14	155.48	133	16.53	129	9.41
2014-15	86.41	74	39.98	312	2.16
2015-16	78.97	68	36.95	288	2.14
2016-17	149.15	128	32.78	256	4.55
2017-18	150.66	129	29.71	232	5.07
CAGR	**2.88**		**9.78**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.15 Fixed asset turnover ratio of RPS from 2008-09 to 2017-18



The table 4.13 and figure 4.15 stand for sales to fixed asset ratio throughout the year from 2008-09 to 2017-18. The CAGR of fixed asset was found to be 9.78 and the growth index 232 correspondingly. It is obvious from the table that the ratio ranges between 2.14 & 14.09. The increase in fixed assets from the year 2012-13 represents new purchases of fixed assets for modernization made by the society. The society renovated their smoke house, godown and installed Effluent Treatment Plant. Bad weather and price crash in the rubber industry affected the sales drastically which has been clearly portrayed in the table. Both mentioned reasons attributed for the decline in ratio and hence cannot be concluded as a negative connotation. The introduction of RPIS in 2015 which provides the growers a minimum amount of ₹150/kg inspired and motivated more members to engage in cultivation and this increased engagement in cultivation attributed for the increase in sales from the year 2015.

4.5.3.2 Total asset turnover ratio

Total asset turnover ratio is an activity ratio measuring the ability of a firm to effectively use its assets for the generation of sales. Unlike the fixed asset turnover, including only property, plant and equipment to calculation, this ratio measures how efficiently company uses all of its assets. Lower ratios usually indicate too heavy investments in assets or notable decline in sales. And also lower ratios may also indicate that the firm's assets aren't being used to their full capacity whereas a company with a high asset turnover ratio operates more efficiently compared to competitors with lower ratios.

Total asset turnover ratio is calculated as,

$$\text{Total asset turnover ratio} = \frac{\text{Net sales}}{\text{Total assets}}$$

Total assets = Current assets + Non-current assets

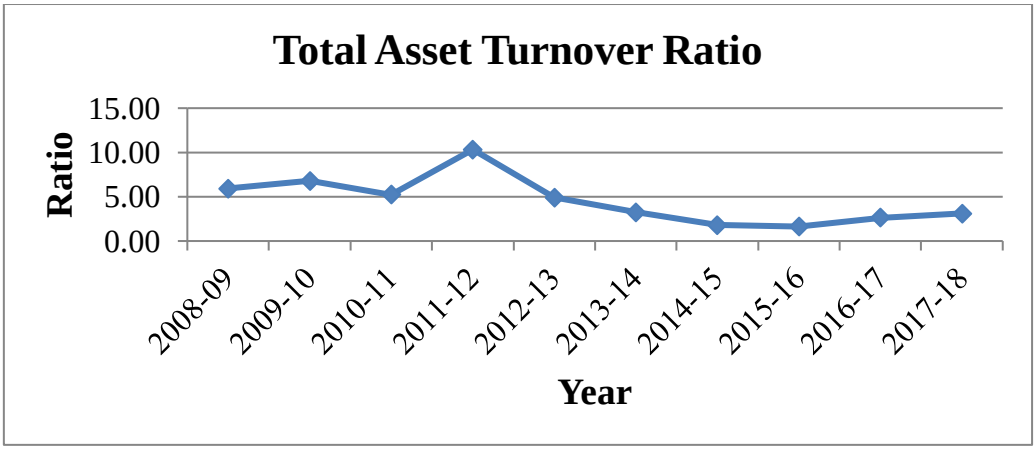
Table 4.14 Total asset turnover ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Net sales	Growth index	Total assets	Growth index	Ratio
2008-09	116.67	100	19.69	100	5.93
2009-10	145.59	125	21.44	109	6.79
2010-11	200.38	172	38.35	195	5.23
2011-12	239.28	205	23.17	118	10.33
2012-13	182.93	157	37.40	190	4.89
2013-14	155.48	133	47.98	244	3.24
2014-15	86.41	74	48.41	246	1.78
2015-16	78.97	68	48.42	246	1.63
2016-17	149.15	128	56.76	288	2.63
2017-18	150.66	129	48.56	247	3.10
CAGR	**2.88**		**10.55**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.16 Total asset turnover ratio of RPS from 2008-09 to 2017-18



It is evident from the above table and figure that, even though the total asset turnover ratio has been declining from the year 2012-13, a slight increase is visible during the last two years. The decline in the sales due to price crash prolonged in the industry was found to be the major reason for the decline in ratio. The positive

deviation in the ratio from the year 2016-17 implies that the society is utilizing the newly purchased assets and other assets efficiently to increase its sale which depicts an indication of better performance. Further, CAGR and growth index of total assets calculated were 10.55 and 247 respectively.

4.5.3.3 Inventory turnover ratio

Inventory turnover ratio indicates the efficiency of the firm in producing and selling its product. It establishes the relationship between net sales during a year and the average stock hold during that period. Generally, a high inventory turnover ratio is indicative of good inventory management. A low inventory turnover ratio implies excessive inventory levels than warranted by production and sales activities or a slow moving or obsolete inventory.

Inventory turnover ratio is calculated as,

$$\text{Inventory Turnover ratio} = \frac{\text{Net sales}}{\text{Average Inventory}}$$

$$\text{Average inventory} = \frac{\text{Begining inventory} + \text{Ending inventory}}{2}$$

Table 4.15 Inventory turnover ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Net Sales	Growth index	Average Inventory	Growth index	Ratio
2008-09	116.67	100	5.18	100	22.54
2009-10	145.59	125	3.46	67	42.14
2010-11	200.38	172	0.73	14	276.39
2011-12	239.28	205	0.89	17	268.85
2012-13	182.93	157	3.77	73	48.59
2013-14	155.48	133	6.05	117	25.72
2014-15	86.41	74	3.77	73	22.95
2015-16	78.97	68	2.71	52	29.14
2016-17	149.15	128	4.39	85	34.01
2017-18	150.66	129	3.38	65	44.64
CAGR	**2.88**		**-4.63**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.17 Inventory turnover ratio of RPS from 2008-09 to 2017-18

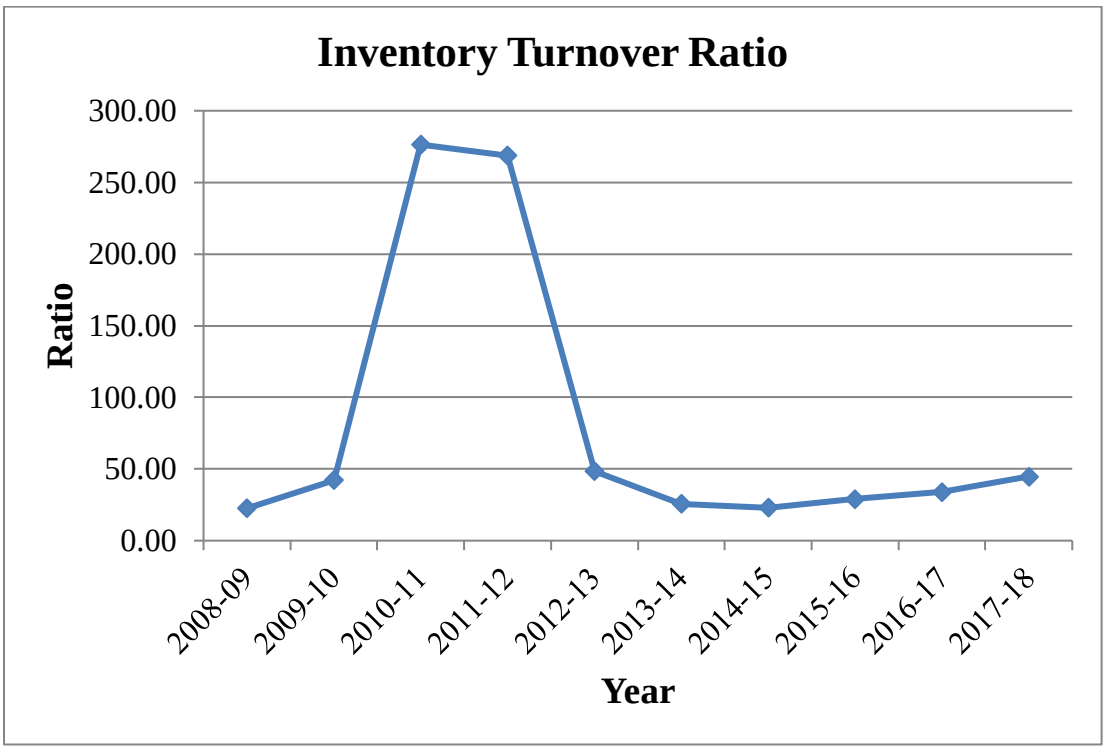


Table 4.15 and figure 4.17 portrays the inventory turnover ratio of RPS Poothrikka during the study period. The inadequate inventory level which occurred as a result of fire accident occurred in the year 2010 contributed for the high inventory turnover ratio during the years 2010-11 & 2011-12. The CAGR of average inventory was calculated as -4.63. Likewise, the growth index 65 correspondingly.

