CHAPTER I

BACKGROUND OF THE STUDY

1. 1. Introduction

Small scale industry occupies a prominent place in the industrial economy of India. Its contribution in terms of number of units, employment and the industrial production is impressive in the growth trajectory of Indian economy. It has also found a place of prominence in successive Industrial Policies of India ever since 1948. The Industrial Policy Resolution of 1956 emphasised that small scale industry provides immediate large scale employment; it offers a method of ensuring a more equitable distribution of national income and facilitate an effective mobilisation of resources of capital and skill, which might otherwise remain unutilised. The traditional small scale industries like coir, cashew, handloom, handicrafts, and khadi along with the small business units such as electronic goods in the modern sector are having potentialities of employment for the growing population in the country.

Coir industry is an important small scale industry contributing significantly to the economy of the major coconut growing States of Kerala, Tamilnadu, Andhra Pradesh, Karnataka, Maharashtra, Goa, Orissa, Assam, and the Union territories of Andaman & Nicobar, Lakshadweep and Pondicherry. Due to its export potential there has been concerted efforts and initiatives on the part of the central government for the promotion of coir industry. Special emphasis has been given in the Seventh Plan for the expansion of home market, product diversification, adoption of new technology, research and development, training for artisans, and
social welfare measures for coir workers, most of whom are women. The Eighth Plan programmes aimed at increased utilisation of coconut husk for production of coir fibre, growth of the domestic market, strengthening of research and development to find out new uses of coir fibre especially in the areas of geo-fibre, fire retardant, cement and gypsum polymer development, acquiring of new technology like PVC-tufted coir products, encouragement to cooperativisation and providing social welfare, civic amenities and medical facilities to coir workers. The export earnings of coir showed an increase of 26 % i.e., from Rs.639.97 crores in 2008-09 to Rs.804.05 crores in 2009-10 (GOK, 2010) and it indicates the scope for further expansion of the coir industry in India. India holds third place in the world production of coconut after Indonesia and Philippines and therefore secure predominance over the coir industry in the world. In India coir industry is concentrated in Kerala, the land of coconut. Over 70% of coir and coir products produced in India originates from Kerala state and the major share of the remaining is produced by Tamilnadu and Karnataka (KITCO, 2005).

The coir industry, which forms the main plank of the economy of the coastal areas of Kerala, is one of the oldest and most traditional industries in the state. Coconut husk being the raw material for the coir industry, coir production depends mainly on coconut production and the areas where it is abundantly available. However, in the case of production of coconut even now Kerala contributes 18 % of the world production and 37 % of the Indian production of coconut and thereby ensure an equal amount of coconut husks. The geographical location of this state provides a salubrious climate for the large scale cultivation of coconut palms and its winding network of rivers, canals, lakes, lagoons and estuaries is an enormous inter connected, web of water ways. Virtual forests of
coconut palm spread across these flat, green lands providing further a unique and
distinct facility for the retting of coconut husks, that constitute the basic raw
material for the industry, have helped in concentrating this industry in and around
coastal area (Murugesan, 1991). Natural facility, which do not seem to exist as
such anywhere in the other large coconut producing countries has been fully made
use of by the generations of men and women who inhabit this part of the country.
In addition, traditional technology, low capital investment and the traditional skill
of the local workers are the factors contributing to the concentration of this
industry in Kerala.

1. 2. Coir Sector and the Kerala Economy

The coir industry, the traditional agro-based industry of Kerala has a very
important position in the economy of the state. Out of the Kerala's total cropped
area of 2694943 hectares, coconut occupies 787769 hectares which is 29 % of the
total cropped area. The area under coconut cultivation has increased from 505035
hectares to 925035 hectares over the period 1961-62 to 1999-2000 and then loses
ground and fell down to 787769 hectares in the year 2008-09 (GOK, 2010).
However, contribution of the industry to the state domestic product has been
declined to less than 1.5% of the state domestic production (Issac et al, 1992).
Kerala accounts for about 16 % of world production and over 47 %of the Indian
production of coir fibre. The industry makes significant contribution to the foreign
exchange earnings of the country. It is also the bread winner of 3.66 lakh poor
people from 2.13 lakh households comprising 4.5 % of the total working
population of the state. The Coir workers are mostly from among the rural poor of
the backward classes, of whom 80% are women, residing in the poverty stricken
densely populated coastal belt of Kerala where there is scarce alternative source of
employment (Nair, 1977). Because of these reasons both central and state
governments extend priority treatment to protect this traditional agro-based rural
household industry in all five year plans.

