REVIEW OF LITERATURE

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CHAPTER 2

REVIEW OF LITERATURE

To identify the research problem, Literature review is a logical requirement. Before specifying the objectives, a critical review of selected literature focusing the method may be an order of analysis. The review of empirical studies explores the avenues for future and present research efforts related with the subject matter. So a close look at these studies would enable the researchers to identify the problems and it would help to locate the gaps in the literature and new issues that need to be taken up for the detailed analysis.

Industrial area is widely researched. Scholars have undertaken a number of studies that have gone into the details of various aspects of industrialisation. These studies fall under the categories of dissertation (both M. Phil, Ph.D) working papers and published articles. While reviewing the specific studies on soap industry it was felt that very few attempts were made to analyse the structure, status, problems, and prospects of the same. Hence a broader approach was followed and the literature available can be classified into three sections:

1. General Reviews – studies on Kerala Industrialisation
2. Specific Reviews – Studies on Soap Industry
3. Reviews based on Methodological Issues.

2.1 General Reviews

We shall now move to take a closer look at the industrial scenario in Kerala. The studies on various industries of Kerala underlined the state’s industrial backwardness and various hypotheses have been put forward to explain

The National Council of Applied Economic Research (NCAER) study (1962) identified the following factors as the causes for the slow growth of industries in Kerala. (1) Predominance of technologically backward small scale units, which created only a meager re-investible surplus and did not lead to entrepreneurial talents. (2) Political instability in the state during the past years which had scared prospective industries away from the state. Lokanathan (1962) in his report on Techno Economic Survey of Kerala imposed the responsibility for retarding progress of investment in Kerala on the trade unions.

Kerala is still known for traditional industries like handloom, coir, cashew, handicrafts and beedi, which provide large scale employment especially to women. The question as to how and why the growth potential of traditional industries as in some parts of India remained stymied in the region

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7 Thampy and Nanda Mohan (1994). “Kerala’s Industrial stagnation- psychic economic analysis – paper presented in the international Congress on Kerala Studies held at Trivandum on 27-29 August.
has been an issue that attracted the attention of researchers much earlier. In this context some major commodity studies need to be mentioned.

They are on cashew, Kannan (1978)\(^{11}\), Beevi (1978)\(^{12}\), Deepa (1994)\(^{13}\), on coir, Isaac (1984)\(^{14}\), Isaac and Nair (1987)\(^{15}\), on beedi, Pyaralal (1986)\(^{16}\), on tile, Raghavayya (1980)\(^{17}\), Mani (1990)\(^{18}\) and on handloom, Devi (1982)\(^{19}\), Karthikeyan(1985)\(^{20}\), Rajagopal (1986)\(^{21}\) and Mridul Eapen (1991)\(^{22}\), on marine product industry, Valsala (1977)\(^{23}\), Sebastian (1986)\(^{24}\), Shajahan (1987)\(^{25}\). These studies have examined the respective traditional industries in the broader context of industrial transformation, organisational factors, labour process and the survival strategy of workers during the crisis phase of the industry and unionisation as well as technology and marketing.

Narayanan and Karunakaran (1985) suggested that the improvement of traditional and small scale sector was the only way of industrialisation in Kerala. Aswathy (1988) in her study - Analysis of regional growth pattern in India, has found that Kerala has remained almost static in industrial scenario.

Radhakrishnan (1989) in his study - Growth structure and productivity of Indian manufacturing industry - an econometric analysis made a comparison of productivity performance in the large scale manufacturing sectors of Kerala and all India. The analysis indicated that the long term trend in growth rate of labour productivity of Kerala exceeded the observed growth rate of capital productivity. The steep decline in the growth rates of both labour and capital productivities, during 1970 - 90 is disheartening and is a sure indication of the malice that has crept into the manufacturing sector of Kerala.

Albin's study (1989) which was based on National Account Statistics, ASI, and Statistics of Own Account Enterprise and Census of India covered almost two decades from 1960 - 61 to 1982 - 83. The study went into the details of the organisational composition of industrial sector. In 1961 Kerala had a low share in the household sector relative to all India. Between 1961 and 1981 Kerala showed a faster decline in household employment. The study found out that kerala's growth rate in small industry was less than that of all India. Finally Alice Albin concluded that regional factors have been so strong as to over power the effect of structural factors and make kerala’s industrial growth rate negligible.

Arun's study (1993) on inter regional characteristics of industrialisation concluded that kerala’s industrial structure showed a bias towards agro based and

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chemical industries. The analysis showed that in Kerala both regional, specific factors, as well as structural factors have implication for industrial deceleration.

Subrahmanyan and Pillai (1994)\(^3\) in their study - Modern small industries in Kerala - a review of structural change and growth performance suggested that modern small sector including electronics, plastics, engineering, computer etc. would have a major role in the future industrial development in Kerala.

Joseph in his study titled -Some recent trends in small scale industries – a case study of diamond industry in Kerala (1995)\(^3\) provided some empirical explanation for the re-location of the highly labour intensive diamond industry from its traditionally low wage cost centre like Surat to high wage state like Kerala. The study focused on organizational structure of industry in kerala. The study tends to disprove such hypothesis like high wage island and labour militancy as the causes for the industrial backwardness of the state and argued that subcontracting system provides the impetus to the emergence of local entrepreneurship. According to Pillai (1996)\(^3\), poor infrastructure is the major bottleneck in the industrialisation of Kerala.

Babu and Harilal (2002)\(^3\) have studied about the competitiveness of different industries in Kerala. The study suggested that Kerala ranks last comparing with Karnataka and Tamil Nadu in terms of competitiveness. The state has competitive advantage in industries like food processing, wood and wood products, paper and paper products, chemical products, rubber, petroleum and plastic products. The study points out that the state is characterised by the existence of a small sections of modern sector and a predominant traditional sector with low investment and productivity.

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Manoharan (2002) proceeded with the objective of examining the extent of industrial development in Kerala. The hypothesis of the study is that there was no industrial advancement during the people's plan period compared to the past. The secondary data has been made use of to present analysis. Ratios and percentages between and over years are applied. The study concluded that there is marked decline in the share of tertiary sector and sluggish growth rate of industries. He also suggested that the government should act as a facilitator rather than a regulator in the whole process of industrial development.