5.5.3.4 Working capital turnover ratio

This ratio measures how effectively a company uses the available funds for streamlined production of goods or services. A high turnover ratio indicates that management is being extremely efficient in using a firm's short-term assets and liabilities to support sales.

Inventory turnover ratio is calculated as,

$$\text{Working Capital Turnover ratio} = \frac{\text{Net sales}}{\text{Working capital}}$$

Working capital = Current assets – Current liabilities

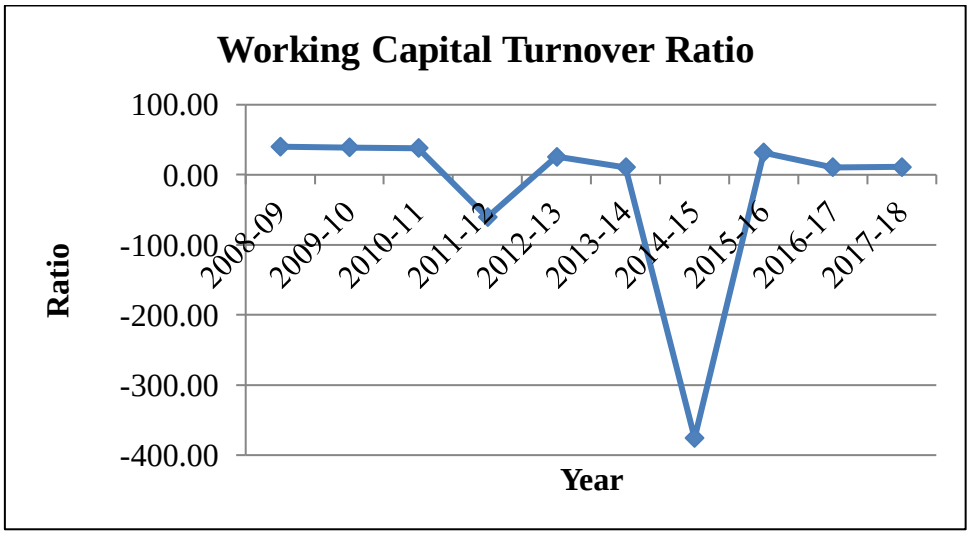
Table 4.16 Working capital turnover ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Net Sales	Growth index	Working capital	Growth index	Ratio
2008-09	116.67	100	2.91	100	40.09
2009-10	145.59	125	3.74	129	38.93
2010-11	200.38	172	5.26	181	38.10
2011-12	239.28	205	-3.95	-136	-60.58
2012-13	182.93	157	7.07	243	25.87
2013-14	155.48	133	14.63	503	10.63
2014-15	86.41	74	-0.23	-8	-375.70
2015-16	78.97	68	2.48	85	31.84
2016-17	149.15	128	14.21	488	10.50
2017-18	150.66	129	13.25	455	11.37
CAGR	**2.88**		**18.34**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.18 Working capital turnover ratio of RPS from 2008-09 to 2017-18



The working capital turnover ratio of the society is depicted in the table 4.16 and figure 4.18. The CAGR of working capital was calculated as 18.34 whereas the growth index was 455. An increase in the amount payable to creditors due to the fire accident happened in 2010 registered an increase in current liability which resulted in the negative ratio of the year 2011-12 whereas the advance collected from growers for the construction of ETP and the reduction in sales due to price crash imparted an increase in current liability during the year 2014-15. These were the reasons for negative ratio in consequent years. Although the negative ratio doesn't support the performance, overall the management tried to efficiently utilize the short-term assets and liabilities to support sales since the ratios are better during other years.

5.5.4 Solvency ratio/Leverage ratio

Solvency refers to the capacity of an organisation to pay off its long term debts. Solvency ratios are used to analyse the long term financial position of a firm. This ratio helps the management in proper administration of the capital.

5.5.4.1 Debt-equity ratio (D/E Ratio)

The D/E ratio is a financial leverage ratio that compares a firm's total liabilities to its shareholders equity. Debt equity ratio is also known as external-internal ratio. It is calculated to measure the relative claims of outsiders and owners against the firm's assets. An acceptable norm for this ratio is considered to be 2:1. A high ratio shows that claims of creditors are greater than those of owners.

Debt equity ratio is calculated as,

$$\text{Debt equity ratio} = \frac{\text{Debt}}{\text{Equity}}$$

Debt = Current liability + Long term liability

Equity = Total asset – Total Liability

Table 4.17 Debt-equity ratio of RPS from 2008-09 to 2017-18

(Amt. in Rs. Lakhs)

Year	Debt	Growth index	Equity	Growth index	Ratio
2008-09	11.76	100	7.30	100	1.61
2009-10	12.01	102	7.31	100	1.64
2010-11	29.20	248	8.25	113	3.54
2011-12	20.37	173	8.27	113	2.46
2012-13	23.20	197	7.97	109	2.91
2013-14	27.34	232	9.38	128	2.91
2014-15	25.52	217	16.86	231	1.51
2015-16	26.23	223	17.24	236	1.52
2016-17	28.71	244	18.94	259	1.52
2017-18	24.69	210	19.10	262	1.29
CAGR	**8.59**		**11.27**		

