Chapter - 1

Introduction and Design of the Study
# CHAPTER-I

## INTRODUCTION AND DESIGN OF THE STUDY

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CHAPTER - I
INTRODUCTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION

The term Textile is derived from the Latin word “Texere” meaning “to weave”. The art of textile making began to develop in the stone age. The first textile fabric was probably a crude felt, made by compressing loose clumps of fleece from wild sheep. Weaving as a craft developed initially in a very crude form with the advent of agriculture, when primitive people got into a settled way of life. The earliest known textiles made from yarn were fishing nets. The art of weaving yarn into fabric, probably, developed from the weaving of strips into mats and baskets.1

Indian Textile Industry is one of the major industries that plays vital role for exports and foreign revenue. The share of textile industry to the country’s total exports is 16.63 per cent and India’s contribution to global textiles and apparel market is 3.9 per cent and 3.0 per cent respectively. The industry has been projected to grow at a rate of 20 per cent post globalization, with a target of US $50 billion for exports, achievable by the government, by 2010.

India claims the 1st position in terms of the installed weaving capacity in the world, but it does not have much importance in terms of quality weaving, as the share of shuttle-less looms to the total shuttle looms in India is just 1.62 per cent, which is very meager in comparison to the other countries. So, the sector requires modernization by way of replacing the old and ordinary looms with modern looms. This is the need of the hour in order to sustain and expand the market share and in meeting the requirement of the apparel industry for quality fabrics.

Due to the changes in the international scenario on the implementation of the World Trade Organization (WTO) agreement on textile industry, our country is facing some implications. We need to prepare ourselves to meet the challenges of global competition, by increasing the productivity and improving the quality of our products.

1.2 INDIAN TEXTILE AND NATIONAL LEADERS

India is an exceptional country, where textile production has been given priority by many eminent National leaders and the persons of eminence. The tradition of patronizing the textile started during the age of Maharajas, Badhushas and Nawabs, who patronized the textile for the style, since they desired that the dresses of royalty and nobles should be different from the commoners; but there were also kings, who wanted to make their subjects happy by implementing various rural development programmes including textile playing the vital role. The Kings of the ancient Assam, both from Pragiyotrshpur as well as the ruler belonging to Ahom dynasty, encouraged eri, muga, mulberry silk, besides cotton and Ramie textile production by providing various fiscal benefits like tax concessions etc. Tippu Sultan, the great patriot Nawab of Mysore introduced sericulture and silk manufacture, as a part of rural development programme in his territory. Fact that Karnataka is the leading silk producing state in our country is, because of the foundation laid by the great Tippu Sultan. British rule caused decay in the textile production, in India. The British raj resorted to various means like legal, political, physical etc., to stop the production of Indian textile, and enable their Manchester fabrics get market in India.

Mahatma Gandhiji understood this aspect very well and attempted to revive hand spinning and hand weaving, as a part of the freedom struggle. He received the spinning wheel or Chakra in the year 1920 A.D. and worked hard to improve its productivity. All India Chakra Sangh was formed to take care of this activity. Perhaps, never in the world history, an innocent looking spinning wheel could become a powerful weapon to achieve freedom of a country, from the yoke of an imperialist as powerful as British, Mahatma Gandhi's dream continued after independence as "Khadi" became a part of the developmental activity.

Mahatma Gandhi's army was no less. He had with him Acharya J.B.Kripalani, who organized a large scale Khadi production in the Northern States. Dr.P.C.Ghosh, jointly with Dr.Nripen Bose and Dr.Suresh Banerjee, organized it in the undivided Bengal. In Orissa it was Niranjan Pattnaik of Berhampore, besides, of course, the great Chowdry brothers, (Gopabandhu and Banakrushna) Acharya Harihara Dass, and the latest revolutionary turned into a Gandhian Pannalal Dasgupta, there are many, whose names can be written with golden letters.
Chakravarthy Rajagopalachari, the last Governor General of India, deviated from Gandhi's concept and encouraged the use of mill yarn, instead of hand spinning, perhaps, looking at the interest of the textile produce in our cottages, to give greater leverage to marketability. His dream child Viswabharathi continues with this silent revolution.