1.3. Crisis in Coir Industry

Since the industry is relatively export oriented, its growth is no doubt a
gambling with the foreign demand for coir and coir products. Any adverse effect
in the foreign demand will invite uncertainty in the coir industry in Kerala creating
a significant impact on income, employment and wage of the poor workers. Indian
coir industry had undergone bitter experience during the two great World War
periods when sea routes to foreign countries were disrupted consequent upon war
and which resulted in a fall in export (Nair, 1977). The over dependence on export
oriented market made the industry susceptible to competition from coir produced in
other regions and from substitute products. The coir industry then onwards
witnessed a gradual decline and therefore large scale factories were closed down
and smaller units sprang up (Issac et al, 1992). In the post independence period, the
coir sector saw the dissolution of a number of large factories, with laid-off workers
being given machinery as part of their retrenchment package. This was the start of
the ‘coir cottage industry’ that continues to dominate the production model today
(BDS, 2011).

In the pre and post independence period, the foreign manufacturers and
exporters were forced to quit coir industry and thereafter the entire structure of the
industry collapsed (Coir Board, 1969). As the organized nature of the coir industry
crumbled down, workers and small manufacturers organized individual household
coir units for their existence. With the result, the coir industry resumed its old
cottage type unorganized structure. Though the Indian manufacturers took over certain companies, they could not succeed as there was labour agitation for improved wages. The individual manufacturers wound up their units and slowly shifted their activity to trade, particularly export and thereafter these traders gradually turned to act as middlemen or agents of export trade. In due course they turned out to be the monopolists in the export market and they began to exploit these unorganized household manufacturers for whom there had not been any other mechanism to enter into the export market.

In the husk market also a few retters took over the control of the business and became the monopolist retters and they dictated the price of the husk and retted husk. Hence, any benefit consequent upon the price hike in the export market is immediately denied by hiking the price of retted husk.

1.4. Technology Adoption in Coir Industry

The technology followed in the industry was traditional and primitive which means the production process was based purely manual and not on any machine power. In all stages of production, from the collection of husks until its conversion to end products, it is labour intensive (Nair, 1977). The introduction of ratt (Spinning wheels) in the nineteenth century significantly increased productivity (Issac et al, 1992). Till 1970’s the only machinery used was the ratt for spinning and wooden looms for weaving (Nair, 1977). On account of the interest of protecting employment of the coir workers, the labour unions were not positive to accept mechanization in the earlier periods. However, at present the situation has been totally changed. The entire coir industry and even the cooperative sector have now to a certain extent, adopted mechanization because of
the non availability of workers to certain activities like retting, and weaving of certain varieties of products particularly mats with small size which fetch low wages to the workers. The industry is even now facing acute shortage of raw material, coir fibre and thereby it is forced to purchase the fibre supplied by the defibering mills of Tamilnadu at higher prices. The situation is so critical that if the arrival of Pollachi fibre is disturbed, the entire coir industry in Kerala would face a compulsory closure.