Source: Audit reports of RPS Poothrikka from 2008-09 to 2017-18

Figure 4.19 Debt-equity Ratio of RPS from 2008-09 to 2017-18

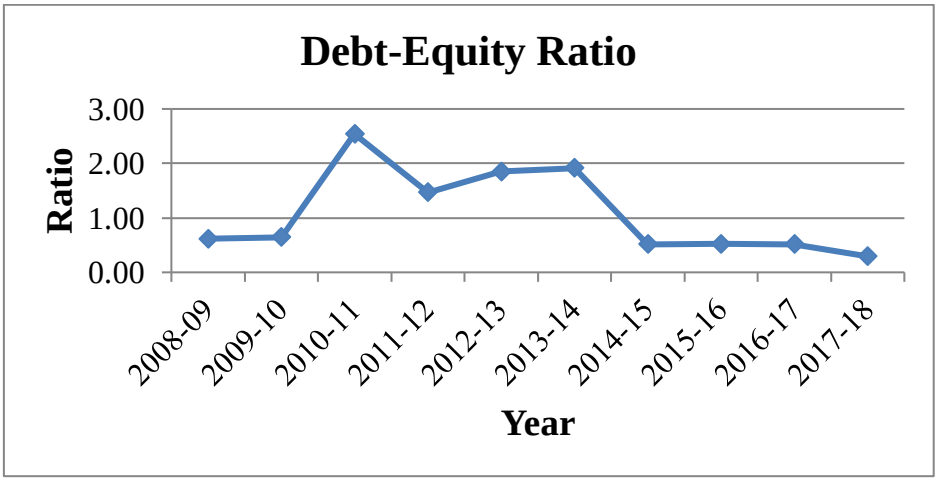


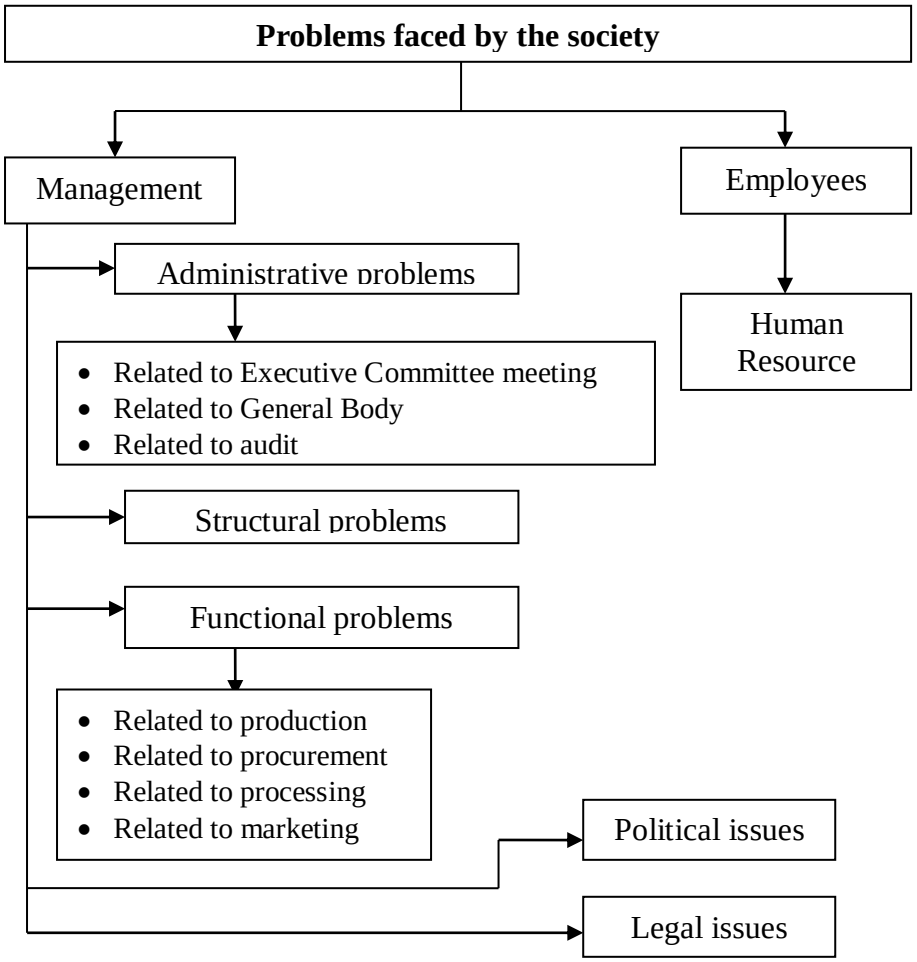
Table 4.17 and figure 4.19 presents the debt-equity ratio of the society. The CAGR of debt and equity measured were 8.59 & 11.27 for the study period whereas the growth index was 210 & 262. It is clear from the table that the ratios are not too high, which implies the society is not using creditor's finance (bank loans) than

investor's (shareholders/members). The ratio of the society less than 1 for almost all years, which means the investors have more stake in the business assets whereas the reason for the ratio to be greater than 1 during some years was the increased debt registered as a result of fire accident in 2010. On an average, the debt-equity ratio of RPS Poothrikka is 2.09, a good value which further implies the financial stability of the society. Hence the ratio is satisfactory throughout the study period.

The financial performance of the Rubber Producers' Society Poothrikka was analysed using different ratios, Simple Growth Index and CAGR. The analyses gave the outcome that all the 11 ratios considered under study was in favour of society and hence concluded that RPS Poothrikka maintained a good financial position

4.7 Problems faced by the society

The last objective of the study was to identify the problems faced by the Rubber Producers' Society Poothrikka and it was examined from the view of the management and the employees.



The responses of the management and employees on the problems existing in the society were analysed, interpreted and presented in the following sections.

4.7.1 Problems faced by the society perceived by the management

The total management of the society is vested in the President and executive committee members. To have a detailed analysis of the problems confronted by the Rubber Producers' Society Poothrikka, the view of management of the society regarding the administrative, structural and functional problems was carried out using percentage and index. The responses to questions were plotted on a five point Likert scale. The scale used the responses such as strongly agree, agree, moderately agree, disagree and strongly disagree and the scores assigned to these rating were 5, 4, 3, 2 and 1 respectively. Following scale was adopted to draw conclusions on the various parameters under the study.

Classification of administrative, structural and functional problems

Index obtained	Problems/Constrains category
0-20	Negligible
21-40	Tolerable
41-60	Risk
61-80	Severe
81-100	Chronic

4.7.1.1 Socio-economic profile of the management

As a prelude of studying the problems perceived by the management, the socio-economic profile of the President & executive committee members were examined with the help of selected socio-economic variables such as age, gender, marital status, education, income etc.

Table 4.18 Socio-economic profile of the management

Variables	Category	Responses (n=7)
Age	Up to 40 years	0
	41-50	0
	51-60	4(57)
	Above 60	3(43)
Total		**7(100)**

Gender	Male	7(100)
	Female	0
Total		**7(100)**
Religion	Hindu	0
	Muslim	0
	Christian	7(100)
Total		**7(100)**
Caste	SC	0
	ST	0
	OBC	0
	OEC	0
	General	7(100)
Total		**7(100)**
Marital status	Married	7(100)
	Unmarried	0
	Widow	0
Total		**7(100)**
Education	Primary	0
	High school	0
	Diploma	2(29)
	Graduate	4(57)
	PG	1(14)
Total		**7(100)**
Economic status	BPL	0
	APL	7(100)
Total		**7(100)**
Employment status	Self-employed	6(86)
	Salaried employed	1(14)
	Unemployed	0
Total		**7(100)**
Self employment nature	Agriculture	5(83)
	Service	0
	Business	1(17)
	Others	0
Total		**6(100)**
Wage employment nature	Government	0
	Private	1(100)
	Agrl. Labourers	0
	Non-agrl. Labourers	0

Total		**1(100)**
Monthly income (in ₹)	Below 10000	0
	10000-15000	2(29)
	15000-20000	0
	20000-25000	0
	Above 25000	5(71)
Total		**7(100)**
Sources of income	Agriculture	3(43)
	Salary	1(14)
	Rent	0
	Wages	0
	Profit	0
	Others	3(43)
Total		**7(100)**
No. of years as a member	Up to 10 years	3(43)
	11-20 years	4(57)
No. of years as executive committee member	Up to 10 years	6(86)
	11-20 years	1(14)
Total		**7(100)**

Note: Figures in parentheses represents percentage to total
Source: Compiled from primary data

Table 4.18 examines the socio-economic profile of the president and other executive members of the Rubber Producers' Society Poothrikka based on the selected socio-economic indicators. It is evident from the table that 57 percent of the committee members were of the age between 51-60 years and the remaining 43 percent falls under the category of above 60 years. Thus it could be concluded that all the executive committee members are of the age above 50 years which signifies that the society failed to attract youngsters in the committee of management.

All the committee members were male, christian, belongs to general category and were married. The education status of the committee members ranges from primary to Post Graduation. Majority of the committee members (4, 57%) had Graduation whereas 2 had diploma and 1 had Post Graduation. Hence it could be concluded that all the executive committee members are well educated.

The economic status of the committee members was examined based on the status in the ration cards revealed that all the members of RPS Poothrikka belonged to

APL category. Likewise the employment status of the respondents revealed that self-employed committee members are more in the society (86%) whereas only one among the committee members was salaried employee. The self-employed members are engaged in agriculture and business where only one was a private employee.

Monthly income status showed majority of them (79%) had income above ₹25000 whereas only 2 (21%) respondents had income ranging ₹ 10000-15000. The sources of income were found to be agriculture, salary and other sources.

It is evident from the table that about 4 (57%) respondents had membership with the society for about 11-20 years whereas only 3 (43%) had membership less than 10 years. Further, 86% of these respondents had experience as executive committee members for less than 10 years whereas only 1 (14%) member had the service of 11-20 years.

4.7.1.2 Administrative as problems as perceived by the management

President and executive committee members are the representatives of a society entrusted with rights, powers and responsibility to take appropriate decisions and to execute them for and on behalf of General Body for the fulfillment and attainment of society's objectives. The sum total of duties and activities performed by the management to fulfill the aspirations of the General Body can be termed as administration. Any hurdles that come in the process of administration are considered as administrative problems in the present study. Administrative problems perceived by the management are classified into three heads and studied in detail.

a. Administrative problems related with executive committee meetings
b. Administrative problems related with General Body meeting
c. Administrative problems related with audit

a) Administrative problems related with executive committee meeting

President & executive committee members, the panel of elected owner users who set goals for the society meets once in a month commonly called "Executive Committee Meeting". The table 4.19 attempts to examine the major administrative problems related with executive committee meeting as perceived by the management.

