

**A STUDY OF
THE EFFECTS OF MOTIVATIONAL FACTORS
ON EMPLOYEES' EFFICIENCY**

Thesis
submitted to the University of Calicut
for the award of the Degree of
Doctor of Philosophy
in the Faculty of Commerce

By

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2000

DECLARATION

I do hereby declare that this thesis entitled **A Study of the Effects of Motivational Factors on Employees' Efficiency**, is a bonafide record of research work done by me and that no part of this thesis has been presented earlier, for the award to me of any degree, diploma, associateship, fellowship or other similar title of any other institution.

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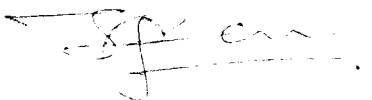
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CERTIFICATE

This is to certify that this thesis entitled, **A Study of the Effects of Motivational Factors on Employees' Efficiency** submitted for the award of Ph.D. degree of the University of Calicut, Kerala, is a record of bonafide research carried out by **Mr. P.V. Basheer Ahammed** under my supervision and guidance. No part of this thesis has been submitted for any degree before.

C.U. Campus,
12th June, 2000.


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(*Supervising Teacher*)

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LIST OF ABBREVIATIONS USED

AITUC	:	All India Trade Union Congress
BHEL	:	Bharat Heavy Electricals Ltd.
CITU	:	Centre for Indian Trade Union
CTL	:	Commonwealth Tiles Ltd.
CTMA	:	Calicut Tile Manufacturers' Association
FATWU	:	Feroke Area Tile Workers Union
GIL	:	Grasim Industries Ltd.
GREA	:	Gwalior Rayons Employees Association
GREU	:	Gwalior Rayons Employees Union
GROW	:	Gwalior Rayons Workers Organisation
GRPFWU	:	Gwalior Rayons Pulp and Fibre Workers Union
GRSA	:	Gwalior Rayons Staff Association
GRSU	:	Gwalior Rayons Staff Union
INTUC	:	Indian National Trade Union Congress
L&T	:	Larson and Tubro Ltd.
MCL	:	Malabar Cements Ltd.
MCLEA	:	Malabar Cements Ltd. Employees Association
MCLEU	:	Malabar Cements Ltd. Employees Union
MCLSU	:	Malabar Cements Ltd. Staff Union
MNCs	:	Multi National Corporations
NFL	:	National Fertilisers Ltd.
STU	:	Swatanthra Thozhilali Union

TISCO : Tata Iron and Steel Company Ltd.
TWLU : Tile Workers Labour Union
TWU : Tile Workers Union
WTO : World Trade Organisation

CHAPTER I

INTRODUCTION

Since independence Indian industries have lived under the shelter of protection, leaving little chance for structural adjustments. The result was lack of research and development, low productivity, unplanned growth and lack of competence. The liberalisation packages introduced in 1991 have necessitated embracing a whole new world of technology.¹

Before 1991, the focus of the policy had been to invest in heavy industries to accelerate economic development. Though both the private and public sectors were taken care of the tilt was towards the public sector. And today, many public sector enterprises are sick as they lack a professional approach and are saddled with social responsibilities. Imports were kept at minimal levels with the emphasis on import substitution while exports were over looked. There was not much foreign direct investment. Neither the government nor the private sector tried to strengthen Research and Development activities. The laws relating to the corporate governance were not reviewed or modified to meet the changing requirements. They became obsolete and hampered the growth of economic activity.

The imperatives that expedited the opening up of the Indian economy were the balance of payments crisis of 1991 and the obligations to

World Trade Organisation since 1995. The country's foreign exchange reserves had depleted to a week's import equivalent by 1991. To manage this crisis, many hard decisions were made. The rupee was devalued by almost 35% and was later made convertible on current account. Import controls were eased by lowering tariff rates. The conditions for foreign direct investments were liberalised. Though exports grew by almost 20% annually till 1995, imports too rose sharply. As a result the trade deficit increased from \$5.8 million in 1993-94 to \$7.6 million in 1995-96. The FDI flow surged from a mere \$97 million in 1990-91 to 1929 million in 1995-96.²

Indian industries, both under the public sector and private sector, came under severe threat as a result of liberalisation. Even the public sector units were forced to show efficiency and profitability in their working.

