Chapter 2

Design of the Study

Statement of the Problem

Khadi & Village industries play a very vital role in the integrated development of the rural economy by accommodating the surplus labour force in the rural areas. These industrial units, as the name implies, enable integrated development of the rural economy by supporting the primary sector with necessary inputs and through adding value to the agricultural produce. Khadi and Village Industrial activities are carried out and promoted further by a number of institutions having faith in the Gandhian ideology. Co-operatives institutions, public and private charitable trusts, individual proprietors, small-scale and cottage industries, etc., are the most common ones which deserve mention here. Khadi Craft and Khadi Gramodyog Bhavans and Sarvodaya Sanghams stand out for their dedicated service for about six decades in the K&VI sector. A detailed study of the performance of the K&VI sector would facilitate policy direction. This study focusing on the performance of Sarvodaya Sanghams assumes significance in the context of its geographical coverage, numerical strength and capacity to generate employment. As a prelude to this study the researcher undertook a review of literature in order to gauge the development in this sector. The review of literature also aimed at identifying any gap in the efforts taken by scholars and administrators.
This chapter is therefore designed with a view to understanding and presenting the status of research in the field of K&V by different authors, especially on the Sarvodaya Sanghams, small-scale units and other relevant institutions, which are involved in Khadi and Village Industrial activities.


The All India Saranjam Sammelan Report (1968) ⁵ and the Report of the Committee for Science & Technology Planning for Khadi & Village Industries (1975) ⁶ threw light on the need for and possibilities of improvement in the technology of Khadi & Village Industries. The report of the Khadi & Village Industries Review Committee (1983) ⁷, and the report of the KVIC (1998) ⁸ observed certain common defects in Khadi & Village Industries units like frequent changes in the composition of state bodies, non-availability of technical and managerial staff, absence of in-service training, deficiency in maintenance of accounts and lack of financial discipline. Further, it pointed out that in many cases diversion of funds, from working capital to capital expenditure, arises due to escalation in the cost of materials for construction of buildings, machinery etc. For this, the Committee recommended that the KVIC must evolve a system of financial discipline. It was suggested that a new financial procedure based on the past performance and other capabilities might be put in place. The above Review Committee (1983) ⁷ recommended that in depth studies should be conducted in respect of two healthy institutions with reference to their level of financial
transactions, and fund flow and lessons should be drawn from such studies for evolving the guidelines for implementation.


Patel, A. R., (1978), in his study “Financing Village Industries: Problems”, argued that there is much scope for the development of village industries. He recommended the setting up of a raw materials bank, enough marketing outlets, technical guidance and financial facilities to artisans for meeting the capital expenditure and working capital needs.

Sudalimuthu, S., (1986), in his study “Adaptability of Accepted Marketing Practices in Khadi & Village Industries”, studied the marketing practices adopted by them. He urged the modernization of industrial units and the introduction of innovative and imaginative methods in advertisement besides expansion of the product lines and varieties, especially in Khadi.

and correlation analysis to analyse and generate a volume of data. The production and sale of KVI products, working capital management practices and assets utilization by the different units run by the Tamil Nadu Khadi and Village Industries Board were studied in detail. He concluded that the financial management practices of the TKVIB were not satisfactory and suggested to improve the financial conditions by fuller utilization of assets to improve the profitability of the K&VI units.

Laxmidass, (1991), in his paper “Why Khadi and Village Industries?” explained the need for Khadi and Village Industries and their role in the development of the rural economy. He stated that such industries solve the unemployment problem of the country and can help to promote the socialistic pattern of society envisaged in our Constitution. He insisted on the need for decentralized means of production in the K&VI industry.

Meenakshi Sitndaram, N., (1991), in his research work “Khadi & Village Industries Institutions in Tamil Nadu - A Study of Financial Performance”, examined the financial performance of selected agencies of Khadi & Village Industries in Tamil Nadu. In the light of his findings the author recommended the introduction of production planning, inventory control and collection drive etc., towards rejuvenating the management of working capital. He also felt that by fixing suitable working capital norms the performance of K&VI units could be improved.