Jeromi (2003) in his paper, What Ails Kerala’s Economy - a sectoral exploration, highlights the lack of development strategy in Kerala for growth and employment generation. Suresh (2003) analysed the role of plastics production and consumption. The objectives of the study are the following: to analyse the growth pattern, productivity, and financial performance. The data sources are both primary and secondary in nature. Linear homogenous production function and Cobb Douglas production function were applied. Financial performance was estimated by using financial ratios. The study concluded that almost all the units in Kerala were in small scale sector and were operating under profitable conditions.

Ashita (2002) study, Economics of engineering industries in Kerala, examined the financial performance, problem and prospects of engineering industry in Kerala. The study cover a period of 10 years (1988-98) and made use of Cobb Douglas and translog production function to assess the labour productivity. Financial performance was examined with the help of financial ratios. She concluded that the engineering industries in Kerala were not economically sound.

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Raghavan on Kerala development and failures (2004)\textsuperscript{39} stated that despite high quality life and welfare indicators, Kerala lags behind in industrialisation with massive doses of unemployment. One of the important features of Kerala economy is poor track record of industrial and agricultural programmes. The rate of growth of manufacturing sector for the year 2001-2002 was 2–4 per cent, while in the national level it was 6 per cent. The shrinking industrial base thus forms a general characteristic of the industrial economy of Kerala.

All these studies on various industries had shown that Kerala is proverbially an industrially backward state in the country with low manufacturing activity.

2.2 Specific Reviews

Very few attempts were made to analyse the structure, status, problems and prospects of Soap Industry. Following are the studies available in this respect.

Kalele (1958)\textsuperscript{40} made a study of the small scale soap units operating in Pune city in 1958 - its organisational structure and investment, distribution and sales and reinvestment of profits and indebtedness. He found out that there was a sort of stagnation in the case of smaller units, the larger units show some progress as regards the volume of business and increase in capital. The author had studied the small scale soap industry in Pune and the data relate to the year 1958. Seven units have been analysed in relation to their organisation structure, investment policies regarding purchases of raw materials and sales of products and also regarding their profits. The author indicated how the government can help the smaller units, both in respect of finance and in the purchase of raw materials.


\textsuperscript{40} J.C. Kalele (1958) Some Aspects of small scale soap industry in Poona-Artha Vijnana Vol.2. No.4 December 1960. pp.327-337.
Subramanian and Papola’s (1971)⁴¹ “Profitability and Growth of Firms” - evidence of the 27 companies in the chemical industry indicates independence of profitability and growth in relation to size.

Langdon (1975)⁴² found in the Kenyan soap industry that small scale firms were struggling to survive despite a growing market for soaps and detergents. Multinational companies had began to penetrate the market with different products and produced with different technologies. His study concluded that MNC’s role in Kenya seems responsible for blocking in a general way the development of decentralised local industry in a wide range of sectors.

Hansavivek (1981)⁴³ in his article “Away from Soaps” - gave picture of the performance of Tata Oil Mill Company (TOMCO) to cater to the increased export demand for its toilet soaps mainly from USSR. This will enable the company to make good quality toilet soap with flexibility for raw materials without any import licensing constraints. The company had achieved a marked improvement in its working results in 1980-81 compared to the previous year when it had to contend with prolonged labour unrest. But now the management is seeking a more fundamental diversification of the company’s products instead of toilet soaps.

The working group on soaps and detergents set by the government in 1984⁴⁴ had projected the demand and production for soaps and detergents for the seventh plan ending 1989-90 and has also looked into the demand by the end of the century. The projections for the industry have been worked out by the working group in terms of (a) Fabric washing products comprising laundry soaps and chemical detergents. (b) Toilet soaps which included all personnel washing soaps. The study revealed that with the lower prices, detergents becoming a major

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factor on the market since, their penetration in the rural market has increased substantially in the past few years with the result that detergents are now found in almost every village. With higher growth in rural income, rural people are likely to spend more on toilet soaps, i.e., the next consumption item after food grains and clothing.

The Indian Soaps and Toiletries Makers Association (1985)\textsuperscript{45} had done a demand projection for synthetic detergents from 1985-90. This was attempted by them in two stages - estimating the demand for all washing products and also of the rate at which synthetic detergents share in the total washing products market is growing. The growth, development and growing importance of synthetic detergents industry and its encouraging outlook had been reviewed by Tata consultancy services during the year 1985.

Goldar (1985)\textsuperscript{46} in his paper analysed the unit size and economic efficiency in small scale washing soap industry in India. The study was based on related unit level data for the census of small scale industrial units. The main finding of the study was that tiny washing soap units were quite inefficient as compared with relatively bigger units within small scale washing soap industry. This was borne out by comparison of partial and total factor productivity and by the analysis of technical efficiency differences based on a frontier production function.

The Economic Times Research Bureau in their Review (1988)\textsuperscript{47} on soap and detergent industry explained the different aspects of this Industry. Poised for a major breakthrough in this industry as stated by Usha Sivaraman, this industry had undergone a metamorphosis in the past few years. From being a stronghold of the large scale soap manufacturing giants, the equation was changing in favour of the small scale sector. This tilt was more pronounced in the detergent business while, for soaps, the organised sector continues to have the upper hand. The

\textsuperscript{45} The Soap Industry- Indian Soap and toiletries Makers Association 1985-page.1-10.
Economic Times Research Bureau found out 15 per cent growth rate for the industry.

The leading spokesman Armi (1988) in his article “Synthetic detergent Plan Priorities and Policies” stated that the use of synthetic detergent had grown immensely in India in the last two decades and contributed to the establishment of a major industry. India presently had only a few thousand washing machines and it may appear premature to consider issues arising from their large scale usage.