Table 4.19 Administrative problems related with executive committee meeting as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	Executive committee meetings are not conducted regularly	9	26	Tolerable
2.	Notice of executive committee meetings are not received in time	9	26	Tolerable
3.	Agenda for the executive committee meetings not intimated in advance	10	29	Tolerable
4.	Documents/information for deliberations in executive committee meetings not circulated in advance	10	29	Tolerable
5.	Executive committee meetings usually resorted to ad hoc decisions	9	26	Tolerable
6.	Executive committee meetings were suspended due to insufficient quorum	9	26	Tolerable
7.	Executive committee meetings were conducted even without quorum in exceptional cases	10	29	Tolerable
8.	Executive committee meetings were inconclusive of agenda of meetings	11	31	Tolerable
9.	Seldom involve in day to day managerial issues of the society	10	29	Tolerable
10.	Seldom monitor the implementation of decisions of executive committee meeting	11	31	Tolerable
	Composite index	**98**	**28**	

Source: Compiled from primary data

Table 4.19 shows the administrative problem existing in the society with executive committee meeting. It is clear from the table that index ranged 26-31 and the composite index calculated was 28. All the statements related to executive committee meetings fell in the index category 21-40 which states that the problems are 'tolerable' where the composite index 28 too fell in the same category. Thus it can be concluded that no major administrative problem related to executive committee meeting exists in the society in the opinion of president and all other committee members. In other words, none of the above mentioned problems had affected the administration of Rubber Producers' Society Poothrikka.

b) Administrative problems related with General Body meeting as perceived by the management

General Body, the supreme authority of a Rubber Producers' Society consists of its members meets annually, commonly known as 'General Body

Meeting'. The main motive behind the meeting is to decide upon the policies and programmes of the society. There could exist some problems in General Body meeting which often affects the authority and administration of the society. Hence table 4.20 tries to figure out the administrative problems existing in Rubber Producers' Society Poothrikka related with General Body meeting in the opinion of the management.

Table 4.20 Administrative problems related with General Body as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	GB meetings are not conducted regularly	11	31	Tolerable
2.	Failed to circulate GB notice in time	10	29	Tolerable
3.	Agenda for the GB meetings not intimated in advance	12	34	Tolerable
4.	Documents/information for deliberations in GB meetings not circulated in advance	11	31	Tolerable
5.	Occasional attendance in GB meetings	10	29	Tolerable
6.	Rare involvement in discussions in the GB meetings	12	34	Tolerable
7.	GB meetings usually resorted to ad hoc decisions	11	31	Tolerable
8.	GB meetings were suspended due to insufficient quorum	11	31	Tolerable
9.	GB meetings were conducted even without quorum in exceptional cases	11	31	Tolerable
10.	GB meetings were inconclusive of agenda meetings	11	31	Tolerable
11.	Delay in implementing decisions of GB	11	31	Tolerable
	Composite index	**121**	**31**	

Source: Compiled from primary data

Table 4.20 shows the administrative problem existing in RPS Poothrikka related to General Body. It is clear from the table that all the statements had fallen in the category of 21-40, which says that the mentioned problems are 'tolerable'. The composite index was found to be 31 which again fell in the same category of 'tolerable'. It is understood from the opinion of executive committee members that GB meetings are conducted regularly, notice were circulated on time, agenda for the GB meetings are intimated in advance, documents/information for deliberations in GB meetings are circulated in advance, attendance were taken regularly in GB

meetings, regular involvement of executive committee members in discussions in the GB meetings, GB meetings usually resorted to detailed discussions, there was no suspension of GB meetings due to insufficient quorum, no GB meetings were conducted without quorum, no GB meetings concluded without completing the agenda and no delay in implementing GB decisions as well.

c) Administrative problems related with audit as perceived by the management

Auditing is the process of examining an organisation's financial records to determine if they are accurate and in accordance with applicable rules, regulations and bye-laws. Problems in audit considerably affect the administration of the society and therefore an attempt is made to examine the possibility of such problems existing in the selected society, as opined by the management.

Table 4.21 Administrative problems related with audit as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	Delay in conducting annual audit	11	31	Tolerable
2.	Delay in rectification of audit defects	11	31	Tolerable
3.	Down gradation of audit classification of the society	11	31	Tolerable
4.	Inquiry was ordered based on audit report/other reasons	11	31	Tolerable
	Composite index	**44**	**31**	

Source: Compiled from primary data

From the table 4.21 it is understood that all the stated problems were 'tolerable' for the society since there exists no critic problems related to audit. The composite index was calculated as 31 which again fell in the category of 'tolerable'. Therefore, it is concluded that the audit process and procedures were conducted by the society at its best with minimum problems in the opinion of executive committee members.

4.7.1.3 Structural problems as perceived by management

Structure is the framework within which an organisation functions. There are internal as well as external factors which hinders this framework. Management being

the representatives who manages the affairs of the society has to face the hurdles, if any, within the framework. Therefore, table 4.22 examines the structural problems faced by the RPS as perceived by the management.

Table 4.22 Structural problems as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	Unethical and poor management practices	10	29	Tolerable
2.	Lack of modern management techniques	11	31	Tolerable
3.	Bureaucracy in administration of society	12	34	Tolerable
4.	Predominance of vested interest of a particular person or class	11	31	Tolerable
5.	Absence of regular performance appraisal of employees	10	29	Tolerable
	Composite index	**74**	**30**	

Source: Compiled from primary data

Table 4.22 explains the structural problems existing in RPS Poothrikka. It was found that the composite index is 30 and all the stated problems fell in the category of 21-40 which is 'tolerable' for the society. Hence there exist no critical structural problems in the opinion of executive committee members.

4.7.1.4 Functional problems as perceived by the management

The key function of President and executive committee members in general is to manage society in accordance with the declared objectives, policies, rules and sub rules amended from time to time. Tasks that fall under executive committee's purview includes enrollment of members, election of office bearers, procurement and distribution of various estate inputs, procurement and sale of produce from the growers for better marketing, approve after scrutiny the monthly accounts of receipts and payments etc. Problems which occur meanwhile carrying out these functions in the society are called functional problems. For the purpose of the study, the functional problems of the society are classified into;

a. Problems related to production perceived by management
b. Problems related to procurement perceived by management
c. Problems related to processing perceived by management

d. Problems related to marketing perceived by management

a) Problems related to production as perceived by the management

The activities undertaken for the enhancement of latex production can be defined as production functions of the society. For this purpose the society is entrusted with the supply of estate inputs to the member farmers, extension services, training etc. The problems which occur while carrying out these functions in the society are called production problems.

Table 4.23 Problems related to production as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	Latest technical knowledge is not disseminated to the growers in the area of latex production	13	37	Tolerable
2.	Leaf and soil analysis and other tests are not conducted for better production	13	37	Tolerable
3.	Lack of nurseries for supplying good quality, high yielding planting materials to the needy growers	33	94	Chronic
4.	Estate inputs are not distributed to the growers	9	26	Tolerable
5.	Price fluctuations prevailing in the market affects the cultivation	27	77	Severe
	Composite index	**95**	**54**	

Source: Compiled from primary data

Table 4.23 explains the problems related to production in RPS Poothrikka. It was found that the composite index is 54. Three of the stated problems fell in the category of 21-40 which is 'tolerable' for the society. Lack of nursery for supplying good quality, high yielding planting materials to the needy growers was found to be a problem since it fell under the category of 'chronic'. And also the management opined that price fluctuations prevailing in the market affects the cultivation to an extent and members are showing less interest in cultivating rubber since the price in the market is unattractive. It is analysed to be a 'severe' problem affecting the smooth functioning of the society which is needed to be rectified in order to uplift rubber cultivation.

b) Problems related to procurement as perceived by the management

The problems faced during procurement or collection of latex, sheets, scrap etc. is defined as the procurement problems faced in procurement by the society.