Mohan Rao, K., (1991), in his report on the K & VI programme in Tamil Nadu and Pondicherry, examined the production, sales and employment performance of the K&VI sector in these two states during the period between 1987 and 1991. The study reported that Tamil Nadu alone contributed about 15-17 per cent of the total K&VI product sales in India. He suggested the need for identifying suitable marketing strategies and training programmes for such industries.
Palanisamy, K. N., (1991), in his study “A Short Review of the Tamil Nadu Sarvodaya Sangh and Its Subsidiaries”, revealed the general pattern of production and sales of Khadi & Village Industries products and the major strategy followed by them for marketing their products. The study was conducted during the period from 1983-84 to 1989-90. He analyzed the production, sale and employment pattern of a few Sarvodaya Sanghams in Tamil Nadu. The study indicated the positive demand for K &VI products among the people and the study recommended that the Sanghams should concentrate more on production of select products to meet the demands prevailing in the market.

Ajith Singh, (1993), made an attempt to study the production and sale of Khadi and Village Industries products produced by the Palani Sarvodaya Sangham. In his study, he found that the sale of Khadi products stood first and non-textiles products occupied the second position in sales.

A study on the production and sales performance of power ghani units of the Pollachi Sarvodaya Sangham by Ananda Rajkumar (1993) highlighted that the rate of production and sales were on the decline due to irregular labour supply and inadequate sales outlets. He attributed the lower sales performance during the study period to the above factors. Hence, he suggested that the Sangham should take measures to open more number of sales outlets to improve the sales performance as an important step towards promotion of power ghani units.

Sakthivel, (1993), in his study “Production and Sales of Olympic Steel Industries”, revealed that the production machines were not utilized to the fullest extent. The machines were used only on shift basis. The under utilization of existing assets led to poor operating efficiency and low profitability. The study urged the need for appropriate measures to improve the assets utilization for improving the financial base.
Sasikumar, (1993), conducted a study on “Marketing of Khadi and Village Industries Goods through Khadi Craft Sales Depot.” The study brought out that the sale of Village Industries products was found to have increased over a period of time without declining, which indicates moderate sales performance of VI products.

Sathiyamoorthy, (1993), in his study “Production and Sales Pattern of Textile and Non-textile Products of Khadi Sector”, revealed that the production of textile goods is always higher than that of non-textile items, contributing about 80 per cent to the total sales.

Dharmalingham, V., (1995), in his study “The Performance of Madurai North Sarvodaya Sangham”, analysed the profitability in terms of production and sales performance from 1983-84 to 1992-93, using ratio analysis. The study also analysed the length of operating cycle of working capital. He found that the demand for Khadi items was not stable. The production also recorded ups and downs in many of the years under study.

Meenakshi Sundaram, N., (1995), analyzed the marketing performance of various K & VI products produced by the GK&VIPCT, Gandhigram. The study revealed that the sales of Silk Khadi was unsatisfactory. The study concluded that the sale of Village Industrial products accounts for a lesser proportion in total sales when compared to Khadi products.

RadhaKrishnan, R., (1995), in his study “Management of Finance in Khadi and Village Industries Institutions”, evaluated the performance of the four different K&VI units in Tamil Nadu on the basis of use of internal funds, disposal of unused and obsolete fixed assets, liquidation of current assets and use of long-term and short-term assets. He concluded that short-term funds occupied the main
place in the flow of funds. Profit and retained earnings are found to have formed a negligible portion in the capital structure in these four institutions.

Varadarajan, R., (1995), in his study “Revival of Sick Small Scale Industrial Units in Madurai City,” used the of Z score technique to identify the major reasons for the failure of such units. He reported that the raw material shortage, inadequacy of finance, demand recession, under utilization of capacity, obsolete machinery and technology, managerial incompetency and incompetent marketing are the major reasons for the failure of the units in the market and to become sick in due course.

Balasubramania, M.H., (1995), in his article “Small-Scale Industry in the Liberalization Era: Emerging Dimensions of Need for Finance”, emphasized the need for technology upgradation and modernization and expansion of K &VI products and transformation of traditional small industrial units to promote the sector in the future.