The studies conducted by Shetty (1988) - the Economic Times Research Bureau on small sector Giant “Nirma shows the way.” stated that the small scale sector manufacturing soaps and detergents presents two starkly contrasting pictures, on the one hand, it was Nirma chemical works who had successfully played David to the Goliath - Hindustan lever, Hippolin, Vimal, etc., on the other hand a large number of small units have been forced to down their shutters or marginalise their operations due to the increasing diseconomies in production mainly because of rising input costs. The study found out that Nirma Chemical works was the largest producer of synthetic detergent powders with a turn over of around Rs. 300 crores.

Meenakshikutty (1989) - in her Ph. D Thesis Economics of Detergent Industry in Kerala made a comparative analysis of the performance of two public sector soap production units namely KSO and KSDC. Her study was based on the secondary data published by ASI. To find out the cost and profitability of these two units she applied linear programming method and Cobb Douglas production function. The study found that these two units of soap production in Kerala were not productive and efficient.

Weitzman’s (1991)51 paper - Price Distortion and Shortage Deformation, What happened to the Soap? has presented a formal model of consumer behaviour under conditions of shortage. A clear theme of the paper was that price distortions and monetary overhang could present very severe threats to the normal functioning of an economy. The essential issue was to remove the incentives that lead to excessive inventory stocks blocking what should be direct flow of goods from production and consumption.

Kumar (1995)52 examined the activities that influence the characteristics of buyers and compares them in both rural and urban markets. Personal interviews were used to understand buyer’s behaviour of soaps. The data indicated valuation of the behaviour of rural buyer compared to the urban buyer in many respects. Such understanding of the rural behaviour had implications for marketing decisions. Comparing the rural market with behaviour in urban market, the buying behaviour of washing soaps and toilet soap is examined. In urban areas, equal number of consumers are loyal to brand and to the shop. But in rural area loyalty to shop was higher. The study suggests a positioning effort that focuses on delivering the basic benefit effectively, and better than existing brands in the rural retail shelf. The rural markets presents challenges to the marketer as it differs from urban markets in literacy levels, incomes, social system and habits.

EPW Research foundation studies (1997)53 on Godrej soaps - Lower Sales and Profits found out that Godrej soaps, a major player in the soaps and toiletries industry, saw a 14.3 per cent decline in its net sales in 1996-97, while the company’s value of production fell by 1-9 per cent over 1995-96, its operating profits crashed by 47.3 per cent. The company broke off its alliance with Procter and Gamble (P&G) and has now undertaken the marketing of its toilet soaps,

53 Godrej Soaps - Lower sales and profits , Economic and Political Weekly Vol. 32, No.43, pp27-80
while the distribution of Consumer products had been handed over to Godrej Hi
care, a company in which Godrej soaps had a 46 per cent stake.

Another study was conducted by EPW Research foundation during
(1997) in connection with the capacity expansion of Godrej Soaps - The study
revealed that while the major products which contributed to revenue last year were
soaps, fatty acids, detergents, financial services and alpha olefin and its precursors
and derivatives, their respective contributions have changed in 1995-96. While
revenue from soaps continues to remain the back bone of the company’s income,
the other major revenue providers in 1995-96 were oils; fatty acids, alpha olefin
and its precursors and derivatives and cosmetics. Despite a fall of around 15.7 per
cent in sale of soaps in volume terms during the year, sales revenue increased by
around 21 per cent, due to higher realisation. The company’s exports sales also
improved by 27 per cent. The company installed new ultra modern toilet soap
finishing lines of 48 tonnes per day capacity each at its Vikhroli and Malanpur
factories. The company has entered into an agreement with Sara Lec De/NV -
which is a part of Sara Lec Corporation which is a fortune 500 company.

EPW research foundation studies on Godrej soaps - Back in Black (2000)
Stated that Godrej soaps, the flag ship of Godrej House has 5-6 per cent of market
share of the Indian soaps segment. It was keen on growth through organisational
restructuring - acquisitions and divestitures, financial reengineering, floating of
brands, absorption of the research and development results into product
improvement and cost pruning measures backed up by good governance. GSL’s
bouncing back into black in the year March 31, 2000, after the previous years loss,
shows the company means business. Its consumer products and chemicals
business did well, but a decline of 33 per cent in the sales of contract
manufacturing of non - Godrej brands, pulled down over growth to 12 per cent.

54 Godrej Soaps- Capacity expansion. , Economic and Political Weekly 1997. vol.32. No.1, pp. 9-10
Soaps and detergents were major drivers of income growth with their share in total income moving up from 29.7 per cent to 41.9 per cent in the year. In soaps, Godrej brands notched up a growth of 24 per cent.

2.3. Reviews Based on Methodological Issues.

In this section an attempt is made to review the empirical studies related to productivity, production function etc. which related to methodology.

Sankar (1970) estimated the elasticity of substitution and returns to scale for 15 manufacturing industries in India for the period from 1943-58. Among the industries analysed the elasticity of substitution between capital and labour was unity for the Indian sugar industry. He also found a presence of increasing returns to scale in a number of industries.

Dadi (1970) in his paper Productivity Wage Rate and Relative Share of the Workers in Manufacturing Industries made an attempt to test the logarithmic relation between the labour productivity and wage rate for the Indian manufacturing industries spread over different regions for the year 1962. The production function is estimated on the basis of cross section data relating to 17 - two digit manufacturing industries in India. The hypothesis that value added and wages per worker are uncorrelated was rejected at least in ten out of seventeen two - digit industries. The rank correlation between share of wages and wage rate was also calculated to examine the distributive aspect of the productive function.13 industries confirmed the good fit - relative wage share and wage rate moving in the opposite direction in those industries where elasticity of substitution was greater than one, and in the same direction where it was less than one.

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Banerjee (1971)\(^{58}\) analysed the productivity growth and factor substitution in Indian manufacturing industry using CMIE and ASI for the period 1946-64. He computed TFP indices and estimated Cobb Douglas production function. It had been observed that performance of the manufacturing sector had been rather sluggish over the study period. There was no sign of technical progress and capital deepening was the major influence behind the increase in production of Indian manufacturing sector.