1.5. Interventions and Initiatives in Coir Sector

During fifties, significant changes had occurred in the industry, such as erosion of the cheap labour base of the industry, militant trade unionism, decentralization of production, emergence of co-operative structure, introduction of comprehensive controls, pressure for mechanization and the decline in foreign exports being some of the developments. The net result has been the continuation of under employment and low wages and resultant poverty among coir workers (Issac et al, 1992). The coir industry is the second most important source of livelihood after agriculture in the coastal belt of the state (Coir Board, 2002). Thus the protection of the industry and thereby the coir workers became the social responsibility of the government. To undertake this responsibility, government initiated actions to intervene in the affairs of the coir industry. In pursuance, the government passed the Payment of Wages Act, 1948 and the Minimum Wages Act, 1948 in order to protect the workers. Reports and studies (Issac et al, 1992; Nair, 1977 and Anandan, 2008) show that due to the manipulation of middlemen, these enactments failed to yield targeted results.
This situation compelled the erstwhile Travancore-Cochin state government to launch the Coir Development Scheme in 1950, to reorganize the coir yarn spinning under co-operative basis. The scheme envisaged to eliminate middlemen, to prevent adulteration and other unhealthy practices which lower the quality of products and loss of market and to ensure reasonable wages and regular work to the workers (GOK, 1961). Another aim of the scheme was to bring all the persons engaged in the various stages of the industry into the co-operative fold (GOK, 2002).

During the same period the government of India passed the Coir Industry Act, 1953 to deal with the problems of coir industry on all India basis. For that, an agency, Coir Board, Cochin, was established. Even after these interventions, the co-operatives continued to be controlled by larger producers and the husk merchants and the workers did not receive any benefit from the reforms (Menon, 1959). Then government introduced measures to regulate husk market and thus introduced Coir Retting (Licensing) Order, 1968. With this, a licensing system for retting of husks and controlling the price of retted husks for different areas was introduced. In 1972, a new scheme for reorganization of the co-operatives was introduced with the objective of complete co-operativisation of the entire spinning sector in a phased manner and envisaged to organize workers’ co-operatives rather than producers’ co-operatives. All the co-operatives were to undertake direct production in their work yards or in the member’s households after paying minimum wages. The production of the coir yarn by primary societies was to be lifted by the Central coir marketing societies on a ‘cost plus basis’. The coir producing areas in the state were grouped under nine projects and each project was put under one Project Officer appointed by the Government of Kerala. One Special
Officer (Coir) was appointed for the overall charge of the scheme. This setup has been made permanent and thus originated the Department of Coir Development under the Industries and Commerce Department of Government of Kerala.

The government again introduced another order, The Kerala Coconut Husks Control Order, 1973 with the objective of controlling the price of husks and regulates its movements to ensure steady supply of husks to the cooperatives at reasonable rates. Under this order the husk dealers were to take movement permits for transport of husk, the retters were to take licenses, different prices for different regions and directions were also issued for proper distribution of husks. Again government through a notification dated 20th July 1973 banned the husk beating machines with a view to providing additional employment to the workers. Kerala Coir Workers Welfare Fund Board was established in 1989 with the objective of implementing welfare schemes like pension, health packages etc. Technological reorganization in defibring and spinning sectors was introduced in 1992 as part of the development package, known as Integrated Coir Development Project (ICDP). This scheme was drawn up with a view to improve productivity, increase profitability, change the level of income, increase the number of days of employment and improve the working environment (Sundaresan, 2002). But these regulations have not been effective in ensuring the availability of husks for fair prices for the industry (Coir Commission Report, 2008). As a result of the New Economic Policy all the control and regulatory measures were withdrawn in the latter period.

Many expert committees and Task forces have gone into the problems of the coir cooperatives and opined that even after, all these governmental efforts, coir co-operatives continued to be poor performers mainly because of the
inadequacy in the availability of the retted husks at reasonable prices. The scarcity of coconut husk only tended to aggravate the issue over time (Issac et al, 1992). Only less than one third of the members of the society are actually found employment in societies and that too for part of the year (Nair, 1977). In Kerala it is estimated that out of the total production of coconut husk, 5802 million which is about 37 % of the Indian production, only 42 % is being utilized for coir production, leaving the major chunk, 58 %, unutilized (GOK, 2008). So it would be paradoxical that the societies and even the coir industry as a whole are finding it difficult to get the husk for the production process in the midst of abundance of husks availability. Thus, the coir industry particularly the coir co-operatives in Kerala experience difficulties in performance and survival due to the shortage of fibre, fall in prices of finished goods, rising wage rates of the workers and the increased cost of production, competition from Sri Lanka in the international market and the threat of substitute products like sisal from China and above all, the competition from the other states in India like Tamil Nadu, Karnataka and Andhra Pradesh.