Kamnan Nair, et al (1996), in their study “Inventory Management through Just In Time Methodologies in Rural Industries,” studied four different K&VI units, namely, GK&VICT, Madurai North Sarvodaya Sangham, Palani Gandhi Seva Sangham and Grama Rajya Nirman Sangham, Chatrapatti during the period between 1983-84 and 1994-95. Statistical tools like ratios and simple correlation and regression analysis were used in their study. They argued that one of the major issues in rural industrial units was huge stock of inventories that affect profitability. Hence, scientific methods like JIT could be installed in such industries that will really help them to sustain their activities and maximize the returns through inventory cost reduction.

Kuethagi, (1996), studied the sales performance of Madurai Sarvodaya Sangham. Her study revealed that the Sangham produced less than its capacity and hence there is under utilization of existing assets. She
concluded that there is enough scope for increasing the production and improving the market potential.

Meenakshisundaram, R., (1996) in his study “The Sale of Khadi and Village Industries Products”, examined the production and sales performance of the TNSS for the period between 1984-85 and 1994-95. He was of the opinion that the salary and wage administration should be given top priority in order to improve the sales performance of the TNSS. Further, the study also recommended the need for advertisement on modern lines to attract the customers.

Pandit rao, Y. A., (1996), in his article “Financing K&VI in the Changed Economic Scenario,” has pointed out certain deficiencies in financing K&VI activities. According to him norms adopted for large industries are rigidly applied in the case of unorganized cottage and village industries too without realizing the distinct characteristics and differing working capital requirements for such labor-intensive industries. The working capital requirements for these industries are usually more, since the raw material has to be collected and stored at different points and the finished products are collected at different time intervals. Similarly, cash payments have to be made from time to time. Banking facilities are not adequately available for units in the remote areas. To keep the work going, adequate provision of raw materials and cash has to be made. The credit cycle of the K&VI sector is also usually long. The study insisted that the government has to initiate measures to provide the required financing and banking facilities for the improvement of such industries.

Raoot, (1996), in his article “Low Cost Management Strategies for Continuous Improvement and Growth of KVIC”, has stated that organisations can improve their performance by adopting suitable models, methods, strategies and management techniques. It is not the tool which
matters but the ways and methods in which tools are being adopted by the organisation. Organisations cannot avoid decay unless they keep on improving their performance and efficiency. Hence, he suggested that Kaizen tools could be successfully adopted by K&VI units for improving their efficiency.

Chauham, et al. (1997), analyzed the KVIC-export promotion strategies and they suggested the establishment of a separate merchandising house in the country exclusively for the export promotion of K&VI items. It is worth considering.

Kannan Nair, N. (1997), made a comprehensive analysis of the production and sales performance of the Gandhigram Khadi and Village Industries Public Charitable Trust for the period between 1983-84 and 1994-95. It was a case study and used simple statistical tools like ratios and averages. The study concluded that the production and sales performance of the Trust with reference to the study period was satisfactory. The study recommended that identification of profitable activities from the list of activities promoted by the KVIC and orientation / training of the employees and personnel in such profitable trades would help further development of the Trust.

Radhakrishnan, S., (1997), in his study “Khadi & Village Industries in Thiruchirappalli District- A Study of Financial Management”, has suggested the introduction of a common marketing organization. He found that, in the case of sample Sanghams, the cost of production was high during the study period and urged the need for initiating suitable measures to reduce the cost of production of K&VI items in such institutions.

Seerengarajan, R., (1997), in his study “The Financial Performance of Handloom Industry”, stressed that efforts must be directed towards reducing
the closing stock of finished goods as it directly affects the profitability. Further, the industry should improve its debt collection cycle in order to improve its financial performance and profitability.

Veerapandian, K. A., (1997), in his study “The Performance of TSS Soap Unit of Thirumangalam”, analysed the financial performance of the unit in terms of production and sales during the period from 1991 to 1995. The study found that the unit was facing stiff competition from both organized and unorganized sectors. Therefore introduction of suitable scientific management techniques, imparting quality improvement consciousness, adoption of modern sales promotional techniques etc., are felt to be the need of the hour to improve the general performance of the unit.