Netaji Subash Chandra Bose founded an organization with Deshbandhu Chittaranjan Dass in Calcutta, for the same purpose. The organization "Dakshin Kalikata Sevak Samiti" was later headed by Netaji with Anil Chandra Biswas as Secretary, and continued with the programme of textile spinning and weaving for several years. When Netaji was kept interim in Mandalaya jail, in the year 1926 A.D., Anil Babu sought his guidance on cloth production. From Mandalaya Jail Netaji Subash responded vide his letter dated 12.02.1926 appreciating additional profit earned by the Samity by producing hand spun and hand woven fabrics. He expressed his anxiety about the availability of raw materials for such textile products. He requested Anil Babu to contact Sri Satish Chandra Bose, the elder brother of Netaji regarding cultivation of cotton in Bengal considering Satish Babu's experience. He also suggested that the extraction of cotton seed oil to ensure additional income for farmers. In another letter dated 09.07.1926 to Anil Babu, he expressed his anxiety over shortage of yarn. He suggested number of Chakras should be increased to meet this crisis and raw materials bank should be built up as a part of the long term planning.

To meet the immediate crisis, he suggested that mill yarn be used as warp and for that matter, Bangaru Lakshmi Cotton Mills be contacted. He also expressed his desire to collaborate with Abhoy Ashram and Khadi Pratishthan. He felt cotton be cultivated around orphanages, by which, not only the Orphanages shall be benefitted but also to ensure raw materials for spinners. He suggested what should be the appropriate constitution of an voluntary organisation doing such noble work. He also suggested organizing a Museum of Bengals home industry, which shall, not only be serving the purpose of publicity, but also shall suggest future programme. There are suggestions about developing the marketing of Khadi and Cottage Industries' products, in the said letter.

Jawaharlal Nehru, himself a great scholar, has not only highlighted the wonderful Dhaka muslims in his books, but he was also a catalyst for the growth of Khadi and the Cottage Industries after independence. Smt.Indira Gandhi developed this sector through her 20 Points Programme. Marxist leaders realized the importance of this sector later, but, they
took over fast to spread economic developments through Panchayats. We may not discuss about Sri. U.N. Dhebar, Sri.Vaikuntha Bhai Mehta, Sri.Pranlal Kapadia or even Sri. P.V. Narasimha Rao, who were born with Khadi. There are many more to be spoken of, and many more to be dugged out. Let us remain silent about them as 'silence is gold'.

1.3 FUNCTIONS OF TEXTILE MILLS IN TAMIL NADU

Textile Industry of Tamil Nadu is the forerunner in the Industrial development and in providing massive employment in the State. It is predominantly Spinning-oriented. The State Textile Industry has a significant presence in the National economy also. Out of the 2049 large and medium textile mills in India, 893 mills are located in Tamil Nadu. Similarly, out of the 996 small units in India, 792 are located in Tamil Nadu. The 893 large and medium textile mills include 18 Cooperative Spinning Mills, 17 National Textile Corporation Mills and 23 Composite Mills. The spinning capacity is 14.75 million spindles with a labour force of about 2.17 lakhs. The Textile Industry in the private sector has a very important role to play in the Industrial field, with regard to employment potential, overall economic and commercial activities. This industry enables the Central and the State Government to earn revenue, besides foreign exchange through exports.

1.4 STATEMENT OF THE PROBLEM

The Indian textile industry is severely affected in the current global crisis and it is absolutely imperative for the Government to prepare a long-term strategy for the growth and export of textiles. The Indian Textile and Apparel Industry is the single largest industry in India, contributing about 14 per cent of the industrial production, 17 per cent to the total export earnings and 4 per cent to the Gross Domestic Product (GDP). The Indian textile and apparel industry has many inherent strength like availability of all types of fibres in the textile value chain, recognition of India in its design capabilities, huge geographical infrastructure, rising exports and support of the various Ministries of the Government.

The Indian textile and apparel industry is currently facing some structural problems like infrastructure, fragmented industry structure, and high transaction cost affecting the global competitiveness of the industry. The phase out of quota in the year 2005 has opened up a lot of opportunities for the Indian textile and apparel industry. However, the main
factor, which will eventually make a difference, will be the overall competitiveness of the Industry. Despite the encouragement shown by the Central Government in the form of fiscal duty ratification, tax concessions and other programmes for mills’ development, the industry has not shown the expected growth.

In the light of the above backdrop, the following questions emerge.

i. How is the performance of the select textile mills in terms of profitability?

ii. Does its size and age influence the profitability of the textile mills?

iii. Has the profitability of the textile mills been influenced by their liquidity?

iv. To what extent are the internal factors contributing to the growth of the textile mills?

v. Is there any possibility that the textile mills will face a financial crisis in future?

1.5 IMPORTANCE OF THE STUDY

Textile Industry employs 3.5 crore people directly or indirectly and is the highest employment provider in the country. The contribution of the textile sector in the total exports is about 20 percent of the entire exports. It has the potency to improve employment in the rural areas. The benefits of the study are varied. The study will be useful to the management in financial planning and to anticipate future conditions in identifying the areas of strength and weakness of the company. It also helps in making appropriate financial projections. The results of the study will help the policy-makers in the evaluation of performance and growth of textile industry, which could help them in policy-making. It would be useful to the bankers, the other financial institutions and the external analysts to assess a company’s creditworthiness and helps in credit granting decision. The study will benefit the investors in their investment decisions.