1.6 Manufacturing Firm’s input output Relationship and Productivity Analysis:

The manufacturing firm’s input output relationship was put to study by Flux in 1913. Since then economists have developed literature on production function estimation, because much of the economic theory yield testable implications that are directly related to the production technology and optimizing behavior (Livinsohn et al, 2000). The trace of productivity analysis with respect to technology is visible from the theories of classical economists viz: Smith to
Ricardo and J.S.Mill. These exponents believed that introduction of new machines and technology not only enhances production efficiency but also leads to displacement of labour.

Neo-classical general equilibrium framework disagrees with the view of classical economists contended that increased efficiency would solve the displacement of labour and minimize unemployment. Keynesian school did not attempt to study the relationship between technological change and employment whereas Schumpeter observed technological change as the dynamics of the economic system (Sundaresan, 2002). The Neo-classical approach of estimating the marginal productivity of inputs like employment and measures of returns to scale and of productivity gave further impetus to research on technology adoptions and efficiency and productivity of firms with respect to outputs and inputs using production function frame (Diewent, 2003). Production function has been one of the most common empirical interests to economists and thus in recent years a surge in interest in productivity analysis at the micro level, with production establishments being the focus of attention (Arnold, 2005).

In majority of cases one tends to use Cobb-Douglas production function or log linear production function as it is a flexible translog function, which is in theory more attractive and less restrictive. The residual of this production function equation is the logarithm of plant-specific Total Factor Productivity (Livinsohn et al, 2000). The standard measurement of total factor productivity growth in economics was originated by Robert Solow and his method is known as Solow residual. The quality of TFP measurement was viewed by the economists with suspicion as the unobservable capital stock in computation is treated as investment and its unknown values at different periods are subject to significant measurement
errors. Many economists have emphasised, the Solow residual which assumes full efficiency. It represents a mix of changes in TFP and efficiency of utilization of factor inputs. Thus macroeconomic analysis of capital stock will bias an unadjusted calculation of the Solow residual as a measure of TFP.

TFP is intended as a measure of the efficiency of a productive process or a production unit. It is resulted to the idea of the capacity to produce over and above what is attributable to the concurrent expansion of input quantities, (Balakrishnan, 2004). Farrel, in his productivity efficiency theory, explained that to assess the technical efficiency of the firms the physical indicators such as capital-output ratio, capital- labour ratio etc. will be sufficient but for the overall efficiency of the firm, productivity efficiency or economic efficiency is proposed. This efficiency can be measured either using TFP or through a measurement of profitability (Farrel, 1957). For any such measurement a correct output values are essential and so in Indian manufacturing TFP estimates followed Value added frame work. Computing nominal value added is not a cumbersome job because it is the difference between the values of an industry’s output and inputs except labour. But to convert the nominal value added into real value added, two methods are available; one is single deflation and the other is double deflation. Coming to productivity accounting, Boumol effect which is explained in his work on unbalanced growth gets prominence. This theory says, sectors that grow slowly also tend to be ones with slow growing productivity (Balakrishnan, 2004).

1.7. Statement of the Problem

The literature reviewed indicates that the coir societies have been on the decline. Both production and employment are either stagnant or declining despite
the control and supportive measures and the investments of an enormous amount of resources by the government. With the infrastructural facilities available in the state and the strong support from the government, it should not have been difficult for the coir societies to take over a major share of the business of the coir industry and to provide regular employment and better wages to its members. The studies conducted earlier by experts and researchers like Nair (1997), Unnithan (1970), Rajendran (2003), Pylee (1975), Issac (1992) etc., concentrated mainly on modernization and trade, mechanization, technological changes, employment aspects, comparative analysis of co-operatives and private sectors etc. There has been no serious attempt in the literature reviewed to analyze how far the governmental policies and supportive measures helped the coir co-operative societies in Kerala to realize its envisaged objectives of providing employment and ensuring reasonable wages to its member workers. From the related literature reviewed pertaining to coir sector, the researcher could also find only a few studies that has attempted to analyze and compare the performance of the primary and manufacturing segments of the coir co-operative societies. Besides, these studies did not make any attempt on the impact of performance of coir co-operatives based on productivity analysis.