Anand, E., etal. (1998), in their study “The Management of Working Capital in Soap Industry at Gandhi Neketan Asram- T.Kalluppatti”, studied the management of working capital for the period between 1987-88 and 1996-97. The authors have used relevant liquidity and turnover ratios for their study. They found a satisfactory level of short-term financial position during the study period. They emphasized the need for reducing the length of the operating cycle and the reformulation of the credit policy for quick collection of receivables. The study attributed the poor financial status to the ineffective management practices of inventory and receivables.

Kannan Nair, N., (1998), has analyzed the financial performance of the Khadi and Village Industries in Dindigul District. The study discusses in detail the fluctuations in production, value addition and sales due to the competition from the organized sector, and the high cost of marketing. He reiterates that the government should give topmost priority to the K&VI sector for generating employment in the rural areas.
Meenakshi Sundaram, N., (1999), in his study “The Financial Performance of Khadi Gramodyog Bhavan- Chennai,” analysed the production and sales performance and employment opportunity in Khadi Gramodyog Bhavans in Chennai City. He used simple ratio analysis in his study. He found that the production and sales of K&VI items have shown a declining trend particularly due to the closure of non-viable items such as bakery and handicrafts. He concluded that the growth in sale performance has shown a ‘U’ turn. More emphasis on “buy and sell” rather than “make and sell” reduced the overheads to a considerable extent during the study period, which helped in improving sales volume from 1997-98 onwards. He also identified that the Bhavan is comfortable in its short-term financial position and inventory management.

Radhakrishnan, S., (1999), in his study “Management of Working Capital in Tiny Sector”, analysed the length of the operating cycle in three different K&VI units in Tamil Nadu. He found that improper management of inventory resulted in the accumulation of stocks on hand. Wrong estimation of working capital, high rate of interest on borrowings and delay in sanction of loan to these units were the major working capital problems. The study emphasized the need for systematizing the marketing network, adaptation of scientific inventory management practices, credit purchase and cash sales, and reduction of value of current assets in accordance with market price fluctuations for better working capital management. The study urged the need for trained managers to look after the financial management of these units.

Kameshwaran, M., (2000), in his study “Financial Performance Analysis of Ramanathapuram District Sarvodaya Sangham -Srivilliputhur”, revealed that the poor financial performance of the Sangham was due to inefficient use of fixed assets and poor marketing strategies adopted by the
Sangham. The study was conducted during the period between 1990-91 and
1998-99. He used ratio analysis. The study identified the major reasons for the
failure of the Sangham and concluded that assets management practices and
inefficiency in the identification of demand for Khadi and VI items were the
major reasons for the declining production and sales performance.

of a Khadi and Village Industrial Units,” assessed the operational and financial
performance of a K&VI unit, and proved that the modern financial statement
analysis tools such as ratio analysis and Z-score technique can be applied to
analyse the operational, financial and profitability performance of such
enterprises. The study concluded that the proper control of inventory, optimum
investments in inventory, better cash and idle funds management are to be
given adequate attention for profitable performance of the Sanghams.

Maria John, S., (2000), in her study “Agro Based and Food
Processing Industry in Theni District of Tamil Nadu”, studied the general
performance of these industries in terms of inventory management and funds
utilization. About 20 groundnut oil industrial units in Audi Patti Taluk were
studied covering the period from 1980 to 1999. She found that inventory
management practices were not scientifically applied. The study recommended
that the inventory management practices have to be thoroughly studied and
suitable measures evolved to manage the units efficiently.

Narayani, R., (2000), in her study “The Problems in Fund
Management in Small Enterprises - Micro Level Realities”, identified the
problems in the context of funds management in small enterprises. She made
an informal interaction with small entrepreneurs and officials of funding
agencies to find out the ground level realities in funds management of small-
scale industries. She found diversification of funds, excess investment on fixed
assets, opting for premature expansion, raising more than the required debt
capital, payment-receipt mismatches, frequent changes in the pricing and credit policy and unexpected changes in the pricing guidelines were the major problems confronting the enterprises.

Ponniafa, M., (2000), in his study “Mineral Based Industry in Dindigul District”, analyzed the various problems faced by the KVIC assisted mineral based industrial units in Dindigul District and studied the performance of the units for the period between 1991and 1995. He identified capital inadequacy and lack of market as the major problems faced by them. He recommended the provision of adequate financial assistance to these sectors and an aggressive publicity campaign to create awareness and educate people about the inherent value of the products.