1.6 REVIEW OF LITERATURE

It is mandatory to review the literature available with respect to the area of the research study. Measuring the performance of the textile industry has always been an area
of controversies from the point of view of the government, shareholders, prospective
investors, creditors, employees and any other stake holder. Several studies have been
undertaken to analyze the profitability in the textile industry. This module presents some of
the excerpts of various studies conducted by the financial analysts in the past.

Achilleas Zaprains and Demetrios Ginoglou⁴ have stated that the recent
developments in the field of non-parametric statistical analysis established neural networks
as an efficient approach to identify the complicated relationship in the multi-dimensional
data sets, without making a prior assumption regarding the nature of these relationships.
They have contrasted the neural networks' approach with multivariate discriminant analysis
in predicting corporate failure in Greece.

Sahu⁵ has made an empirical study based on the secondary data from a sample of
100 non-financial, non-government, and public limited companies in East India for a period
of ten years from 1984-1985 to 1993-1994. He has chosen the profitability ratios and the
interest coverage ratio for the analysis. Cross sectional spearman rank correlations of the
profitability ratios for all the companies have been calculated and applied, for selecting the
ratios for analysis.

Mohammed Rafiqual Islam⁶ has made a study for a period from 1985-1986 to
1994-1995. 5 out of 7 fertilizer enterprises in Bangladesh under the control of Bangladesh
Chemical Industries Corporation, have been taken for the study, and he has examined the
earning capacity of the select enterprises.

Gopal Krishna Swami⁷ has brought a light to the application of Robert C.Higgins'
sustainable growth model and his extended model in corporate growth. He has discussed
the different classes of sustainable growth problems, associated with the rapid growth firms,
which have no access to equity, slow growth firms, multinational firms and rapid growth
firms, which have access to equity.

⁴ Achilleas Zaprains, Ph.D. and Demetrios Ginoglou, Ph.D., “Forecasting Corporate Failure with Neural
⁵ Dr.R.K.Sahu, “Analysis of Corporate Profitability – A Multivariate Approach” – The Management
⁶ Dr.Mohammed Rafiqual Islam (University of Bangladesh), “Profitability of Fertilizer Industry in
⁷ Gopala Krishna Swami, L. “A Forecasting Model for Sustainable Corporate Growth” – The Management
Desai\textsuperscript{8} has assessed the capital structure of Gujarat Steel Tubes Ltd., for 10 years from 1980-1981 to 1990-1991 and found out that the real value of the equity shares had been far below their book value and also inconsistent during the entire period of the study. He has found out that the company’s capital structure was imbalanced and over capitalized. Financial plans have continued for a long period of time, preventing the company from earning profits.

Narasimhan and Balasubramanian\textsuperscript{9} have taken a sample of 296 companies which had positive net worth and positive profit margin and an assessment has been made for the year ending March, 2000. According to them, if the return on net worth is greater than the return required to compensate for business and finance risk, quality of earnings exists in that company, which should be, due to efficient asset management, cost management and leverage management.

George W. Gallinger\textsuperscript{10} has examined the framework of financial statement analysis in five parts. The first part of his study has focused on “Return-on-asset performance”; it has examined the profitability of Salton Company. He has examined the components related to return on sales and asset management in depth. According to him, inefficient asset management will result in destroyed market value of the company and will probably cause financial distress problems, which may even result in bankruptcy.

George W. Gallinger\textsuperscript{11} through the second part of his study, has examined the role of financial leverage in converting the return on asset ratios into return on equity ratios. The impact of financial leverage has been ascertained by multiplying the interest multiplier by the financial multiplier, called ‘Joint Multiplier’. In other words, he has determined the amount of EBIT left after the interest payment and the amount of assets supported by each dollar of equity. The joint impact of these two effects has been determined to decide whether financial leverage is favourable or not, if the result is greater than one, debt

financing is considered to provide a favourable leverage and if the result is less than one, it means unfavourable leverage and it is equal to one, it means neutral leverage.

George W. Gallinger\textsuperscript{12} has determined the tax effects on profitability and sustainable growth which according to him, after tax return on equity performance before considering any non-operating effects can be derived by multiplying the before tax return on equity ratio by the ‘After income tax multiplier’. For assessing the sustainable growth rate, he has applied the model return on equity ratio $\times$ firm’s retention rate. He has used two items, namely, ‘annual growth rates of sales and assets to assess growths’ and secondly annual growth rates of debt and equity to assess how management has financed the growth that is either higher or lower than the sustainable growth rate.