Since it is a signatory to the WTO, India is obliged to meet its requirements. With economic barriers, both tariff and non-tariff, being brought down under the WTO frame work, it has become indispensable to gear up Indian industries for global competitiveness, for which there is a need to rewrite many of the laws, policies and method of implementation. It is essential to restructure and remodel the functioning of institutional mechanisms.

In short, for Indian industry, time has come to prove the very logic of its existence. It has only two options - either to grow or die. In the current

competitive environment, it has to cope with the standards of its major competitors. Even the most leading companies are trying to locate areas where they can co-operate for mutual benefits. Indian industry has to enhance the efficiency of production mechanism, human resources and distribution systems to survive and excel in its performance. This could be achieved through a willful attempt to review the whole system and upgrade the men and machinery to suit the demands of the time.

Productivity and Labour Efficiency

The changing concepts about the management of industrial organisations require a new approach at the concept of productivity. In the past, productivity was defined in terms of rise in output per worker with the same or reduced level of input, through improved methods of work and improved technology. However, it is through the employees that the ultimate increase in production is achieved. The performance and efficiency of employees are more important than equipment and raw materials. Every employee's satisfactory performance is vital to the proper functioning of machinery and equipment in industry. If the employees are not motivated to work harder, better, with sincerity, initiative and co-operation, no amount of sophisticated technology is going to help.

The growing importance for labour efficiency is emphasised in the developed countries like the USA, Russia, Germany & Japan. In Russia

labour productivity is measured on the basis of set standards followed by detailed technical studies. In the United States, employees are free to suggest productivity improvement schemes and are offered incentives like a percentage of the savings resulting from the implementation of the suggestions.

The productivity linked wage payment system is employed in Germany. The industries are prepared to share the gains of higher productivity through national consensus. The Japanese also attribute their success in linking productivity with wages to worker's participation in introducing and monitoring the productivity-linked wage system. In India, incentives by way of cash payments for achieving production levels beyond the base level performance by atleast 50%, has not resulted in a reduction of overtime expenses, labour turnover, absenteeism etc.

The case of successful organisations like Bharat Heavy Electricals Ltd., National Fertilisers Ltd., Larson & Tubro and Tata Iron and Steel Company is a different story. Their experience shows that greater emphasis should be laid on improving the quality of employees through upgradation of their conceptual, managerial, behavioural and technical skills. The attitude of the employees in the organisation and the work culture play a dominant role in achieving positive results in terms of labour efficiency.

It is equally important to absorb the changing dimensions of productivity from efficiency to effectiveness, concern for linkages between profitability and productivity on the one hand and between productivity and quality of work life on the other. A motivated involved human resource is a precondition without which the gains of technology cannot be achieved. Hence greater stress should be laid on improving the quality of employees through an upgradation of their conceptual, managerial, behavioural and technical skills.

In the Indian context, the key to people orientation is 'trust'. Some of the successful organisations have won in creating among employees a feeling of commitment and emotional involvement interwoven into a corporate culture by the top management. This will naturally result in high morale and positive work culture of employees. In other words, labour efficiency can be improved through effective motivational forces. Then, it becomes essential to identify the factors which may motivate the workers to elicit their best performance and ultimately an overall increase in their efficiency.

Labour Efficiency and Motivation

The term 'motivation' is derived from the Latin word 'emover' which means 'to move'. It is a process of stimulating people to action to accomplish desired goals. The process of motivation, involves needs,

drives and goals. There is 'need' behind most of the actions of a man. Better facilities, more pay, recognition, opportunities for promotion etc. are some of the needs of the people. Drives are called motives and they represent the behaviour in the process of motivation. Every undertaking has certain goals which it wants to achieve, which can be materialised only through the efforts of employees.

Trust, hard work and sincere efforts of employees help an organisation to achieve the goal of high productivity. Job involvement or belongingness induces a person to put in his best in the development of the organisation.³

Motivation is an internal feeling - a psychological phenomenon which generates within an individual. Each individual in the organisation is a self-contained and inseparable unit and all his needs are interrelated which creates continuity in human behaviour.

Early writers like F.W. Taylor believed in the economic basis of motivation. Workers would be motivated by obtaining the highest possible wages through working in the most efficient and productive way. Performance was limited by psychological fatigue. For Taylor, motivation was a comparatively simple issue - what the workers wanted from their employers more than anything else was high wages.⁴ This approach is the "rational-economic concept" of motivation.