Table 4.24 Problems related to procurement as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	No regular supply of latex from members	21	60	Risk
2.	Price fluctuations in the market affect the procurement of latex	27	77	Severe
3.	Procurement get reduced due to the unavailability of tapping equipments	7	20	Negligible
4.	Lack of transportation affects the quantity of procurement	7	20	Negligible
5.	Lack of collection centers to procure the latex of member growers	7	20	Negligible
	Composite index	**69**	**39**	

Source: Compiled from primary data

From the table 4.24 it is understood that there exist some problems in the society related to procurement. The composite index was calculated as 39 which fell in the category of 'tolerable'. The statement 'no regular supply of latex from members' fell in the category of 'risk' since it has an index of 60 whereas 'price fluctuations in the market affect the procurement of latex' was identified as a 'chronic' issue existing in the society.

c) Problems related to processing as perceived by the management

The problems faced during processing of collected latex are defined as the problems related to processing by the society.

Table 4.25 Problems related to processing as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	Smoke houses and joint community processing center does not improves the quality of the product	7	20	Negligible
2.	No sufficient technology to produce good quality sheets	7	20	Negligible
3.	Contaminated water from the processing center pollutes the surrounding area.	7	20	Negligible
4.	Difficulty in storage of processed sheets	7	20	Negligible
5.	Non-utilization of ETP	7	20	Negligible
	Composite index	**35**	**20**	

Source: Compiled from primary data

It is clear from the table 4.25 that all the statements had fallen in the category of 0-20, which says that the mentioned problems are 'negligible'. The composite index was found to be 20 which again fell in the same category.

d) Problems related to marketing as perceived by the management

The problems which occur while carrying out the marketing of processed sheets and latex in the society are called marketing problems.

Table 4.26 Problems related to marketing as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	Procured latex and processed sheets are not marketed collectively at a better price	8	23	Tolerable
2.	Price fluctuations prevailing in the market affects marketing	34	97	Chronic
3.	Difficulty in trading with Rubber Board's trading companies	34	97	Chronic
4.	Difficulty in dealing with private dealers	12	34	Tolerable
5.	Difficulty in transportation for marketing	9	26	Tolerable
	Composite index	**97**	**55**	

Source: Compiled from primary data

From the table 4.26, it is clear that the society is having issues in marketing of processed sheets and latex due to the price fluctuations prevailing in the market. And this found to be a reason for the society to sell the produce to private dealers since the trading companies of the Rubber Board offer them less price. The composite index calculated is 55 which fell under the category of 'risk'. Therefore necessary measures should be adopted by the society to create a smooth marketing channel which assures a guaranteed return.

4.7.1.5 Political and legal issues faced by the society as perceived by the management

For the study, the problems faced by the society related to politics is termed as political issues whereas the issues due to the violation of act and rules prescribed in the byelaw of the society is termed as legal issues.

Table 4. 27 Political issues as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	Over politicization	10	29	Tolerable
2.	Predominance of vested interest of a particular person's political view	9	26	Tolerable
3.	Election of executive committee members are influenced by the politics existing in the locality	10	29	Tolerable
4.	Heavy dependency on government capital rather than society's profit	10	29	Tolerable
5.	Marketing is influenced by interests of political leaders in the locality	10	29	Tolerable
	Composite index	**49**	**28**	

Source: Compiled from primary data

Table 4.27 clearly depicts that all the stated problems related to politics are 'tolerable' which impacted a lot to the smooth functioning.

Table 4. 28 Legal issues as perceived by the management

Sl. No	Statements	Score	Index	Intensity
1.	Corruption	11	31	Tolerable
2.	Election of office bearers not conducted at the annual general body as per rules	9	26	Tolerable
3.	Audited accounts and annual performance report are not submitted to the annual general body	9	26	Tolerable
4.	Enrolment of members to the society not as per act and rules	10	29	Tolerable
5.	Annual budget and performance report are not scrutinised	10	29	Tolerable
6.	Expenditure for the day-to-day functions not as per the approved budget	9	26	Tolerable
7.	Monthly accounts of receipts and payments are not approved at the monthly executive committee meeting	9	26	Tolerable
8.	Neglects tri-monthly& annual stock verification	9	26	Tolerable
9.	Annual fee collections are used for the day-to-day expenditure of the society.	9	26	Tolerable
	Composite index	**85**	**27**	

Source: Compiled from primary data

Table 4.28 describes the legal issues of RPS Poothrikka. The calculated index ranged from 26-31. The composite index was found to be 27 which is

'tolerable'. All the statements was categorized in 21-40 which is 'tolerable'. Therefore, it can be concluded that there exist no legal issues.

4.7.2 Problems faced by the society as perceived by the employees

The problems faced by the society perceived by employees are analysed under various heads as follows:

4.7.2.1 Socio-economic profile of the employees

The socio-economic profile of employees of RPS Poothrikka is presented in the following table.

Table 4.29 Socio-economic profile of the employees

Variables	Category	Responses (n=9)
Age	Up to 40 years	1(11)
	41-50	5(56)
	51-60	3(33)
	Above 60	0
Total		**9(100)**
Gender	Male	2(22)
	Female	7(78)
Total		**9(100)**
Religion	Hindu	4(44)
	Muslim	0
	Christian	5(56)
Total		**9(100)**
Caste	SC	3(33)
	ST	0
	OBC	1(11)
	OEC	0
	General	5(56)
Total		**9(100)**
Marital status	Married	9(100)
	Unmarried	0
	Widow	0
Total		**9(100)**
Education	Illiterate	0
	Primary	4(44)
	High school	0
	Others	5(56)
Total		**9(100)**
Economic status	BPL	4(44)
	APL	5(56)
Total		**9(100)**

Technical education	Yes	8(89)
	No	1(11)
Total		**9(100)**
Monthly income (in ₹)	Below 5000	0
	5000-10000	6(67)
	Above 10000	3(33)
Total		**9(100)**
Designation	Supervisor	1(11)
	Accountant	1(11)
	Peon	0
	Others	7(78)
Total		**9(100)**
Years of service	Up to 10 years	3(33)
	11-20 years	6(67)
	21-30 years	0
Total		**9(100)**
Training attended	One	5(56)
	Two	0
	Three	3(33)
	Four	0
	Five	0
	Six	0
	Seven	0
	Above seven	1(11)
Total		**9(100)**

Note: Figures in parentheses represents percentage to total
Source: Compiled from primary data

Table 4.29 examines the socio-economic profile of the employees of Rubber Producers' Society Poothrikka based on the selected socio-economic indicators. It is evident from the table that 56% of the employees are of the age between 41-50 years, 33% falls under the category of 51-60 years and only one employee (11%) has the age ranged 31-40. Thus it can be concluded that majority (89%) of the employees are of the age above 50 years which signifies that the society failed to attract young blood for agricultural job.

Seventy eight percent of employees were female. Majority (56%) of the respondents was found to be Christian and belongs to general category. Cent percent of the respondents were married. Majority of the employees (5, 56%) had graduation and plus two as qualification whereas others had only primary education.

The economic status of the employees examined based on the status in the ration cards revealed that 56% of the respondents belonged to APL category and only one (11%) among the employees had technical education. Further, the monthly income of the respondents revealed that 67% of the employees acquired income between ₹5000-10000 and only 3 (2 male employees and accountant) had income above ₹10000. Among the 9 employees, the society had 1 supervisor, 1 accountant and 7 labourers who work in procurement and processing of latex. Sixty seven percent of the employees had a service experience of more than 10 years with the society and most of the employees had attended only one training programme for improving their skill.

4.7.2.2 Human resource related problems as perceived by the employees

Human resource can be defined as the set of people who make up the workforce of an organization, business sector, industry, or an economy. Absence of specialized staff, lack of professional skills, poor interpersonal relations etc., are some of the problems related to human resource. Table 4.30 examines the major human resource problems as opined by the employees of RPS Poothrikka.

Table 4.30 Human resource related problems of the society as perceived by the employees

Sl. No	Statements	Score	Index	Intensity
1.	Lack of professional skills	13	29	Tolerable
2.	Staff paucity and employee overburden	21	47	Risk
3.	Over aged staff	13	29	Tolerable
4.	Lack of training programmes	15	33	Tolerable
5.	Absence of good work culture & commitment	11	24	Tolerable
6.	Delayed hike in salary	24	53	Risk
7.	Absence of regular performance appraisal of employees	19	42	Tolerable
8.	Poor interpersonal relations	12	27	Tolerable
9.	Increasing employee apathy	11	24	Tolerable
Composite index		**139**	**26**	

Source: Compiled from primary data

Table 4.30 depicts the human resource problems of the society in the opinion of employees. It is clear from the overall index of employees that “staff paucity and employee overburden” and “delayed hike in salary” were the human

resource problems fell under the category of 'risk'. Rest of the statements fell under the category of "tolerable" which implies that the management is good in maintaining smooth inter and intra relationships among employees.