George W. Gallinger\textsuperscript{13} in the fourth part of his study, has proved that the share value of a firm, is dependent on cash flows within the company and not accounting earnings; and EPS is not the true indicator of earning power. He has examined the cash flow from operating activities, financing activities, and investing activities. He has converted the actual accounting based net operating profit to a cash based operating profit. According to him, the quality of earnings of a firm is low, if the difference between adjusted net income and cash profit is large.

George W. Gallinger\textsuperscript{14} has made a study on prediction of financial distress as the fifth part of the framework for financial statement analysis. He has used number cruncher mode of Kaplan and Hurwitz that predicts the bond rating of a company. Z-score model by Edward Altman and Lambda model by Gary Emery to test the solvency of the company in his study, bond rating model is dependent on the firm’s size, long term debt to total assets ratio, net income to sales, and variability in the net income as measured by its coefficient of variation, and interest coverage ratio.


Ramcharan\textsuperscript{15} has identified the role of Velocity in the improvement of ROI and thereby good growth and bad growth. According to him, a firm can raise its ROI by increasing sales relative to assets or by reducing assets relative to sales. Both velocity and the source and quality of EPS growth will have a major impact on P/E ratios.

Hrishikes Bhattacharya\textsuperscript{16} made a first attempt to capture the essence of natural business year and translated it to operating cycle and disproved the ideas of S.K.Chakraborty. The net operating cycle, calculated by S.K.Chakraborty, for Union Carbide of India, of 103 days, which is more or less equivalent to the net working capital, cannot be equated with natural business year of the company within which, all the current items mature and this operating cycle contradicts his own conceptual framework.

Kathuria Sanjay; Bhardwaj Anjali\textsuperscript{17} in their article state that substantial export tax equivalents exist for Indian Textile and clothing exports, especially to the United States. In today’s world, these would have been even higher if domestic Indian policy constraints had been relaxed. In tomorrow’s world, the health of India’s textile and clothing industries may depend on timely relaxation of these constraints.

Dodd, Erin Linnea\textsuperscript{18} in his research study state that the main issues, which are facing the textile industry are NAFTA, CBI, Asia and the WTO. The effect that these have had and will have on the spinning industry, was examined in detail. The analysis included the use of a correlation matrix for both yarn production levels and yarn prices in order to see which factors statistically had the stronger impact on these.

Elbehri, Aziz; Hertal, Thomas; Martin, Will\textsuperscript{19} in their article state that the agreement to abolish the quotas on textiles and clothing introduced under the Multi-Fibre Arrangement (MFA), will create a new and much more competitive world market for

\textsuperscript{18} Dodd, Erin Linnea, “United States Trends In Short Staple Spinning”, North Carolina State University, M.S. Degree, 2000, p.135.
India's exports of textiles and clothing. India's inefficient and costly policies, such as cotton export quotas, the hank yarn obligation, and the restrictive policies on foreign investment that have held back productivity in the Indian apparel sector, will impose serious costs.

Gurumurthy in his article says that the recently floated World Bank sponsored Line of Credit (WB-LC) for the cluster-based small and medium enterprises, operated by the Small Industries Development Bank of India (SIDBI), is turning out to be one more window to low-cost financing of modernisation project for the textile industry.

Srivats in his article states that the export community has described the setting up of 5 working groups by the reconstituted Board of Trade as a 'concrete step' towards boosting exports from the country. It has also expressed confidence that all policy concerns would get addressed and transaction cost reduced.

Simon X.B.Zhao and K.K.Wong China's accession to the WTO and the 'Agreement on Textiles and Clothing' (ATC) which gradually ban the use of quota, will have profound impacts on the textile industry in China. This article attempts to examine such impacts on all textile firms of Hong Kong origin. It briefly examines the impact of WTO on the textile industries in general, the participation of Hong Kong based firms in China's textile industry, and the competitors from foreign countries. It examines, in detail, the practice of obtaining Hong Kong quota for textile products that are made in the Mainland by Hong Kong firms. The article argues that there are positive and negative effects of China's WTO accession for all textile firms of Hong Kong origin.

I.K.M.Mokhtarul Wadud This paper estimates the sources of productivity growth in Australian textile and clothing firms based on the Business Longitudinal Survey (BLS) from 1995 to 1998. Productivity growth estimates have been obtained for each sub-category of textile and clothing firms. Sources of growth in Multi-Factor Productivity (MFP) are examined with growth in technical efficiency and scale effects based on estimates of

stochastic frontier production functions. Separate estimates of output growth have been compared with the productivity growth estimates for each of the product categories.