The human relations writers, however, demonstrated that people go to work to satisfy a range of different needs, and not simply for monetary rewards. They emphasised the importance of social needs of individuals and gave recognition to the work organisation as a social organisation, as illustrated in the Hawthorn Experiment. The human relations approach to organisation and management led to the 'social concept' of motivation.

The system approach also supports the social concept of motivation. The socio-technical system is concerned with the interaction between both the psychological and social features, and the needs and demands of people; and the structural and technical requirements of the organisation. The Longwell Coalmining study, for example, demonstrated the importance of redesigning work in a manner which provides opportunities for team work and social interaction.

The findings of the Hawthorn experiment, and the subsequent attention to the social organisation and theories of individual motivation, gave rise to the work of "neo-human relation" writers. The writers adopted a more psychological orientation to motivation. Greater attention was focussed on the content and meaning of the task, and attempts to make work more intrinsically satisfying. The major focus of concern was the personal adjustment of the individual within the work situation. This approach is the "self actualisation" concept of motivation.

The "contingency approach" to organisation and management, takes the view that there are a large number of variables, or situational factors which influence organisational performance. Contingency theory is concerned more with difference between organisations than with similarities. Managers must be adaptable, and vary their behaviour according to the peculiar situation and the different needs and motivation of the staff. The varying situational factors together with the complicated nature of human behaviour lead to the "complex-person concept" of motivation.

A major determinant of behaviour is the particular situation in which individual workers find themselves. Motivation varies over time and according to circumstances. Differences in patterns of motivation are illustrated by "Hunt", who had developed average 'goal profiles' showing the relative importance of different categories of needs for people in different occupations and changes in profiles at different stages for an average manager.⁵

The complex nature of motivation is supported by the work of Vroom. Citing more than 500 research investigations, he concludes that there is no all-embracing theory of motivation to work.⁶

Thus, it can be concluded that efficiency and motivation are positively related. The present study focuses on the effects of motivating

factors on the efficiency of employees, in the selected public and private sector units in Kerala.

Scope of the study

India, a country with immense natural resources and abundant manpower, is still a developing country only when compared to the USA, Japan and Germany. Technological developments, political stability with visionary leaders, sincere and committed labour force etc. are the back bone of the progress of any nation. What Japan did in fifty years, India could not imagine in hundred years.

Lack of commitment to work and low productivity adversely affect the growth of our nation. Idle and under utilised capacity, outdated technology and negative work culture resulted in low productivity and the poor performance of Indian industry. The situation in Kerala is more or less similar to that of the national scene. The performance of the public sector undertakings in Kerala is far from satisfaction. Only very limited units are enjoying profits. With a high literacy rate, the productivity of our employees is low compared to that of the neighbouring states like Tamil Nadu, Karnataka and Andhra Pradesh.

Hence it is thought worth while to conduct a comparative analysis of the efficiency level of the employees in the selected public sector and private sector units and the impact of motivating factors on their efficiency.

Statement of the Problem

Globalisation and the economic renaissance have compelled the trade and industry to excel in work on par with its counterparts of Multi National Corporations. The sophisticated technology of the west require high degree of specialised skills. The Indian technology is to be adjusted to the prevailing socio-cultural framework of the country.

Technology can be adapted and updated. Infrastructural facilities also could be developed. Unless for the effective and efficient utilisation of labour force, these are meaningless. Hence an indepth analysis of the various factors leading to improved efficiency is to be done. In this study an attempt is made to compare the efficiency level of employees both in the selected public sector and private sector units.

Naturally, such an analysis demands more conscious and serious study of the various variables relating to the work life of the employees such as their antecedents, working environment, labour relation, welfare activities provided by the employer, degree of satisfaction with the remuneration and other incentives, scope for personal development, job security, extent of involvement in the firm etc.

Objectives

With this background the following specific objectives have been set for the study:

1. To measure and compare the level of efficiency of workers in the selected public and private sector units in Kerala.
2. To analyse the relationship between the level of efficiency and antecedents of the workers.
3. To study if any significant differences exist in the workers satisfaction in work life in the units under study.
4. To analyse the factors motivating the workers for better performance and compare the companywise variation.
5. To examine the relationship between motivational factors and antecedents of the workers.
6. To study the empirical relationship between workers level of satisfaction and expectation of motivating factors.
7. To identify the most important variables influencing the level of satisfaction.
8. To suggest remedial measures, where necessary, for the improvement of the workers' efficiency.