The objective of "problems faced by the society" was examined above with the help of percentage and indices. The objective was analysed and interpreted from the perspective of president, executive committee members and employees. In this chapter, the analysis and discussions of the objectives of the study was done in detail. The findings and conclusions based on the analysis were presented in Chapter V.

CHAPTER V

Summary of findings and Conclusion

CHAPTER V
SUMMARY OF FINDINGS AND CONCLUSION

The present study entitled "Performance evaluation of Rubber Producers' Society Poothrikka, Ernakulam district" focuses on the objectives viz; to analyse the functions and services provided by the Rubber Producers' Society, to examine the financial performance of the society and to study the problems faced by the society. The primary data for the study were collected from 7 Executive Committee Members and 9 employees of the society. Secondary data was collected from the annual reports for the reference period of ten years from 2008-09 to 2017-18. Growth index, Compound Annual Growth Rate, financial ratios, indices and percentages were administrated for the data analysis.

5.1 Major findings

The major findings of the study are summarized and presented in the sequence given below.

6.1.1 Functions and services provided by Rubber Producers' Society

6.1.2 Financial performance of the society

6.1.3 Problems faced by the society

5.1.1 Functions and services provided by Rubber Producers' Society

a) **Membership:** The number of active members was found to be half the number of total members which signifies that not all the members are actively participating in measuring latex in the society.

b) **Production:** The study showed a declining trend in the sale of estate inputs which reflected the lack of member's interest in rubber cultivation. Unpleasant weather condition and price crash during 2013-14 & 2014-15 were also found to be the other reasons for the discouragement in members from buying inputs for cultivation in the succeeding years whereas the introduction of Rubber Producers' Incentive Scheme (RPIS) in July 2015 gave the farmers a hope in rubber cultivation.

c) **Procurement:** The CAGR for quantity of latex procured by the society was found to be -0.32 and amount 3.07 percent. The impact of the excessive rains in Poothrikka, the consequent high level of incidence of abnormal leaf fall disease, member's reluctance in cultivation and poor maintenance of trees in response to the low prices were analysed to be the reasons for low production during the years 2014-15 & 2015-16.

d) **Processing:** Processing was identified as the major function of the society. The latex collected by the society is processed as RSS 1X and RSS IV. Processing in RPS Poothrikka is carried out on contract basis since 1st May 2013.

e) **Marketing:** Latex, Ribbed Smoked Sheets (RSS) and lot sheets are marketed to private trading companies by the society since the prices offered by dealers of Rubber Board were not profitable. The CAGR of the society for the last 10 years was found to be 1.33 which shows an increased performance of marketing.

f) Rubber Producers' Incentive Scheme, assistance for establishing eco-friendly group processing centre by RPSs, scheme for purchase of sheeting battery, scheme for construction of store room for storage of sheets, UDAYA Self Help Group, training, honouring the best rubber growers and tappers, awards/scholarships to children of growers and tappers, "YUVA" Youth club and medical camps were identified as the other schemes and services provided by the society.

g) Forum for discussion, helping to uplift the standard of living, act as a nodal agency and local area development were recognized as the social benefits rendered by the society to the member growers.

5.1.2 Financial performance of the society

5.1.2.1 Activity ratio

a) The current ratio ranged between 0.61 and 3.37 for the study period and on an average the current asset ratio of Rubber Producers' Society Poothrikka was found to be 1.7.

b) The CAGR of quick assets and current liabilities were found to be 21.31 & 3.92 during the course of study period. On an average, the ratio was calculated as 1.25 which indicates that the society has ₹1.25 amount of liquid assets available against the ₹1 amount of current liabilities.

5.1.2.2 Profitability ratio

a) The gross profit ratio was analysed as positive for all the years except the year 2011-12 due to the fire accident occurred in 2010. The CAGR of gross profit was found to be 4.18 whereas the growth index 145.
b) For some years the net profit ratio ended up with negative value since the society had excess of expenditure over income (net loss). Further, the CAGR and growth index of net profit calculated were -267.67 & -10475.
c) Direct expense ratio showed an increasing trend throughout the study period but maintained below 10 which signified the profitability of RPS Poothrikka. The CAGR and growth index computed for direct expenses were 13.20 and 305 respectively.
d) The overhead expense ratio raged between 0.46 and 9.37. The CAGR and growth index computed for indirect expenses were 11.51 and 267.

5.1.2.3 Activity ratio

a) Fixed asset turnover ratio indicates how well a company uses its fixed assets to generate sales. The CAGR of fixed asset were found to be 9.78 and the growth index 232. The ratio ranged between 2.14 & 14.09.
b) Total asset turnover ratio measures the ability of an organization to efficiently produce sales. The ratio was found to be decreasing due to price crash prolonged in the industry. Further, 10.55 were found to be the CAGR of fixed assets and 247 the growth index.
c) Inventory turnover ratio indicates the efficiency of the firm in producing and selling its product. The CAGR of average inventory was calculated as -4.63.
d) Working capital turnover ratio measures how effectively a company uses the available funds for streamlined production of goods or services. The CAGR of working capital was calculated as 18.34 whereas the growth index was 455.

5.1.2.4 Solvency ratio

a) The debt to equity ratio is a financial leverage ratio that compares a firm's total liabilities to its shareholders equity. The CAGR of debt and equity measured were 8.59 & 11.27. On an average, the debt-equity ratio of RPS Poothrikka was found to be 2.09, a good value which indicated the financial stability of the society.

5.1.3 Problems faced by the society

5.1.3.1 Socio-economic profile of President & executive committee members

a) Among the president and executive committee members, 57 percent had age in the range between 51-60 years and 43 percent aged between above 60 years.
b) All the committee members were male, christian, belongs to general category and were married.
c) Among the president and executive committee members, 57% (4) had Graduation whereas 2 had diploma and 1 had Post Graduation.
d) All the committee members belonged to APL category.
e) Eight six percent of the committee members were self-employed whereas only one among the committee members was wage employed. The self-employed members were engaged in agriculture and business.
f) Among the committee members, 79% acquired income above ₹25000 whereas only 21% respondents had income ranging ₹10000-15000. The sources of income were found to be agriculture, salary and other sources.
g) Fifty seven percent of the respondents had membership with the society for about 11-20 years and 43% had membership less than 10 years. Further, 86% of these respondents had experience as executive committee members for less than 10 years whereas only 1 (14%) member had the service of 11-20 years.

5.1.3.2 Administrative problems perceived by management

i) Administrative problems related with executive committee meeting perceived by management

a) The management of RPS Poothrikka were of the opinion that no major administrative issues were present in the society, which was substantiated by the overall index of 28, 'tolerable'.

ii) Administrative problems related with General Body meeting perceived by management

a) The composite index was calculated as 31 which signified the problems related to General Body meeting perceived by the management were 'tolerable'.

iii) Administrative problems related with audit perceived by management

a) The composite index for problems related with audit was calculated as 31 which concluded the problems related to audit in RPS Poothrikka were 'tolerable'.

5.1.3.3 Structural problems perceived by the management

a) The composite index calculated was 30 and all the stated problems fell in the category of 21-40 which was 'tolerable' for the society. Hence there exist no critical issues related to audit in the opinion of executive committee members.

5.1.3.4 Functional problems perceived by the management

i) Problems related to production perceived by the management

a) Lack of nurseries for supplying good quality, high yielding planting materials to the needy growers and price fluctuations prevailing in the market were identified as the production problems existing in the society.

ii) Problems related to procurement perceived by the management

a) No regular supply of latex from members and price fluctuations in the market were identified as the procurement problems existing in the society.

iii) Problems related to processing perceived by the management

a) The composite index was found to be 20 and no problems related to processing existed in the society.

iv) Problems related to marketing perceived by the management

a) Price fluctuations prevailing in the market and difficulty in trading with Rubber Board's trading companies were identified as the marketing problems in the society.

5.1.3.5 Political issues perceived by management

a) Problems related to politics were absent in the society which impacted a lot to the smooth functioning.

5.1.3.6 Legal issues perceived by management

a) No legal issue existed in the society.