Kazi (1972)\(^{59}\) examined the possibilities of capital-labour substitution in the CES production function framework across the regions in Indian industry. He utilized the time series of cross section data 1961,62 and 63. In most of the cases the author observed that the elasticity of substitution between capital-labour lies between zero and unity. Furthermore the findings corroborate the fact that the role of capital-labour substitution was significant in the context of Indian establishments.

Banerjee (1973)\(^{60}\) estimated elasticity of substitution between capital and labour for 5 selected Indian industries viz Cotton and Jute textiles (1946-63), Sugar(1946-62),Paper(1946-58) and Bicycle(1946-58). The 5 different variants of SMAC relationship had been used to estimate elasticity of substitution from time series of inter-state cross section data. It had been observed that the hypothesis of zero elasticity of substitution implying fixed input coefficients was rejected conclusively for all the industries excepting paper.

Mehta(1974)\(^{61}\) had estimated Cobb Douglas and CES production function for Indian sugar industry on the basis of time series data. The CMIE&ASI data for the period 1953-65 have been utilized for analytical purpose. The study revealed

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that total factor productivity had been declining over the period under investigation. The study also observed that there was no evidence of constant returns to scale and neutral technical progress for the industry.

Banerjee (1975)\(^6\) examined the relationship between capital intensity and productivity in the context of India’s industrial development. The analysis had been carried out for manufacturing sector as a whole and 5 individual industries (viz-cotton textiles, jute textiles, sugar, paper and bicycle) by using CMIE&ASI data for the period 1946-64. The study highlighted that the performance of the manufacturing sector was sluggish over the period 1946-64. While labour productivity showed a significant upward trend no evidence was found to indicate the presence of technical progress in the sector.

Barthwal (1975)\(^6\) fitted various forms of production functions viz variable elasticity of substitution (VES) (CES) & Cobb Douglas for Indian paper industry using ASI & CMIE data for the period from 1948-65. The study revealed that Cobb Douglas production function was consistent for Indian paper industry. Further the author observed some evidences of constant returns to scale and almost negligible technological progress in Indian paper industry. The partial elasticities of capital and labour inputs were found to be in the order of 0.64 and 0.36 respectively.

Basin & Seth (1977)\(^6\) made an analysis regarding returns to scale, the extend of technological change and elasticity of substitution in Indian manufacturing sector, by using pooled ASI & CMIE data for the period 1953-65 for 27 comparable industries. The estimation of Cobb-Douglas production function indicated that the exponent of capital was relatively higher than the exponent of labour which in turn implied that output was relatively more

responsive to capital. The estimated sum of two exponents showed that the Indian manufacturing sector is subjected to decreasing returns to scale.

Acharya & Nair (1978) made an attempt to measure productivity trends in Indian cement industry by using ASI data for the period 1959-71. They obtained the estimate of elasticity of substitution between labour and capital by using standard SMAC relationship. The magnitude of elasticity of substitution coefficient was found to be 0.86 – which then tested was not observed significantly different from 0 and 1 in the industry.

Hitiris - (1978) provide empirical evidence of the relationship between market structure and profit margins in the U.K. manufacturing industry and assess the importance of foreign competition and profitability in a country which had a relatively large foreign trade sector. The basic data source for the present study are the input - out put tables. The main objective of the study had been to examine the hypothesis that the degree of foreign competition exerts an important influence on profit margins which was independent of the structure of the domestic market. The hypothesis was positively tested.

Mehta (1980) attempted to analyse productivity trends for 27 Indian industries by using adjusted CMIE & ASI data for the period 1953-65. The results revealed that there was a considerable diversity in the experience of different industries regarding trends of labour and capital productivity. Labour productivity was found to have increased significantly in industries like vegetable oil, chemicals, tanning, glass & glass ware and insignificantly in matches, iron and steel and cement. However, capital productivity has not increased appreciably in

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most industries, rather, the reverse was true in most industries. The TFP of Indian manufacturing sector had been found to decline.

Arya (1981)\(^68\) measured technological change in Indian cement industry by computing “solow index” – of technical change for period 1951-70. The study observed that the upward shift in the production function was neutral since no change was traceable in the marginal rate of substitution between capital and labour. The rate of technical progress was higher during 1961-70 as compared to 1951-60 which indicated that major shifting in the production function took place in the later decade.

Rajalakshmi (1981)\(^69\) made a comparative study of the productivity performance of the mineral and metal based industries of Rajasthan and all India. She observed that at the all India level the productive efficiency declined over the period in industries like basic industrial chemicals, machinery, except electrical machinery. This happened in spite of increase in labour productivity and capital intensity. Among the other 3 industries selected for the study, non metallic mineral products and metals except machinery exhibited an increase in the means of productive efficiency. In the case of Rajasthan, the total factor productivity growth was substantially higher than that at the all India level for all industry groups except electrical machinery

Mukharjee (1982)\(^70\) conducted a study of productivity trend in the large scale manufacturing sector in Bihar. The study dealt with in a comparative frame work at the all India level. The study showed that total factor productivity derived significantly at the all India level, while it was not so at the state level over the decade 1961-71. Total factor productivity showed the declining trend both at the

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state level and all India level - rate of decline being marginally high in the state. According to Brahmanada's (1982) estimate, the productivity performance of Indian industries during 1971-81 was worse than in the early two decades. It also showed that the productivity changes between 1971- and 1981 - was pronouncedly negative.

Nishimiza and Page (1982) analyzed the productivity change in Yugoslavia by industry and region for the period of 1965 - 1978 and discussed main empirical results. The objective of this paper was to propose a methodology that decomposes total factor productivity change into technological progress and changes in technical efficiency. They discussed specification and estimation of deterministic frontier production function which is estimated by the programming technique of Aigner and chu (1968) and Timmer (1970, 71). The analysis indicated that the slow down in total factor productivity growth was a consequence of both a reduction in the rate of technological progress and of a determination in technical efficiency.