Margaret C. Perivoliotis24 This paper presents the case study of the Technological & Educational Institution of Athens, Greece, which is part of the four-year European Module in the textile/fashion industry among the four European schools of design, funded by the Socrates program. The unique feature of this project and its case studies are that it provides the opportunity for European researchers, teachers, students, and designers to explore textile production issues from their home base, enabling the effective sourcing of textile information by strengthening the interface between education and research technology.

Ikilem Gocek, Senam Kursun and Yesim Iridag Beceren25 explain that the customer satisfaction for textile sector carries great importance like the customer satisfaction for other sectors carries. Especially, if it is considered that gaining new customers create four times more costs than protecting the existing customers from leaving, it can be seen that the customer satisfaction plays a great role for the firms. In this study, the affecting independent variables of customer satisfaction are chosen as brand image, perceived service quality and perceived product quality.

Sudhi Ranjan Dash, Kanika T. Bhal, Jitarani Udgata26 explains that Corporate Social Responsibility principle is mainly concerned with the accountability of organizations towards all its stakeholders. In this article, we assess the culture of the organizations and correlate it with their level of environmental responsibility. We have analyzed the organizational culture and environmental responsibility of the sample organizations. By matching the Environmental Performance and Environmental Responsiveness of organizations with their environmental responsibility (BOD level and Technology) in a matrix form.

Samson Muradzikwa\textsuperscript{27} seeks to establish the consequences of a changing trade and investment environment for the clothing and textile industry in Southern Africa. The study covers Malawi, Mauritius and Zimbabwe - the three largest producers of textiles and garments outside South Africa. The paper specifically analyses the linkages between clothing and textile firms and examines firm level responses in the light of increased efforts towards regionalism, and the spread of globalization.

**Good Practice Case Study: EMS-TEXTILE - Promotion of Energy Management Practices in the Textile Industries of Greece, Portugal, Spain and Bulgaria**\textsuperscript{28} The EMS-TEXTILE project aims to promote energy management practices, mainly to the textile industries of Greece, Portugal, Spain and Bulgaria. The proposed energy management practices are based on previous experience from the successful environmental and energy management applications throughout the world.

Balanosky, E., Fernandez, J., Kiwi, J., & Lopez, A.\textsuperscript{29} The textile industry is rather a complex entity, and the term ‘safety’ has been greatly extended from the safety of the workers to the safety of the environment, in the future. The range of industry and technology, that is covered when the term ‘textile industry’ is used, is enormous, and is closely connected to the chemical industry as well as agriculture. To understand some of the issues that would constitute socially responsible behaviour or not, the processes that take place in textile industry must be understood. One must look at the production and the degradation, of the fibers, and treatments that can be applied to the textiles between production and degradation, such as, dyeing and finishes among many others.

Marquez J\textsuperscript{30} In the face of disappearing quota, smaller exporters of textiles and clothing to the United States can expect stiff competition from the larger rivals, particularly China and India. Since its accession to the WTO in December 2001, China's exports of


\textsuperscript{28} Website: www.ems-textile.net


textiles and clothing to the United States have increased by 125 percent. Chinese exporters gained a greater share of the market by reducing their prices. Given these developments, it is crucial for the smaller exporters to have a comprehensive understanding of the implications of the said developments, so that, they can formulate effective policy in the increasingly competitive markets for textiles. In this regard, the US market is the most significant giving its share in world textile imports. Trade elasticities computed in this paper are not only a first step in that direction, but should also prove useful in later policy-oriented research that make use of *Computable General Equilibrium* (CGE) models, to investigate welfare effects of different policies. In the past, researchers have largely concentrated on estimating trade elasticities for aggregate trade. The current study estimates import elasticities on a bilateral basis, instead, which allows it to avoid what is known as the 'aggregation bias' problem. The elasticities are computed for US textiles imports from 20 of the largest textiles exporters to the United States.

*Bisschops; H. Spanjers*\(^{31}\) In the textile industry, many different processes are used and almost all of them generate wastewater. The effluents, resulting from these processes, differ greatly in composition, due to differences in processes, used fabrics and machinery. Textile wastewater is usually treated as a mixed stream. For water and chemicals reuse purposes, however, it is preferable to keep process streams apart and treat them separately. Characterization of textile industry effluents is of great importance for the separate treatment of process streams. This literature review provides an overview of what is known about the wastewater of the separate processes, and the methods used for characterization of these streams.