5.1.3.7 Socio-economic profile of employees

a) Among the employees of the society, 56% of the respondents are of the age between 41-50 years, 33% fell under the category of 51-60 years and only one employee (11%) had the age ranged between 31-40.
b) Seventy eight percent of employees were female and the rest were males.
c) Fifty six percent of the respondents were found to be christian and belonged to general category.
d) All the respondents were married.
e) Majority of the employees (56%) had graduation and plus two as qualification whereas others had only primary education.
f) Fifty six percent of the respondents belonged to APL category and only one (11%) among the employees had technical education.
g) The monthly income of the respondents revealed that 67% of the employees acquired income between ₹5000-10000 and only 3 (2 male employees and accountant) had income above ₹10000.
h) Among the 9 employees, the society had 1 supervisor, 1 accountant and 7 labourers who work in procurement and processing of latex.
i) Sixty seven percent of the employees had a service experience of more than 10 years with the society and most of the employees had attended only one training programme for improving their skill.

5.1.3.8 Human resource related problems perceived by employees

a) "Staff paucity and employee overburden" and "delayed hike in salary" were the identified human resource problems fell under the category of 'risk'.

1.2 Suggestions

a) The society shall maintain the present functions, schemes and services rendered.
b) The society may take arrangements to attract more members either by encouraging members to produce good seedlings or by purchasing it from other nurseries.

c) The society may also collect rubber sheets along with latex to attract more members.
d) The society may conduct regular training and extension services to attract members and encourage rubber cultivation while more active members will increase the income of the society as it fetches ₹20/kg as service charge for collection and marketing.
e) The RPS by having a contract with private dealers can guarantee an assured profit to member growers as well as the society despite of the fluctuations in the market.
f) The society may ensure with adequate employees during peak season to reduce the workload.
g) The society may guarantee the employees with a regular income by signing a contract despite of the profit of the society.
h) The society may also sell the excess purified water for field use at reasonable price inorder to increase the performance.

5.3 Conclusion

The present study analysed the functions and services provided by RPS Poothrikka, financial performance and problems faced by the society. The major functions of the society include production, procurement, processing and marketing from which processing was found to be the major one. The study also found out that the Rubber Producers' Incentive Scheme (RPIS) adopted by the society imparted interest in cultivation by grower members and also found different schemes under which the society receives financial assistance from Rubber Board. The social benefits of the society to its members were also analysed. It includes forum for discussion, helping to uplift the standard of living, act as a nodal agency and local area development. All the 11 ratios considered under study of financial performance showed positive result. Even though the fire accident occurred in the year 2010 accounted for an increase in amount due to creditors and hence turned out to be a liability to the society, in general, the society was found to be in a good financial position. No administrative, structural, political and legal issues existed in the society. Lack of nurseries for supplying good quality, high yielding planting materials to the

needy growers, price fluctuations prevailing in the market, irregular supply of latex by members and difficulty in trading with Rubber Board's trading companies were the major identified functional problems of the society. However, the human resource related problems opinioned by the employees were "inadequate staff for procurement and processing" and "delayed hike in salary".

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APPENDICES

Appendix – I

Kerala Agricultural University
College of Co-operation, Banking & Management
Performance evaluation of Rubber Producers' Society Poothrikka, Ernakulam district

SCHEDULE FOR INSTITUTION

1. Name of the institution :
2. Date of registration
3. Area of jurisdiction :
4. Objectives
5. Membership criteria :
6. Details of membership from 2008-09 to 2017-18

Year	Total members	Active members
2008-09		
2009-10		
2010-11		
2011-12		
2012-13		
2013-14		
2014-15		
2015-16		
2016-17		
2017-18		

7. Details of infrastructure facilities

Sl. No.	Item	Extent/ Quantity	Written Down Value as on 31/03/2017 (₹ in lakhs)
1.	Land		
2.	Building		
3.	Computer		
4.	Dish and vessels		
5.	Furniture and fittings		
6.	Plant and Machinery (including ETP)		

8. Organisational structure :

9. Details of sale of estate inputs from 2008-09 to 2017-18

Year	Input sale
2008-09	
2009-10	
2010-11	
2011-12	
2012-13	
2013-14	
2014-15	
2015-16	
2016-17	
2017-18	

10. Details of procurement from 2008-09 to 2017-18

Year	Input sale
2008-09	
2009-10	
2010-11	
2011-12	
2012-13	
2013-14	
2014-15	
2015-16	
2016-17	
2017-18	

11. Steps in the determination of Dry Rubber Content

12. Processing procedures

13. Details of marketing from 2008-09 to 2017-18

Year	Input sale
2008-09	
2009-10	
2010-11	
2011-12	
2012-13	
2013-14	
2014-15	
2015-16	
2016-17	
2017-18	

14. Details of schemes and policies of the society
15. Details of training and information provided by the society
16. Details of other services provided if any

Appendix – II

Kerala Agricultural University
College of Co-operation, Banking & Management
Performance evaluation of Rubber Producers' Society Pootrikka, Ernakulam district

SCHEDULE FOR MANAGEMENT

1. Socio-economic profile of management

1. Name :
2. Age :
3. Gender : Male / Female / Transgender
4. Religion : Hindu / Muslim / Christian
5. Caste : SC / ST / OBC / OEC / General
6. Marital status : Married / Unmarried / Widow
7. Education : Illiterate / Primary / High school / UG / Others
8. Economic status: : APL / BPL
9. Employment status: : Self employed / Wage employed / Unemployed
10. If Self employed : Agriculture / Service / Business / Others
11. If wage employed : Government/ Private / Agricultural Labourers / Non-agricultural Labourers
12. No. of family members : 2/ 3/ 4 / 5 and above
13. No. of earning members : 0 / 1 / 2 / 3 and above
14. Monthly income : < 10000 / 10000-15000 / 15000-20000 / 20000-25000 / > 25000
15. Source of income : Agriculture/Salary/Rent/Wages/Profit/Others
16. Year of acquiring membership in RPS Pootrikkka :
17. No. of years as executive committee member : Up to 10 years / 11-20 years / 21-30 years
18. Are you a member of any other society? : Y/N
19. If 'Yes', how many? : 2/3/4 and above
20. Are you a member of
    a) Political party : Y/N
    b) Local administration : Y/N
    c) Voluntary organisation : Y/N

d) Religious organisation : Y/N
e) Others (Specify) : Y/N

2. Problems faced by RPS Pootrikka

Sl. No	Administrative problems	SA	A	MA	DA	SDA
	a) Related with executive committee meeting					
1.	Executive committee meetings are not conducted regularly					
2.	Notice of executive committee meetings are not received in time					
3.	Agenda for the executive committee meetings not intimated in advance					
4.	Documents/information for deliberations in executive committee meetings not circulated in advance					
5.	Executive committee meetings usually resorted to ad hoc decisions					
6.	Executive committee meetings were suspended due to insufficient quorum					
7.	Executive committee meetings were conducted even without quorum in exceptional cases					
8.	Executive committee meetings were inconclusive of agenda of meetings					
9.	Seldom involve in day to day managerial issues of the society					
10.	Seldom monitor the implementation of decisions of executive committee meeting					
Sl. No.	**b) Related to General body**	**SA**	**A**	**MA**	**DA**	**SDA**
1.	GB meetings are not conducted regularly					
2.	Failed to circulate GB notice in time					
3.	Agenda for the GB meetings not intimated in advance					
4.	Documents/information for deliberations in GB meetings not circulated in advance					
5.	Occasional attendance in GB meetings					
6.	Rare involvement in discussions in the GB meetings					
7.	GB meetings usually resorted to ad hoc decisions					
8.	GB meetings were suspended due to insufficient quorum					