Thillainayagam, N., et.al (2000), in their study “Institutional Finance to Small Enterprises”, stressed the need for adequate credit facilities at the appropriate rate of interest. They believed that such efforts would promote the small-scale industry in the country.

Amutha, R., (2001), 54 in her study “The Management of Working Capital in Rural and Small Industries”, emphasized the need for adequate and timely flow of working capital for the success of small and rural industries.

BaSastibramani, K., (2001), 55 in his study “The Input-Output and Cost-Benefit Analysis in Selected Khadi & Village Industries”, analysed the relationship between major inputs and benefits which occurred in the form of the value of production. He also analyzed the relationship between economic and social benefits of Khadi & Village Industrial units based on the study of selected units. He suggested a suitable model for the promotion of Khadi and Village Industrial units. He firmly recommended that the products of K&VI should be made available throughout the country by developing a strong and extensive marketing network.

Dhanasekaran, K., (2001), 60 in his study “Integrated Management Approaches for Rural Industrialization”, discussed the various constraints faced by the rural industrial units and how these constraints inhibit the development of village and small industries to have access beyond the local market. He identified problems like lack of market information about the tastes and preferences of the consumers, inability to scale up production and service due to inadequate capital, inability to adopt technological transformation to meet the quality standards required by the market, lack of standards and standardization, lack of adequate infrastructure support, inadequate support from both state and central government, lack of improved tools and technology, lack of knowledge about the market, of adequate training facilities and of assured and adequate supply of raw material.

A study conducted by Jeyalakshmi Sri Kumar, (2001), 61 on the various challenges faced by small-scale industries emphasized the need for the provision of adequate and continuous supply of raw material and for credit
facility for such industries. These things would promote the small-scale industries in the present economic scenario.

Murugan, N., (2001), 58 in his study “The Financial Performance of the Lakshmi Seva Sangham”, analyzed the financial performance in terms of liquidity, profitability and productivity. The study was conducted between 1991 and 2000. He used ratio analysis, cash flow analysis and Z-score for the prediction of financial soundness. The method of least square was also used by him to project the different key indicators like production and sales volume. The study concluded that inefficient inventory and receivables management and ineffective utilization of fixed assets were the major hurdles to the continuous growth of the Sangham.

Ganesan, G., et.al (2002), 59 in their study “Activity Based Cost Management for Rural Industries”, emphasized the need for the ABCM system to control cost of production in rural industries. The study mainly focused on the ways and means to reduce the cost of production without affecting the product quality. Further, it analysed the method of fixing the best possible price for the products. The study concluded, that with the help of the ABCM, rural industries could get an accurate cost by eliminating non-value added expenses and achieve maximum profit and benefits.

Manivel, S., and Murugan, N., (2002), 60 in their article “The Financial and Operational Performance of an NGO Run Enterprise”, discussed the liquidity and profitability performance of a village industrial unit by applying liquidity, long-term solvency, profitability and asset management ratios for a period of ten years from 1991 to 2000. The study reported that the Sangham’s liquidity position in terms of current and quick ratio was satisfactory, but the absolute liquidity and debtors management were found to be poor. So they advised to improve these areas by maintaining a moderate level of liquid cash and strict adherence to the credit policy of the Sangham.
Manivel, S., et. al (2003), in their study “Technical and Long-term Solvency of Rural Industries”, examined the financial performance of selected rural industrial units in terms of liquidity and long-term solvency. The study employed the simple accounting tool, viz., ratio analysis for data analysis. The statistical tools such as arithmetic mean, standard deviation and co-efficient of variation were also applied to study the consistency and volatility of the performance of these units over the years. The study revealed that the long-term solvency of the Sangham was not encouraging during the study period. They concluded that scientific approaches to management of funds and working capital are very much essential to make the units economically viable.

Manivel, S., et.al (2003), in their study “The Financial Soundness of an NGO Run Enterprise”, analyzed the financial soundness of a village industrial unit by calculating a few financial and operating ratios and using Z-score technique for assessing the financial soundness. They concluded that the financial position of the unit was found to have improved year after year owing to its ability to convert the assets into sales quickly. The quick turnover also enabled the unit to improve its capital funds base.