The various government policies and institutional measures to protect and revamp the coir industry has been criticized at different levels in the light of their performance. It is a bare fact that there is no guarantee of regular employment and better wage to the coir workers. This warrants a need to assess the impact of governmental policies and control and supportive measures on both the segments of coir co-operatives. In this study, an attempt is made to fill the visible gap in the
related literature by providing fresh evidence on productivity performance of primary and manufacturing sectors of the coir co-operative societies in Kerala

1.8. Objectives of the Study

- To trace the governmental policies and control measures adopted to protect coir co-operative societies in Kerala
- To identify the difference in the productivity performance of primary and manufacturing coir co-operatives.
- To examine the growth performance of the coir co-operatives in the context of new economic reforms introduced in India.
- To analyze the socio-economic conditions of the member coir workers in the co-operative societies in Kerala.

1.9. Methodology in Brief:

The study followed Survey method. Two types of data i.e., secondary as well as primary were collected for the research. The secondary data were collected from published sources. A structured schedule was prepared for collecting the primary data through survey. A pilot study was conducted for pre-testing the structured schedule. In addition, the socio-economic aspects pertaining to the member coir workers in the cooperative societies were also collected. After processing, the data analysis has been done by using STATA – a sophisticated statistical computer software. Both descriptive as well as inferential statistics, Partial and Total factor productivity (TFP) estimates based on Cobb-Douglas (CD)
production function and Levinsohn and Petrin (2003) model have been employed for the analysis. (A detailed discussion on Methodology is given in Chapter IV).

1.9.1. **Data Base and Sample**

The whole activity of research is done in four distinct phases, which are linked together but focuses on different aspects of the study.

In the Phase I, secondary source of data pertaining to details of coconut and Coir in the world, India and Kerala along with background of the coir industry in Kerala have been collected from different official/ institutional published sources.

For the purpose of the study the coir industry is divided into two main sectors viz.: Primary sector and the Manufacturing sector or Factory sector. The retting and spinning operations are mostly carried out in ‘primary sector co-operatives’ and in households and therefore these can be grouped into primary sector. The weaving of mats and mattings is the most important operation of the ‘mats and mattings co-operatives’ and therefore these societies are considered into manufacturing sector.

The study analyses the performance of the coir co-operative societies using unit level data gathered for the years 1980-81, 1990-91, 2000-01 and for the period 2001 to 2010 continuously for primary and manufacturing coir co-operatives. In Phase II of the study, the coir societies, which functions regularly from 1980-81 to 2008-09 in three districts, Alappuzha, Kollam and Thiruvananthapuram have been verified and listed.

The coir industry in earlier period was concentrated in port towns like Thiruvananthapuram, Kollam and Alappuzha and so, the coir cooperatives of these three districts have been selected for studying the primary sector. However, the
manufacturing operations are concentrated in Alappuzha district alone, so ‘Mats and Mattings societies’ were selected from Alappuzha as representative samples.

A stratified sampling design has been adopted for the study. The primary and manufacturing coir societies are taken as the stratum. In Phase III, out of the listed societies 10% were selected by circular systematic random sampling method for detailed study. After visiting these societies, details of variables required for the study like input (raw material), labour, capital, wage, intermediate input and output are gathered using a well structured schedule.

In Phase IV a socio-economic survey of the coir workers were conducted after taking samples from the list prepared out of the details gathered from the societies using a pre-tested structured schedule. Fifty households of coir workers each from the sample districts along with an additional fifty samples from Alappuzha to give adequate representation to the manufacturing sector have been selected randomly and enumerated.