9.	GB meetings were conducted even without quorum in exceptional cases					
10.	GB meetings were inconclusive of agenda meetings					
11.	Delay in implementing decisions of GB					
Sl. No	**c) Related to audit**	**SA**	**A**	**MA**	**DA**	**SDA**
1.	Delay in conducting annual audit					
2.	Delay in rectification of audit defects					
3.	Down gradation of audit classification of the society					
4.	Inquiry was ordered based on audit report/other reasons					
Sl. No	**Structural problems**	**SA**	**A**	**MA**	**DA**	**SDA**
1.	Unethical and poor management practices					
2.	Lack of modern management techniques					
3.	Bureaucracy in administration of society					
4.	Predominance of vested interest of a particular person or class					
5.	Absence of regular performance appraisal of employees					
Sl. No	**Functional problems** a. Problems related to production perceived by management	**SA**	**A**	**MA**	**DA**	**SDA**
1.	Latest technical knowledge is not disseminated to the growers in the area of latex production					
2.	Leaf and soil analysis and other tests are not conducted for better production					
3.	Lack of nurseries for supplying good quality, high yielding planting materials to the needy growers					
4.	Estate inputs are not distributed to the growers					
5.	Price fluctuations prevailing in the market affects the cultivation					
Sl. No	**Functional problems** b. Problems related to procurement perceived by management	**SA**	**A**	**MA**	**DA**	**SDA**
1.	No regular supply of latex from members					

2.	Price fluctuations in the market affect the procurement of latex					
3.	Procurement get reduced due to the unavailability of tapping equipments					
4.	Lack of transportation affects the quantity of procurement					
5.	Lack of collection centers to procure the latex of member growers					
Sl. No	**Functional problems** c. Problems related to processing perceived by management	**SA**	**A**	**MA**	**DA**	**SDA**
1.	Smoke houses and joint community processing center does not improves the quality of the product					
2.	No sufficient technology to produce good quality sheets					
3.	Contaminated water from the processing center pollutes the surrounding area.					
4.	Difficulty in storage of processed sheets					
5.	Non-utilization of ETP					
Sl. No	**Functional problems** d. Problems related to marketing perceived by management	**SA**	**A**	**MA**	**DA**	**SDA**
1.	Procured latex and processed sheets are not marketed collectively at a better price					
2.	Price fluctuations prevailing in the market affects marketing					
3.	Difficulty in trading with Rubber Board's trading companies					
4.	Difficulty in dealing with private dealers					
5.	Difficulty in transportation for marketing					
Sl. No	**Political issues as perceived by the management**	**SA**	**A**	**MA**	**DA**	**SDA**
1.	Over politicization					
2.	Predominance of vested interest of a particular person's political view					
3.	Election of executive committee members are influenced by the politics existing in the locality					
4.	Heavy dependency on government capital rather than society's profit					
5.	Marketing is influenced by interests of political					

	leaders in the locality					
Sl. No	**Legal issues as perceived by the management**	**SA**	**A**	**MA**	**DA**	**SDA**
1.	Corruption					
2.	Election of office bearers not conducted at the annual general body as per rules					
3.	Audited accounts and annual performance report are not submitted to the annual general body					
4.	Enrolment of members to the society not as per act and rules					
5.	Annual budget and performance report are not scrutinised					
6.	Expenditure for the day-to-day functions not as per the approved budget					
7.	Monthly accounts of receipts and payments are not approved at the monthly executive committee meeting					
8.	Neglects tri-monthly& annual stock verification					
9.	Annual fee collections are used for the day-to-day expenditure of the society.					

(SA- Strongly Agree. A- Agree, MA- Moderately Agree, DA- Disagree and SDA- Strongly Disagree)

Appendix – III

Kerala Agricultural University
College of Co-operation, Banking & Management
Performance evaluation of Rubber Producers' Society Pootrikka, Ernakulam district

SCHEDULE FOR EMPLOYEES

1. Socio-economic profile of employees

1. Name :
2. Age :
3. Gender : Male / Female / Transgender
4. Religion : Hindu / Muslim / Christian
5. Caste : SC / ST / OBC / OEC / General
6. Marital status : Married / Unmarried / Widow
7. Education : Illiterate /Primary / High school / Others
8. Economic status : APL / BPL
9. Technical education : Y/N
10. Monthly income : < 5000 / 5000-10000 / >10000
11. Designation : Supervisor / Accountant / Peon / Others
12. Years of service : Up to 10 years / 11-20 years / 21-30 years
13. Training programmes attended : 1/2/3/4/5/6/7 and above seven

2. Human resource related problems of the society

Sl. No	Statements	SA	A	MA	DA	SDA
1.	Lack of professional skills					
2.	Staff paucity and employee overburden					
3.	Over aged staff					
4.	Lack of training programmes					
5.	Absence of good work culture & commitment					
6.	Delayed hike in salary					
7.	Absence of regular performance appraisal of employees					
8.	Poor interpersonal relations					
9.	Increasing employee apathy					

(SA- Strongly Agree. A- Agree, MA- Moderately Agree, DA- Disagree and SDA- Strongly Disagree)

ABSTRACT

PERFORMANCE EVALUATION OF RUBBER PRODUCERS' SOCIETY POOTHRIKKA, ERNAKULAM DISTRICT

By

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ABSTRACT OF THE THESIS

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ABSTRACT

India is the 5th largest producer of Natural Rubber (NR) in the world. Indian rubber plantation sector is dominated by small holdings, which account for almost 88% of the total rubber production in the country. The preponderance of small rubber growers makes the sector vulnerable to exploitation by middlemen and also difficulties in gaining access to technology and information. Lack of availability of timely and adequate credit, rapid rise in the wages of labourers and increase in the price of fertilisers were the other major problems faced by the small rubber growers. Only institutional support built upon a community basis would help empowering the framework of small farmers to manage adequate market strengths and also this would help farmers to get a realistic margin. Therefore the Rubber Board promoted the formation of small voluntary associations of small growers called Rubber Producers' Societies (RPSs) which are free from political and bureaucratic control or intervention. This opened a new opportunity for the extension services of the Rubber Board.

The present study entitles "Performance evaluation of Rubber Producers' Society Poothrikka, Ernakulam district" was undertaken with the objectives viz., to analyse the functions and services provided by Rubber Producers' Society, to examine the financial performance of the society and to study the problems faced by the society.

By considering the accomplishment of thesis works amidst of COVID -19 outbreaks, Ernakulam district was purposively selected for the study. The secondary data for studying the first two objectives was collected from the annual reports for ten years (from 2008-09 to 2017-18) of the society and was analysed with the help of statistical tools such as growth index, CAGR and financial ratios. The primary data for examining the problems existing in the society was collected from president, executive committee members (6) and employees (9) of RPS Poothrikka using a structured interview schedule. The data thus collected was analysed using the tools such as growth index, Compound Annual Growth Rate, liquidity ratios, profitability ratios, activity ratios, solvency ratios, indices and percentages.

By analysing the first objective, it was found that sale of estate inputs, collection of latex from member growers, processing of RSS 1X & RSS 4 and marketing of processed sheets, implementation of Rubber Producers' Incentive Scheme, extension services, training etc., were the major functions and services provided by the society whereas, marketing was opinioned as the major function by the executive committee members. Unpleasant weather condition, grower's reluctance in harvesting due to persistent low prices during the last few years, high level of incidence of abnormal leaf fall disease etc., were identified as the reasons for the decline in cultivation of rubber.

The financial performance of the Rubber Producers' Society Poothrikka gives the outcome that all the 11 ratios considered under study shows positive results. Even though the fire accident occurred in the year 2010 accounted for an increase in amount due to creditors, the society was found to be in a position to meet the claims and debt obligations in the short run, usually within one year when they become due without raising external fund. RPS Poothrikka also maintained a good profitability ratio which showed the position of society in creating enough operational profit from their assets. Since all the four activity ratios of the society were found to be good, it can be concluded that the assets of the society are being used effectively and efficiently by the management to generate maximum possible revenue. As the debt-equity ratio of the society is less than 1 for almost all years, it can be concluded that the investors (members) have more stake in the business assets.

The identified problems faced by the society were lack of nurseries, irregular supply of latex, difficulty in trading with Rubber Board's trading companies and price fluctuations. Staff paucity & employee overburden and delayed hike in salary were the identified problems faced by the employees.

The study therefore suggests that the society should make arrangements to attract more members either by encouraging members to produce good seedlings or by purchasing it from other nurseries, collect rubber sheets along with latex, conduct regular training and extension services to attract members and encourage rubber cultivation while more active members will increase the income of the society as it fetches ₹20/kg as service charge for collection and marketing. And also involving in agreement with dealers can guarantee an assured profit to member growers as well as

the society despite of the fluctuations in the market. Only with proper intervention of RPS with the help of Rubber Board on the above mentioned areas can encourage the farmers to continue the rubber cultivation despite of the price fluctuations in the market.