*Raghbir Singh and Lalit Mohan Kathuria*\(^{32}\) The Textile and Garment Industry occupies a unique position in the Indian economic scenario due to its contribution to industrial production, employment generation and foreign exchange earnings. Presently, it adds 14 percent to the Industrial production and 4 percent to the GDP. About 35 million people are directly employed in this sector. The contribution of this industry to the gross export earnings of the country is about 21 percent. It is the only self-reliant industry and

\(^{31}\) *Bisschops a; H. Spanjers a* Environmental Technology, Volume 24, Issue 11, November 2003, pages 1399 - 1411

complete in all respects in the value chain, from procuring of raw materials to the highest value-added products, i.e., garments. Therefore, the growth and development of this industry has a significant bearing on the overall development of the Indian economy. All this business will change base after the Multi-Fibre Arrangement [MFA] Phase-out. Although, the reaction and implication of the Multi-Fibre Arrangement [MFA] Phase-out will not be seen or felt immediately, industry experts are of the opinion that the main losers will be companies, in developing countries that have built up market share due to the privilege of holding a quota or having quota-free access.

**Dr. V. Kubendran**\(^3\), The cotton textile industry occupies the pride of place among all the large scale industries in India and the largest employer next to agriculture. The textile industry is a vital source of revenue to the central and state exchequer. The textile industry also occupies a pre-eminent place in the economy of Tamil Nadu. Of the total number of textile mills in the country today, Tamilnadu accounts for 41.56 per cent of mills. Human beings are resourceful entities. Their maximum utilization leads to attainment of organizational goals. Work life and its quality have assumed significant importance in the recent years, all over the world. The safety and physical working conditions and the friendly atmosphere in the working place are perceived as the most important factor.

**D.R. Saklani**\(^3\) has developed Likert type summated altitudinal scale for the assessment of the concept of Quality of Work Life in his research study. Thirteen dimensions factored in the scale after carrying out in depth analysis based on extensive review of literature and responses obtained at the pre-testing stage include, adequate and fair compensation, fringe benefits and welfare measures, job security, physical environment, work loan and job stress, opportunity to use and develop human capacity, opportunity for career growth, human relations and social aspects of life, helpless position in decision making, reward and penalty administration, equality, justice and grievance handling, work and total life space and the image of organization in the society.

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\(^3\) Dr. V. Kubendran, Professor, Bharathiar School of Management, Bharathiar University, Coimbatore – 11 “Quality of Work Life in Textile Industry in Dindigul District” Global Management Review- Volume 3 – Issue 3- May 2009.

Rish Roy\textsuperscript{35} reveals that good quality of work life promotes job performance. On the other hand poor quality of work life demotes job performance. The alternations in thinking, mood or behavior are associated with significance, distress and impaired functioning over an extended period of time. It may be because of the stress and strain caused which is percolated to the Indian working psyche.

Arbind Gupta\textsuperscript{36} reveals that Government exports from India have failed to stage the desired show in the post quota arena.

M.K. Panthaki\textsuperscript{37} told that experts have estimated the export figures for the whole year of 2006 at $9-10 billion, as against $ 8.1 billion in 2005. Going by the first half-early figures and the trend witnessed in the second half, we are likely to attain a growth of not more than 17 per cent for the entire calendar year of 2006.

Dr. I. Satya Sundaram\textsuperscript{38} reveals that Indian exports are expected to surge as much as 250 per cent following quota elimination.

M. Guruprasad\textsuperscript{39} said that a paradigm shift for Indian companies could be to consider making acquisitions of brands and retail businesses, largely operating in the clothing category in major markets like the US, the EU and Japan in Textiles.

V.S. Velayutham\textsuperscript{40} says that the excellent commercial diplomacy, undertaken by the Indian embassy in Peru and the effective arguments made by Tex-Procil led to the Peruvian investigating authority dropping the proceedings without imposing any safeguard duty.

\textsuperscript{37} M.K.Panthaki - Director, Clothing Manufacturers’ Association of India [CMAI], Business India – Feb.11, 2007, pp.103
G.P Gandhi41 - India has developed a new technology through which natural colour silk yarn could be produced. The technology is set to provide India an opportunity to tap new global silk markets.

M.V Rama Prasad42 - Indian textiles due to their lowest, are increasingly penetrating the international market. India has emerged as one of the most cost-competitive locations for production of casuales and leisure garments that thrive on variety, and flexibility.

Dr. I. Satya Sundaram43 - The cotton textile industry has been clamouring for changes in labour laws, but the government has refused to provide any relief. The industry wants freedom to sack at least one percent of its total workforce. Also, the minimum number of employees needed for forming a trade union needs to be increased to 100 from the current level of seven.