Babu & Vani(1983) made an attempt to estimate the parameters of CES production function for the Indian manufacturing sector at constant prices for inputs and outputs for the two periods 1949-58 & 1959-66. The study observed that there was a shift in the production function for the period 1949-66 and the elasticity of substitution in terms of ease in substitution of capital for labour at each labour-capital ratios. The study concluded that substitution possibilities differ in the 2 periods and hence the assumption of unitary substitution which was same for both periods was not found to be valid in Indian manufacturing sector.


Jarris’s (1985) estimation of a system of dynamic inter related equation of the demand for labour and capital services in the U.K. engineering industry used a quarterly data for the period 1968 - 81. The data requirements of the model were quite extensive, especially with regard to the user cost of capital. It was based on the joint assumption of profit maximising behaviour and technology adequately described by a C.E.S. production function. The result suggested that the U.K. engineering industry operates under a capital intensive technology with substitution possibilities between capital and labour services and decreasing returns to scale. They also suggested that technical progress did not have a significant effect.

Verma (1985) in his paper Production Structure of Jute Industry in India examined the production structure of Jute industry of India specifically, it seeks to estimate factor productivities, production elasticities returns to scale and elasticity of substitution in Jute industry. The methods of kendrick, solow, and divisia have been followed in this study. Data on Jute Textiles relating to value added, capital, labour, and wages had been taken from census of manufacturing industries. It was found that the growth of factor productivity in Jute industry was little. Jute industry seems to be operating under constant returns to scale. The elasticity of substitution between labour and capital in Jute industry was small.

Goldar (1986) estimated the average annual growth rate TFP by both solow and trans log indices, during 1951 - 65 at 1.3 per cent. He observed a significant rising trend in labour productivity and capital intensity and significant declining trend in capital productivity. To summarise Goldar’s estimates of productivity for the two periods - 1951 - 65 and 1959- 79, brought out that TFP

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growth in Indian manufacturing during 1951 - 79 was rather sluggish and the relative contribution of TFP growth to output growth was quite small.

Funke (1986)\textsuperscript{76} analysed the pattern of falling profitability in the U.K. manufacturing sector between 1951 and 1981 on the basis of time series data. He made use of Weisskopf's approach which splits up changes in the profit rate into changes in the profit share, output, capital ratio and their component parts. The paper had attempted to disentangle some of the influences on falling profitability in the U.K. manufacturing sector since 1951. Weisskopf's finding for the US is that profitability usually peaks before capacity utilisation was also true for most upswings in the UK in 1960's and early 1970's.

Soni & Jane(1987)\textsuperscript{77} measured neutral technical progress and magnitude of elasticity of substitution for industrial sector of Gujarat as compared to the same for all India as a whole(all industries) using ASI data for period 1960-61 to 1980-81. For this they estimated VES production function specification given by Leo & Fletcher. The regression coefficients for the time variable indicating neutral technical progress were found to be highly significant. The parameters corresponding to the neutral technical progress had values 0.19 and 0.05 for the industrial sectors of Gujarat state and all India respectively. These results implied that the technological parameters for the industrial sector of Gujarat state were found to be nearly 4 times that of all India.

Majumdar & Page(1987)\textsuperscript{78} estimated a three input translog production for 5 indian industries namely, printing , machine tools ,soap , shoes , and metal casting. They had taken value added as output and capital, skilled labour and unskilled labour as three inputs. They estimated the production function from cross-

sectional data on firms obtained from a survey of industrial enterprises in India (belonging to the 5 industries mentioned above). The translog production function and the share equations for skilled and unskilled labour had been jointly estimated on the basis of the multivariate regression technique. The results of the study of Little et al (1987) showed that capital, skilled and unskilled labour are mutually substitutable and generally the substitution possibility between capital and skilled labour was found to be more than that between capital and unskilled labour. In soap, metal casting and machine tools the hypothesis of constant returns to scale was not rejected by the data. Printing and shoe making industries exhibited variable returns to scale which was not significantly different from one.

Bhatia (1990) made an attempt to examine changes in productivity during 1965-85 in the manufacturing sector of India in comparison to that in U.K & U.S through Kendrick and solow indices of total factor productivity. The results indicated that productivity in Indian manufacturing sector was observed to have declined during 1965-75, but the same exhibited a rise subsequently which was particularly steep during 1980-85 and was even faster than that in U.K & U.S. However, in absolute terms, the level of productivity in India was much lower than that in the 2 countries.

Singh’s paper (1990) was an attempt to study the different facets of the growth and structure of the industry ie growth performance, market concentration, ancillarisation, growth of internal demand, export performance, and the impact of the policy liberalisation in 1980’s. The data for the study was based on mainly secondary sources - ie Hand book of statistics and Engineering export promotion council (various years). The analysis of the growth production structure and market reveals that by the late 1980’s the bicycle industry had managed to take

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roots. Production of bicycles grew rapidly during 1950's followed by a slow growth in the 1960's. The impact of policies of liberalization, modernisation and export promotion was reflected in the changes in the production structure of the industry after the first half of 1980's

Bairam(1990) estimated appropriate production function for 46 major industrial branches and for the total Indian economy. He used cross-regional industrial branch data for 1965 and aggregate annual time series data drawn from research work of Lakdawala, Yoginder Alaga and Sharma(1974) entitled: "Regional Variations in Industrial Development". The results of the study conclusively suggested that the underlying production model for Indian industrial branches was Cobb-Douglas production function. It has been observed that for 33 of the 46 branches considered, the estimated substitution parameters were not statistically different from Zero at the 0.95 confidence level. This clearly implied that the appropriate production function for all these branches was the Cobb-Douglas and, hence, the elasticity of substitution is equal to unity. For aggregate Indian manufacturing industry the results favoured the Cobb-Douglas production function as the most appropriate production function.

The purpose of Soong’s paper (1990) Performance of small firms under adversity - the Singapore experience, was to assess whether small firms perform better than large firms in terms of establishments, employment, output, value added and exports during periods of slow down or recession. The paper used data from the census of industrial production to assess, whether small firms were better than medium and large firms during 1973-75 and 1985-86 periods. Regression analysis was employed to determine factors which affect the labour demand of

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small firms, and large firms. The main conclusion of the paper was that small firms were more vulnerable to increased labour cost than to recession.