Thaiigavel, K., et.al (2003), in their study “Management as an Input and Its Influence on Output”, attempted to apply the concept of linear programming to maximize the profitability of selected Khadi and Village Industrial units. They used the UNDO software package for the purpose. The study analyzed the different models for the maximization of profit within the constraints such as given in the K&VI units and testified to the suitability of the package. The UNDO package is quite suitable for the purpose of profit maximization decisions.

Arabinda Ghose, (2004), in his study stressed the urgent need to stimulate the rural economy. He urged to provide the right encouragement to
the K&VI sector by creating proper infrastructure facilities in terms of uninterrupted water supply, adequate supply of electricity, creating all other required facilities on easy terms which may go a long way to promote the rural economy. Enough subsidies should be given to K&VI sector units in the interests of the integrated development of the rural economy.

Manivel, S., et.al (2005), in their study “Liquidity, Productivity and Profitability Performance of the Village Industrial Unit”, analyzed the relationship among the liquidity, productivity and profitability of K&VI units by applying tools like, accounting ratios, multiple correlation and regression analysis and Spearman’s rank correlation. The study was conducted between 1993-94 and 2002-03. The study found that there is a positive association among liquidity, profitability and productivity. The study also stressed the need for the adoption of sophisticated techniques in the inventory and receivables management practices for improving the liquidity and profitability performance.

Most of the literature available on Khadi and Village Industries deal with Government policies towards the K&VI sector, the philosophy of Khadi, economic, financial and technical aspects of small and Village Industries and their importance in the economic development of the country. However, very few of them have addressed themselves to the managerial problems. Many authors have discussed the problems of the manufacturing and business units under the K&VI sector, but many aspects especially aspects such as financial management, have remained untouched by the modern day researchers. Even those studies which have dealt with aspects such as financing and financial performance have seldom covered the financial soundness and position in an analytical frame. The doctoral dissertations cited above are among the few exceptions. Therefore, institution specific studies of managerial and financial performance will significantly add to the understanding of the problems faced
in the K&VI sector. Coverage of all functional areas of management like production, human resources, finance and marketing will be unwieldy. It is, therefore, necessary to select one of the functional areas for the present study, viz., Financial Management

Scope of the Study

The study has been undertaken with a view to analyzing the financial performance of the select Sarvodaya Sanghams in Tamil Nadu. The scope of the study is, therefore, confined to the issues relating to the financial and operational performance of the Sanghams in terms of liquidity, solvency, productivity and profitability. The study also makes an attempt to analyze the financial viability and product profitability of the Sanghams.

Objectives

The objectives of the study are:

1. to ascertain the short-term and the long-term solvency of the select Sanghams;
2. to analyze the operational efficiency of the select Sanghams;
3. to find out the profitability of the select Sanghams in relation to their sales and investment;
4. to assess the financial soundness of the select Sanghams in terms of key financial and operating indicators; and,
5. to find out the product profitability of the select Sanghams.

Data Collection

The present study uses both primary and secondary data. The primary data about the practices and procedures followed in the management of working capital in the Sanghams have been collected through a short schedule which was designed after a pilot survey. Information has also been gathered
through informal and formal discussions with the executives working at various levels in these Sanghams during a personal interview. Secondary data relevant to the study from sources such as published annual reports and audit reports of the select Sanghams for the relevant periods were collected and have been used extensively. The annual reports containing the results of past performance are considered important and reliable sources of the financial data of the select Sanghams. In addition, data pertaining to the performance of the K&VI at the State and National levels were collected from the annual reports of the All India Khadi and Village Industries Commission, Mumbai.

Methodology

The study is an analytical research based on the sample survey method. The study critically analyses the financial and operational performance of three different sample Sarvodaya Sanghams selected based on the stratified random sampling method from among the sixty Sarvodaya Sanghams in Tamil Nadu.