1.7 OBJECTIVES OF THE STUDY

The main objective of the study is to analyze the profitability of textile industry in Tamil Nadu. The specific objectives are:

➢ To analyze various measures of profitability of the select textile mills.
➢ To analyze overall profitability of the select textile mills.
➢ To examine the measure of liquidity of the select textile mills.
➢ To determine sustainable growth of the select textile mills.
➢ To predict financial crisis and positive measures taken to overcome the crisis.

1.8 HYPOTHESES

➢ Earning capacity and overall profitability of a mill do not depend on the size of the mills.
➢ Quality of earnings of a mill is influenced by its efficiency in cost management, asset management and leverage management.
➢ There is a relationship between the liquidity of a mill and its profitability and quality of earnings.
➢ Growth of a mill depends on the factors, namely, payout pattern and operating performance levels reflected by its profit margin and asset turnover.

1.9 SCOPE OF THE STUDY

This study aims at making an analysis of profitability of the select textile mills in Tamil Nadu. The listed companies engaged in textile business have been considered for the study. The scope of profitability is very wide and broad based. Hence, the study has analyzed only the accounting of profitability.

1.10 SAMPLING DESIGN

The data for the study have been collected from the PROWESS Database of the Centre for Monitoring Indian Economy (CMIE). Data for 253 companies are available in Prowess Database. In selecting the samples, the textile mills, which have financial data available for a continuous period of ten years, viz., 1998-1999 to 2007-2008, have been considered for the study. The textile mills, for which data are not available for one or more than one year in between the study period of ten years, or in the beginning or at the end of the study period, have been deleted. The mills, which have been amalgamated or merged, have been considered as one company. 20 mills, which satisfied the above said conditions, have been selected as samples for the study.

1.11 GEOGRAPHICAL AREA OF THE STUDY

Geographical area of the study is Tamil Nadu. There are totally 253 textile mills in Tamil Nadu. Out of which 113 are in Coimbatore District and the rest are in the other districts of Tamil Nadu. The researcher has taken 20 textile mills only into consideration, since these 20 textile mills are the members of the "The Southern India Mills' Association, Coimbatore, Tamil Nadu" (SIMA). The table 1.1 given below reveals the total number of textile mills available in India.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Regions</th>
<th>No. of Mills</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Coimbatore District</td>
<td>113</td>
</tr>
<tr>
<td>2.</td>
<td>Rest of Tamil Nadu</td>
<td>140</td>
</tr>
<tr>
<td>3.</td>
<td>Andhra Pradesh</td>
<td>76</td>
</tr>
<tr>
<td>4.</td>
<td>Karnataka</td>
<td>9</td>
</tr>
<tr>
<td>5.</td>
<td>Kerala</td>
<td>13</td>
</tr>
<tr>
<td>6.</td>
<td>Pondicherry</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>Other States</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>368</td>
</tr>
</tbody>
</table>

Source: The Southern India Mills' Association – Membership.
1.12 CLASSIFICATION OF THE SAMPLE MILLS

The sample mills have been classified into different groups based on their size (See Table 1.2) and age (See Table 1.3). The distribution of the sample mills into different groups gives an overall idea of the coverage of the samples and enables group-wise analysis.

1.12.1 Classification according to Size:

The textile mills selected for the study have been divided into three groups as small, medium and large based on the average total assets. The ten years average of total assets and mean values for each textile mill are found out initially. From these, the overall mean and standard deviation are found out for the 20 textile mills. Using these mean and standard deviation, large, medium and small textile mills are found out by using the formula $X \pm 0.5$ S.D. The textile mills whose average assets are falling below $X-0.5$ S.D., are considered as small and the textile mills, whose average assets are falling above $X+0.5$ S.D., are considered large and the textile mills, whose average assets during the study period, falling between $X-0.5$ S.D. and $X+0.5$ S.D., are considered medium sized textile mills. Table 1.2 exhibits the classification of the select textile mills, based on size.

**Table 1.2**
Classification of Sample Mills by Size

<table>
<thead>
<tr>
<th>Size</th>
<th>No. of Mills</th>
<th>Percentage to Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>Medium</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>Large</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

*Based on $x \pm 0.5$ SD (Formula)*

1.12.2 Classification according to Age

The sample mills are classified based on their age, considering the year of incorporation of the mill as the year of birth and 31st March, 2008 as the concluding year. Table 1.3 shows the classification of the select textile mills, based on the year of incorporation.
TABLE 1.3

Classification of Sample Mills by Age

<table>
<thead>
<tr>
<th>Year of Incorporation</th>
<th>Age Group</th>
<th>No. of Mills</th>
<th>Percentage to Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to 1985</td>
<td>Old</td>
<td>15</td>
<td>75</td>
</tr>
<tr>
<td>1985 to 1995</td>
<td>Moderately Old</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>After 1995</td>
<td>New</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

1.13 SOURCES OF DATA

The data required for the study is secondary in nature. The main source of data for the present study is the PROWESS Database of the CMIE, the Centre for Monitoring Indian Economy that monitors the Indian Economy, builds databases, undertakes research, produces documents and database products and services its clients' needs for economic and business information. PROWESS Database is the reliable database, which provides detailed information in all operating activities, financial statements, ratios, fund flow, cash flow, share prices etc. relating to each company. Capitaline Plus is another source, which was useful in collection of data. Capitaline Plus also provides information on financial statements, history, background etc. relating to each company.