1.9.2. Analysis of Data

For the analytical purpose descriptive as well as inferential statistics such as simple averages, compound growth rates, coefficient of variation, skewness measures, kurtosis measures and diagrams are used. In addition to this, for studying the productivity performance of the coir co-operatives, some selected indicators are also used. The foremost among them are partial productivity, factor intensity, factor growth rates, factor elasticity, profitability and total factor productivity (TFP) estimates besides computing the capital-labour ratio. Factor or partial productivity, defined as output per factor, labour, capital, input and intermediate input are the partial factor productivity measures identified in this
context. The capital-labour ratio, measured as real gross fixed assets divided by total number of persons engaged, is the other factor ratio used to capture the trends in performance of the societies. As regards TFP growth estimate the Cobb-Douglas (CD) production function is followed. To correct the biased parameter estimates this study employed the methodology developed by Levinsohn and Petrin (2003). Socio-economic condition of coir worker households were analysed using the selected deprivation indices.

1.10. Scope and Limitations of the Study

The Government of Kerala is giving priority treatment to the coir industry because it is a traditional, labour intensive and export oriented industry providing livelihood to about 3.66 lakhs poor people of backward classes living in coastal tract of Kerala. Both the central and state government, are spending considerable resources Form the First Five Year Plan onwards to protect the coir co-operative societies with the sole objective of providing employment all the year round and to ensure better wages to the workers. The studies conducted by various agencies and individual researchers reveal that coir co-operative societies are poor performers and these societies still depended on governmental supports and grants for survival. In this context, it is high time to examine how long this traditional industry can be protected in the context of New Economic Policies of the government viz: liberalization, privatization and globalization. The studies reviewed either recommends reorganization or modernization of the coir industry. Moreover, in the changing economic scenario and policy regime most of the studies lost their relevance as their recommendations have already implemented or became outdated. Of recent, no serious attempt has been made to conduct a
performance study of the primary and manufacturing sectors of the coir co-operative societies on productivity perspective. The present study would supplement a scientific base to take policy decisions on alternative measures to improve performance of the coir co-operative societies. Also the study will contribute to the knowledge domain to outline a new strategy by changing the existing strategy of spending governmental resources to protect the coir co-operatives.

Every care and precision has been taken by the researcher to make the study systematic and scientific to the core. However, the unavoidable deficiencies caused in the data due to the nature of such a widely dispersed traditional industry like coir, may compromise with sample size.

Moreover, the longitudinal nature of the study (three decades of continuous production activity) inhabited by the change in the socio-economic structure has caused its own limitations in meeting the requirements of the Livinsohn & Petrin Methodology.

Absence of scientific and systematic record keeping of many societies proved data collection tough and in extreme cases such societies had to be omitted from the final data base.

In the beginning stage of the study, the management of co-operatives showed reluctance to take the researcher into confidence and reveal the actual information regarding their activities. Considering the sensitiveness of estimation of TFP using LP method the researcher had to convince the societies who were deliberately hiding information, the scope of the research and ensured them that the data will only be used for research purpose.
Certain societies identified for survey were found to be not functioning though in the official records these societies are functioning regularly. To satisfy the requirements of the LP method those societies working and properly maintaining records for the entire period of study were selected and enumerated. Because of the dismal performance of a few societies, such societies in certain years showed negative Gross Value Added (GVA) which caused difficulty in taking log values. By using STATA software this issue has been overcome.

1.11. Chapter Scheme

The study is provided in six chapters.

The Chapter I provide introduction and background of the study with its theoretical base.

Chapter II gives review of available literature on coir industry and the coir co-operatives. The research studies and papers and the governmental reports are reviewed and included separately with a view to identify the critical gaps in the research pertaining to coir industry.

The methodology adopted for the study is explained in Chapter III.

In Chapter IV the development of the coir industry over the years is explored. It includes historical part and origin of the coir industry, location of the industry and its relation with coconut cultivation, features of the industry, structure of the industry, emergence of co-operatives, types, structure and organizational pattern of the coir co-operatives, governmental policies and supportive measures, etc.
Chapter V discusses the details of variables used in the study viz., output, labour, capital and intermediate inputs for analyzing the performance of coir operatives. A comparative analysis of productivity performance of the two sectors namely primary and manufacturing is also discussed in detail in this chapter.

The present plight of the households of coir workers with respect to their socio-economic conditions are discussed in Chapter VI.

The final Chapter presents the summary, conclusions and findings of the study.