In the first stage the Sanghams were grouped into profit-making and loss-making Sanghams based on five years’ average profit figures. As such 32 Sanghams were found to be running on profit. The rest were incurring loss in their business. Since the study focuses on financial performance, viability and product profitability, it was considered essential to have sample units from out of the profit-making units. Therefore, it was decided to have a 10 per cent sample from the 32 Sanghams. Consequently, the 32 Sanghams were grouped into three categories based on a range of average profit (five years’ average) as shown hereunder:

<table>
<thead>
<tr>
<th>Average Profit (5 years)</th>
<th>No. of Sanghams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>Less than Rs.3 lakhs</td>
</tr>
<tr>
<td>Group 2</td>
<td>Between Rs. 3 lakhs and Rs. 5 lakhs</td>
</tr>
<tr>
<td>Group 3</td>
<td>Above Rs. 5 lakhs</td>
</tr>
</tbody>
</table>
Having decided upon a 10 per cent sample size, it was applied to the 3 different groups with different profit ranges and the result was as follows:

\[
\begin{align*}
10/100 \times 32 & = 3.2 \quad \text{i.e., 3 Sangham} \\
10/100 \times 13 & = 1.3 \quad \text{i.e., 1 Sangham} \\
10/100 \times 9 & = 0.9 \quad \text{i.e., 1 Sangham} \\
10/100 \times 10 & = 1.0 \quad \text{i.e., 1 Sangham}
\end{align*}
\]

The three different Sangham groups, one from each of these three groups, were finally selected as the representative Sangham groups. These different Sanghams, viz., Kangayam Sarvodaya Sangham (KASS), Koduvai Sarvodaya Sangham (KOSS) and Padiyur Sarvodaya Sangham (PSS) located adjacent to each other, were found to represent the three categories of profit making Sanghams. These three Sanghams are the oldest Sanghams, that too from the pioneer districts of the Sarvodaya movement. Such long years of service, on the part of these Sanghams, it is hoped, will help obtaining rich source of data and information required for the study. Moreover, the proximity i.e., location of the Sanghams close to each other was another factor which favoured their selection for the study as the researcher found it easy to collect data and information.

Tools for Data Collection

A short structured interview schedule was administered to collect the basic information about the working profile of the Sanghams. The secondary data required for the study were collected from the byelaws, financial statements and annual reports of the Sanghams from 1993-94 to 2002-2003.

Period of Study

The study covers the performance of the selected Sarvodaya Sanghams for a period of 10 years from 1994 to 2003.
Techniques of Analysis

The study was made using predominantly various ratios relating to liquidity, profitability and assets management. Simple statistical techniques such as standard deviation, co-efficient of variation and averages were applied to analyze the consistency, the stability and overall trend in the different financial aspects of the Sanghams under study. Further multiple regression and correlation analysis were applied to judge the joint influence of the independent variables on the dependent variable. The ‘t’ test was used to judge whether the computed correlation and regression co-efficients are significant or not. All statistical analyses were done through a statistical software package, viz., SPSS, version 11.0. The details of the ratios used and their formulae are given hereunder.

1. Short -term Solvency Ratios

   Current Ratio = Current assets/ Current liabilities
   Quick Ratio = Quick assets / Current liabilities
   Absolute Liquid Ratio = Cash + Bank Balances/ Current liabilities

2. Long-term Solvency Ratios

   Debt to capital fund Ratio = Debt/Capital fund
   Interest Coverage Ratio = Interest / EBIT
   Reserves to Total Capital Fund = Reserves/Total Capital Fund
   Reserves to Total Assets = Reserves/Total Assets
3. Profitability Ratios

(i) (Profit in Relation to Sales)

- Gross Profit Ratio = \(\frac{\text{Gross Profit}}{\text{Sales}} \times 100\)
- Net Profit Ratio = \(\frac{\text{Net Profit}}{\text{Sales}} \times 100\)
- Operating Profit Ratio = \(\frac{\text{Operating Profit}}{\text{Sales}} \times 100\)
- Operating Ratio = \(\frac{\text{Operating Expenses} + \text{COGS}}{\text{Sales}} \times 100\)
- Operating Expenses Ratio = \(\frac{\text{Operating Expenses}}{\text{Sales}} \times 100\)

(ii) (Profit in Relation to Investment)

- Return on Capital Employed = \(\frac{\text{EBIT}}{\text{Capital Employed}} \times 100\)
- Return on Capital Fund = \(\frac{\text{EBIT}}{\text{Total Capital Funds}} \times 100\)
- Return on Total Assets = \(\frac{\text{EBIT}}{\text{Total Assets}} \times 100\)