Bhatia (1990)\(^{85}\) tries to study the changes in productivity during 1965 - 1985 in India in relations to that in the UK and the US. The data on capital stocks, value added and persons employed in India, UK and the US were based on secondary sources - mainly from the UN year book. The methodology adopted was that of using the purchasing power parity estimates available from the World Bank studies on international comparison project. Productivity index was also used. The study found that in India, productivity after 1975 grew at a rate faster than that in the UK and US. A cross-country comparison reveals that productivity in India was much lower than those two countries. In the year 1975, India’s productivity was much lower than that in these two countries, ie, the total productivity in the manufacturing sector of India was 37 per cent of that in the UK and only 20 per cent of that in the US.

Another important study on productivity growth in Indian industry was of Ahluwalia (1986 and 1991)\(^{86}\). Ahluwalia (1986) examined the trends in capital output ratio over the period 1959 -80 for the manufacturing sector and observed statistically significant positive trends in all the industry groups. Ahluwalia (1991) attempted to analyse the rate of productivity and the growth of the organised manufacturing sector of Indian economy. The empirical analysis had clearly brought out the poor performance with respect to total factor productivity growth up to the end of 1970’s. An important feature of total factor productivity in the first half of 1980’s was that it largely reflected importance of labour productivity measured in terms of output per worker. Capital productivity was stagnant over the period.

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Beena (1991)\(^87\) compared the physical and financial performance of state sector public undertakings with that of the private sector firms operating in the same product group for the period 1975 - 87 on the basis of secondary data collected from annual accounts. The study found that while the public sector performed better in terms of growth in output and value added the private sector maintained a marginally higher increase in terms of gross fixed capital formation and employment. However, in terms of financial efficiency the private sector was found to have performed better compared to the public sector. The study concluded that public sector had demonstrated relatively better productive efficiency compared with the private sector.

Singh & Kumar(1992)\(^88\) analysed the pattern of total factor productivity growth and factor substitution in small scale sector and large scale sector in Indian manufacturing by using ASI data for period from 1973-74 to 1984-85. The analysis of growth rates of Kendrick, solow and translog indices of TFP painted a gloomy picture regarding the factor use efficiency in Indian manufacturing sector. The study revealed that the small scale sector was not inferior to large scale sector so far as labour productivity was concerned. Also, both large scale and small scale sectors had experienced the phenomenon of capital deepening.

Ghosh & Neogi (1993)\(^89\) examined the performance of 29 ‘sunrise’ Indian industries in terms of labour productivity to capital intensity. The study used ASI(factory sector) data for the period from 1974-75 to 1986-87. They observed that the increasing use of overhead capital has not produced any significant improvement in productivities and the most important factors that influenced productivities in an aggregative were skill, the capital-labour ratio, elasticity etc. it


also revealed that firm size did not play any significant role in determining productivity.

Kumary (1993)\(^{90}\) analysed the productivity trend at group level of public sector enterprises (1974 - 78). In the analysis, the estimates of TFP - for steel group and consumer goods group showed a falling trend with falling labour and capital productivities. But for groups like power, petroleum, chemicals etc. TFP showed a rising trend with a rise in labour and capital productivity. For minerals and metals group labour productivity showed an increasing trend and capital productivity showed a decreasing trend.

Singh & Ajith (1995)\(^{91}\) estimated different parameters of production function for Indian industries by using ASI data for the period 1974-90. They used both conventional production function specifications, namely, Cobb-Douglas, CES & Translog as well as new production function introduced by Bairam (1989). The result showed that there had been an increase in use of capital relative to that of labour in most of the manufacturing industries. Capital productivity recorded marginal improvement in 1970’s followed by gradual decline in 1980’s. The labour productivity had shown steady improvements during 1974-90, with the signs of significant improvements in the 80’s. Among the production function, the Cobb Douglas and Bairam production functions performed better than CES & Translog production functions.

Sidhu’s (1995)\(^{92}\) analysed the productivity trends in major manufacturing industries in Gujarat and all India level showed that the capital productivity in the manufacturing industries both in state level and in all India level recorded a lower growth than labour productivity during the decade 1980-91.

Majumdar in his study Fall and Risk of Productivity in Indian Industry (1996)\textsuperscript{93} found that as the policy became regulation oriented in 1960’s efficiency dropped steeply. As the regulation and control regime turned authoritarian in the later part of 1960’s and mid 1970’s there were occasional spirit in the efficiency scores. Efficiency scores started rising only in the 1980’s.

In their analysis of productivity growth and technological change in Indian Manufacturing Lal Mrigendra etal (1996)\textsuperscript{94} observed that the labour productivity was high compared to capital productivity from the period 1973-74 to 1989-90. The study revealed that there was significant gains in TFP so far as the manufacturing sector of India is concerned. Srivastva (1996)\textsuperscript{95} observed that the estimation of average total productivity growth rate for the different sector was generally quite low with the model value of around 0.56 for the period 1970-85.

Baghel & Pendse(1997)\textsuperscript{96} made an attempt to analyse productivity trends and statistical estimation of production function and technical change in the aggregate manufacturing sector of India. The ASI data for the period 1973-74 have been utilized for computing Solow and Kendrick indices of TFP along with partial productivity indices of labour, capital and raw material and econometric estimation of Cobb-Douglas, CES &VES production functions. The analysis revealed that the Indian manufacturing sector had not experienced technological change which was evidenced from the growth rates of TFP growth indices as well as parameters of time variable in the production functions.

An attempt has been made by Yousefi (1997)\textsuperscript{97} in his paper - Determinants of industrial growth in oil producing countries - the case of claim to see why ‘Iran’ has not been able to develop its industrial sector, despite its vast financial resources. Data regarding the share of manufacturing GDP, share of investment in GDP were taken from Central Bank of Iran, Annual reports, Balance sheets of organisation and Budget planning. The value of industrial exports and industrial imports were taken from custom office of Iran, which covered the period 1971 - 1986. Regression analysis was applied. The study indicated that the capacity of a country to generate manufactured growth from internal sources was positively related to the extent of resource mobilisation within the country which was roughly measured by the share of investment in GDP and the extend of demand generation within the economy as measured by the level of income.