The annually published financial report of the companies has also been used for random checking of the data and to supplement the existing data, wherever required. The Reserve Bank of India Bulletin, Centre for Monitoring Indian Economy Monthly, Review of the Indian Economy and Yearly Reports on Corporate Sector, Industrial Sector and Economic Intelligence Service have also been used.

1.14 PERIOD OF STUDY

The period of study has been confined to one decade, namely 1st April, 1998 to 31st March, 2008. For facilitating easy reference, the period of 12 months in each financial year has been taken from 1st April to 31st March, for (eg.) the year 1999 has been taken from 1st April 1998 to 31st March 1999.
1.15 FRAME WORK OF ANALYSIS

Appropriate statistical tools have been used to analyze the data. Statistical techniques such as mean, standard deviation, co-efficient of variation, annual growth rate (AGR), compounded annual growth rate (CAGR), linear growth rate (LGR), analysis of variation (ANOVA), correlation, regression, discriminant function, lambda index and ratio analysis have been used. In this study, Edward I. Altman’s Bankruptcy Model has been applied.

1.16 LIMITATION OF THE STUDY

The study is subject to the following limitations.

1. The financial statements, from which the data have been extracted, are historical and quantitative without considering the impact of inflation in the accounting data. Hence, the study incorporates all the limitations inherent in such statements.

2. A few of the sample mills have not been following uniform accounting year, throughout the study period of ten years. In such cases, the financial data have been so organized that they relate to the twelve months of the relevant accounting year.

1.17 CONCEPTS USED IN THE STUDY

1. **Net Sales – NS**
   Sales excluding indirect taxes and duties such as excise, sales tax, octroi.

2. **Cost of Goods Sold – CGS**
   Cost of Production – Change in Stocks.

3. **Cost of Production – CP**
   Total raw material expenses, power and fuel, 70 percent of wages and salaries, other operating expenses.

4. **Non-Recurring Transactions – NRT**
   Income from non-recurring transactions net of non-recurring expenses. Non-recurring transactions include profit / loss on sales of fixed assets / sale of investments, provisions written back, prior period income / expenses, insurance claims form part of Non-recurring transactions.

5. **Current Liabilities – CL**
   Current Liabilities includes Sundry Creditors, acceptances, interest accrued and due.. etc. Tax, dividend and other provisions form part of current
liabilities. Short term borrowing are included in the current liabilities, but share application money amount is excluded from it.

6. **Current Assets** — Inventory of raw materials, stores, finished and semi-finished goods, cash and bank balance, receivables such as sundry debtors, advances, investments in marketable securities excluding that of in group companies form part of current assets. Inter corporate loan and housing loans to employees are excluded from current assets.

7. **Total Assets** — TA

8. **Total Tangible Assets** — TTA

9. **Capital Employed** — CE

10. **Shareholders' Equity** — SHE

11. **Tangible Portion of Shareholders' Equity** — TPSHE

12. **Industry Average**

13. **Gross Contribution**

14. **Operating Cash Flow**

15. **Retained Cash Flow — RCF**

The sum of all the assets net of depreciation.

The excess of total assets over intangible assets.

Aggregate of the long term loans, debentures, short term loans and advances and shareholders' equity.

Total paid up capital (ordinary and preference) and accumulated reserves and surplus adjusted for losses.

The excess of shareholders' equity over intangible assets.

Average of the sample companies.

Net Sales – Cost of goods sold.

EBDIT + Amortization – Other income ± difference in Receivables ± Difference in current liabilities – Tax paid.

Sum of retained earnings and depreciation provided during the period.
1.18 LAY-OUT OF THE THESIS

The thesis is organized into six chapters.

The **First chapter** deals with introduction and design of the study. It covers the statement of the problem, objectives of the study, source of data, limitations etc.,

**Chapter Two** brings out the textile industry in India and Tamil Nadu.

The **Third chapter** explains the profile of select textile mills in Tamil Nadu.

**Chapter Four** covers the role of textile industry in economic development.

The **Fifth chapter** makes an analysis of profitability of the selected textile mills.

**Chapter Six** summarizes the findings and offers suggestions and conclusion.

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