4. Activity/Performance Ratios

- Inventory Turnover Ratio = \(\frac{\text{Net Sales}}{\text{Inventory}}\)
- Debtors Turnover Ratio = \(\frac{\text{Net Sales}}{\text{Debtors}}\)
- Current Assets Turnover Ratio = \(\frac{\text{Net Sales}}{\text{Current Assets}}\)
- Working Capital Turnover Ratio = \(\frac{\text{Net Sales}}{\text{Working Capital}}\)
- Total Assets Turnover Ratio = \(\frac{\text{Net Sales}}{\text{Total Assets}}\)
- Fixed Assets Turnover Ratio = \(\frac{\text{Net Sales}}{\text{Total Fixed Assets}}\)
- Capital Fund Turnover Ratio = \(\frac{\text{Net Sales}}{\text{Total Capital Funds}}\)
- Creditors Turnover Ratio = \(\frac{\text{Net Purchase}}{\text{Creditors}}\)
Multiple Regression and Correlation Analysis

Multiple regression and correlation analysis were used in this study as technical statistical tools to study the joint influence of the independent variables on the dependent variables. It is a method of determining the specific function relating to y to x i.e., \( y = f(x) \). This method explains the cause and effect(s) and also predicts how the independent variables combine to help predict the dependent variable, for which it provides a value denoted as \( R^2 \), which tells how well a set of variables explain a dependent variable. The method also explains the means to reduce the errors when predicting the dependent variable scores on the basis of information about the independent variables. Further, the regression results measure the direction and size of the effect of each variable on the dependent variable.

The linear regression model used in the present study is

\[
Y = A + B_1 X_1 + B_2 X_2
\]

where,

- \( A \) = intercept,
- \( B_1, B_2 \) = partial regression co-efficients,
- \( X_1, X_2 \) = independent variables,
- \( Y \) = dependent variable.

Z'-Score

Many attempts have been made to predict success/failure of business organizations using financial ratios. One of the well-known efforts in this area is that of Altman. He used five major financial ratios and linear discriminant analysis to classify firms as solvent or insolvent calculating an index called Z'-Score, especially for privately held firms whose shares are not traded in the market.
This is calculated as follows:

\[ Z' = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5 \]

where \( Z' \) = Index

- \( X_1 \) = Working Capital/Total Assets
- \( X_2 \) = Retained earnings/Total Assets
- \( X_3 \) = EBIT/Total Assets
- \( X_4 \) = Capital fund/Total liabilities
- \( X_5 \) = Sales/Total assets

When the \( Z' \)-Score is below 1.23, the firm is considered to be failing and when it is above 2.90 it is considered to be financially healthy.

**Linear Programming Technique**

Linear programming is a specific class of mathematical technique, in which a linear function is maximized (or minimized) subject to given linear constraints. In general this method is used for determining the optimum allocation of scarce resources for obtaining a particular objective. Although allocating resources to activities is the most common type of application, linear programming has numerous other important applications as well. Production allocation model, blending model and product mix model are some of the most common areas of applications. In product mix selection, the decision maker wishes to determine the level for a number of production activities during the specified period of time. The study used the following LP model for its analysis.

The general formulation of the LPP can be stated as follows,
For the present study a mathematical software called UNDO was used for deciding upon the product profitability of the select Sanghams.

**Chapterisation**

The outcome of the study is presented in nine chapters. The first chapter provides an overview of Gandhian economics, and the general performance of Sarvodaya Sanghams in Tamil Nadu. The second chapter presents the review of literature and the design of the study. The third chapter presents the working profile of the select Sanghams under study. The fourth chapter presents the short-term and the long-term solvency positions of the selected Sanghams. The performance of the different forms of assets of the select Sanghams is discussed in the fifth chapter. The sixth chapter discusses the profitability of the select Sanghams in relation to sales and investment. The seventh chapter explains the financial soundness of the select Sanghams. The eighth chapter deals with the selection of optimum product mix among the different K&VI products produced by the select Sanghams. The summary of findings, the conclusion and the recommendations are presented in the final chapter.
References