Charcoal Production and Rural Entrepreneurship Development -Kalal and Abdullah’s (1998)\textsuperscript{98} study proposed to analyse the charcoal entrepreneurs on the following objectives (1) to examine the socio economic background of the charcoal entrepreneurs. (2) to analyse the performance of charcoal entrepreneurs on charcoal production, pattern of investment, capacity initiations and (3) to find out the problems of charcoal makers relating to production and marketing. Data have been collected from 24 entrepreneurs by both formal interview and informal discussions. With the method of least square, the projection of charcoal production for the year 2000 - showed that the charcoal production would double in five years time. To conclude it may be stated that the charcoal production has been done by many rural entrepreneurs in the absence of alternative employment. However the cost of production had been rapidly increasing due to various reasons.

The paper Industrial Restructuring of Workers in Plastic Processing Industry by Shah and Gandhi (1998)\(^99\) explores how the newly introduced economic reforms and in particular industrial restructuring was affecting women workers at their work place. The study had tried to capture the range of units and women workers in order to make it representative of the industry. The qualitative and quantitative methods were interwoven in different stages of the research. Initially the former was used to arrive at a set of research questions and it consisted of questionnaire of 157 questions. The quantitative group focussed on the work place and changes within it. The SPSS software programme was used for data processing. The study showed that the majority of the women workers of house holds were in the low income category with a percapita income of less than Rs. 950 per person, per month. They had no fall back on resources or any other source of income besides their wages.

The present paper of Upadhyay (2000)\(^100\) - Econometric Analysis of total Factor Productivity in Indian Fertilizer Industry, analysed the total factor productivity in Indian fertiliser industry. Translog cost function had been fitted to estimate the different components of TFP, viz. returns to scale, technical progress, elasticity of substitution, scale bias, and technical bias over a period of 25 years from 1973 - 74 to 1997 - 98. The analysis found that industry exhibited decreasing returns to scale during the entire study period.

A case study of APSRTC - the paper of Singh (2001) examined the Andra Pradesh State Road Transport Corporation using its annual data from 1979 - 80 to 1999 - 2000 . TFP studies using index numbers can be readily extended to show the impact of productivity gains on a firm's financial performance by tracking the share of productivity gains between the enterprise and customers. Despite the productivity gains achieved by APSRTC, the author found that on average, the

prices it must pay for the inputs are outstripping the prices it receives for the output.

Kumar (2001)\(^1\) in his paper Efficiency and Technology Undercurrents in Indian Textile Industry traced out the changes in the growth patterns, level of efficiency and technology under currents which the textile industry observed overtime in two subsectors namely cotton and woollen. The study covered the period of 1973 - 94. The major source of data was Annual survey of industries-factory sector summary results. To capture growth, efficiency and technology under currents in the textile industry, trend growth rate of different variables, efficiency parameters, factors intensity, total factor productivity and production functions - Cobb Douglas and CES - are estimated. He advocated that textile industry witnessed positive growth during 1973 - 94 in capital stocks, output and capital output ratio, more so in its woollen textile segment while it enjoyed a relatively stable demand, domestic as well as international on the break down of East European market. A negative growth in total factor productivity, value added to output and value added to capital ratio's were recorded in the woollen textile subsector.

Das and Mukhopadhyay (2001)\(^2\) made an attempt to understand the various characteristics of the Indian leather industry. The characteristics of the industry are reviewed in terms of its production and share in the Gross Domestic Product (GDP), employment generation, linkage effect in the economy, and exports in the light of various policy initiatives for 20 years, based on CSO data. He commented that the leather industry has grown at an annual average rate of 20 per cent during 1972-91. The share of leather products in total GDP had reached a level of 1.5 per cent. At the export front also the industry’s performance was quite notable. Export value is more than 60 per cent of total value of production. Regarding

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employment - industry employed around 1.78 million person ie 25 per cent of total employment. The linkage effect had been studied through input output analysis. Higher multiplier values and backward linkage co-efficients assert that the leather industry had a significant positive impact on the entire economy.

Datta (2002)\textsuperscript{103} desired to probe deeper into the performance trend of cotton mill industry in terms of some productivity measures - partial and total. For the purpose of the analysis, he had considered the period 1966 - 90 and the Annual survey of industries and Reserve bank of India Bulletin. Three alternative measures of total factor productivity - viz kendrick, solow, and translog Indices had been analysed for all India cotton mill industry’s performance. These Indices had been constructed with 1980 - 81 as base. He viewed that the units had gradually been sinking to ground in terms of productivity cost and finances and were being weeded out by the cost efficient power looms.

Raut (2002)\textsuperscript{104} formulated a model of optimal export decision of private firms and then empirically studied the effect of firm size, import of raw materials and capital data on variables such as net sales, fixed assets, wages & salaries( were goods taken from Bombay stock exchange directory). Competitiveness measured in terms of price - cost - margin (PCM) or Learner’s Index for the period 1975 - 1986. He found out that while competitiveness and value added growth improved in all industries, the export performance and productivity growth improved only in a few industries. Competitiveness had significant positive effect only in the lighter industries.

Bheemappa (2002)\textsuperscript{105} in his article Technology and Rural industrialisation opined that the setting up of Agrobased industries assumed great significance and holds great promise to bring about substantial improvement in the quality of life.

They promote local entrepreneurship, generate employment and provide jobs for rural workers as well as put a check on rural urban migration.

Ramaswamy (2002) examined three hypotheses regarding small scale manufacturing units namely (1) small firms uses more labour per unit of capital (2) they produce more output per unit of capital and (3) do small firms use resources more efficiently than large firms in terms of total factor productivity. The establishment level data from the Reserve bank of India survey of small scale industrial units were collected. Analysis was confined to four industry groups namely Motor vehicle parts, Agricultural machinery and parts, Machine tools and parts and plastic products. The analysis indicated that capital intensity and partial productivities were sensitive to alternative measures of firm size. Firm size and TFP are not found to be systematically related. There was a negative relationship between firm size and capital productivity. The lack of systematic relationship found in their study between establishment size and relative total factor productivity suggested that technical efficiency differences between establishments with in the small scale sector of the Indian industry may not be substantial.

Hashim (2003) in his article - productivity and cost in Indian Airlines - viewed the relationship, between unit cost and productivity of Indian Airlines for the period 1964 - 99. Based on secondary data, partial factor productivity as well as total factor productivity had been estimated. The TFP was calculated by aggregating four inputs namely labour, capital, energy and materials with the help of the translog multilateral index procedure, proposed by caves - et-al. (1982). From this analysis it could be concluded that there was an urgent need for Indian Airlines to improve its productivity. This would require proper utilisation of capital stock in particular and other inputs in general.

Bedi (2003)\textsuperscript{108} studied the structural changes in the composition of sponyarn, age of installed spindles and its impact on the efficiency and the productivity of spindles. The productivity analysis along with the state of spinning industry and future requirement of sponyarn used in forecasting the future requirement of spindles improved at a rate of 2-3.8 per cent per annum during the period 1988 to 1996 as a result of gradual introduction of new technology.

The paper advertisement and markets by Acharya and Mukherjee (2003)\textsuperscript{109} shed some light on the issues - What purpose do advertisement serve? What are the economic gains from such huge amounts of expenditure? What social value do they add in the Indian context? The analysis was based on both the available secondary data and media surveys. Their study revealed that except for cosmetics and toiletries, the magnitude of advertisement expenditure in India in the 1990’s had not been well below 2 per cent. But the share of total advertisement expenditure incurred by all 136 industries has been the highest for food products.

Indian Automotive Industry Challenges and Prospects - in this paper Chaturvedi (2003)\textsuperscript{110} discussed the challenges and prospects of the Indian Automotive industry. He also focused on the performance of passenger car industry and Auto component industry. The data base of the study covers sales volumes data in the CRIS INFAC Annual Review 2002 and Utility Vehicles Review and Out look, dated May 2003 - reclassified in accordance with price based segmentation. The study found out that by fiscal 2003, the passenger car market constituted 52.2 per cent of the total Indian passenger car market and was expected to grow to 57.6 per cent of the Indian passenger car market by fiscal 2007 at a CAGR of about 12.3 per cent.

In the paper of Kodali (2003)\textsuperscript{111} Japanese manufacturing strategies for Indian industries, attempts had been made to examine Japanese manufacturing strategies for feasibility in Indian industries. The present work describes a comparative rating model for the justification of Japanese manufacturing strategies for Indian industries. The study concluded that Japanese manufacturing strategies had been proved more promising and challenging as compared to Indian manufacturing strategies. It was very evident from the data that the Japanese manufacturing strategies had the larger potential to provide the competitive advantages.

Raj (2004)\textsuperscript{112} traced trends in the efficiency of firms in the Indian manufacturing sector and investigates the factors that affect it in the era of liberalisation. The Data Envelopment Analysis (DEA) had been used to estimate the efficiency of firms belonging to 27 industry groups for the years 1991 - 2001. The results indicated that average efficiency declined in the period 1991 - 96 and improved thereafter. Rohini (2004)\textsuperscript{113} looks at the performance of the Indian steel industry by using CMIE Data. It specifically examined certain major players both during the down turn as well as the recent upswing, when recovery in prices has bolstered the bottom lines of companies. The study concluded that steel industry in India would remain in a fractured state and may miss the opportunity to become global player.

Sarkaria and Shergil (2004)\textsuperscript{114} examined the relative roles played by market share concentration and capacity utilisation in determining the performance of firms in Indian manufacturing industries. The period chosen for the study 1980-81 & 1990-91 was based on CMIE data. For the purpose of the study, they used a

composite measure of growth and profitability as the representatives of financial performance. They computed multiple regression model by using SPSS package on computer and reached the conclusion that there was a strong negative relationship between risk and profitability and capital intensity.

Nikado’s (2004)\textsuperscript{115} aim was to get some policy implications for the SSI sector. He measured the technical efficiency of SSI sector by using a stochastic production frontier model on the basis of data drawn from the second - all India census of SSI units published by development commissioner SSI 1992. He recommended that the government had to promote SSI by promoting agglomeration economies, keeping infrastructure in good condition, and supporting technological upgradation. etc.

Mansor et.al(2004)\textsuperscript{116} gave some evidence of problem regarding technical efficiency of wooden furniture industry in Malaysia .In their study a Cobb Douglas Stochastic frontier production function was estimated using data from 124 furniture manufacturing industries in Malaysia for the year 1997. The result showed that actual firm output was 20 per cent less than the maximal output which could be achieved from the existing level of inputs. The evidence suggested that many firms still operate below the efficiency level, confirmed the conventional view that ‘labour intensive’ firms were most likely inefficient.

Iyer and Pillai (2004)\textsuperscript{117} paper - Ownership structure and financial performance - A study of chemical industry in India - examined the relationship between ownership structure and financial performance of firms with particular emphasis on the dynamics of the relation between the two. The data for all sample - 1219 firms were obtained from prowess data base provided by CMIE Mumbai.

This paper followed the multiple regression approach to test the hypothesis i.e. there was a positive relationship between the proportion of insider ownership and the profitability of the firm. There was also a positive relationship between the proportion of insider ownership and the market value of the firm. Empirically, firm performance is expected to have positive correlation indicating its active involvement in monitoring management. He advocated that ownership concentration was one way to improve financial performance through R&D spending.

The literature review categorically established that soap industry is infant area in social science research. A few studies had already highlighted the problem of these industries in terms of raw material escalating price. Very few concentrates on economic performance in terms of factor use efficiency, capacity utilization, financial performance and cost behaviour. To the best of my knowledge no more studies had been made so far to examine the productivity and profitability trends in toilet soap production in Kerala for this particular period 1995-2004. Hence the present study is relevant in this context to examine the economic and financial performance of toilet soap production in Kerala.