Hypothesis

1. The average efficiency level of workers in Kerala is medium.
2. There is no significant difference in the level of efficiency of the workers in the public and private sector units in Kerala.
3. There is no significant relationship between the level of efficiency of workers and their antecedents.
4. There is no significant difference in the workers' level of satisfaction with regard to work life in different companies.
5. There is no significant difference in the magnitude of factors motivating the workers for better performance with reference to different companies.
6. There is no significant difference in the relationship between factors motivating the workers and their antecedents.
7. Immediate financial improvement is the most important variable influencing the level of satisfaction.
8. There is no significant difference in the level of satisfaction and expectation of motivating factors of workers between the different companies.

Methodology

The present study has been designed as a descriptive one based on both secondary and primary data.

Source of Secondary Data

The secondary data necessary for the study has been collected from the following sources:

1. Annual Reports and published accounts of the units under study: The Malabar Cements Limited, The Commonwealth Tiles Ltd. and Grasim Industries Ltd.
2. The Memorandum of Settlement signed by the management and trade union leaders of the units.
3. 'Statistics for Planning' published by the Government of Kerala.
4. 'Survey of Indian Industry 1999' published by The Hindu.
5. Published statements of the Manufactures Associations of Cement, Tiles and Pulp.
6. Record of 'Labour Welfare measures of the three units
7. Various academic studies conducted in the field in different parts of India and abroad.
8. Newspapers and periodicals dealing with the subject.

Primary Data

Since most of the information necessary to fulfill the objectives of the study are not available from the secondary source, the researcher mainly based his study on relevant primary data collected from the selected sample units.

Selection of Sample Units

There are about 55 medium and large scale industrial units in modern manufacturing sector in the state, of which 25 belong to the public sector and 30 belong to the private sector. Out of the 25 units in the public sector, only 12 units were running consistently at profit during the last five years. From these twelve units, one unit is selected at random by using lottery method. The Malabar Cements Ltd., Walayar (MCL), was selected from this category to represent the public sector units.

Out of the thirty units in the private sector, only twenty two were earning profit. From among these 22 units, 2 units were selected at random by drawing lots to represent the private sector.

They are:

1. The Commonwealth Tiles Limited, Feroke (CTL) and
2. Grasim Industries Limited, Mavoor (GIL)

Selection of Workers

There are 720 workers (excluding mine workers and headload workers) in Malabar Cements Ltd., 505 workers in the Commonwealth Tiles Ltd. and 640 workers in the Pulp Division of Grasim Industries Ltd. (excluding workers in Turbine, Electrical, Boiler Maintenance, Bamboo Yard and Pulp Shed).

Of these workers, a minimum of 10% have been selected at random by drawing lots from each unit. Thus there are seventy two workers from the Malabar Cements Ltd., fifty six workers from the Commonwealth Tiles Ltd. and sixty four workers from Grasim Industries Ltd., altogether constituting 192 workers, as sample for the survey.

Method of Data Collection

To collect the required information from the respondents, undisguised personal interview method was followed. The researcher himself administered a structured interview schedule comprising four parts - regarding labour efficiency, job satisfaction, motivating factors and antecedents of workers.

Measurement of Labour Efficiency

There is no single criterion to measure labour efficiency in all situations. Both objective and subjective methods are suggested by

industrial psychologists and practicing managers for measuring labour efficiency. Among the several methods a multidimensional measure based on objective and subjective criterion is more appropriate than a unidimensional measure based on dividing the total output by number of workers. Though this method is highly objective in nature it fails to measure the variation in the performance level of a more efficient worker and a less efficient worker, as both these workers get the same mean production. Hence in this study, subjective method is employed by the researcher to measure the efficiency of employees.

Computation of Labour Efficiency Index

The performance appraisal is done in two stages: a supervisory evaluation by the immediate supervisor and a self evaluation by the worker himself. For this purpose, twelve variables have been identified in a five point scale, and the supervisor is asked to rate the efficiency of the worker on these variables. Thus the maximum obtainable score under supervisory evaluation is 60 for the most efficient worker and 12 for the least efficient worker. Stated differently, the efficiency score ranges from 60 to 12. In the self appraisal form these twelve variables are repeated in an elaborate way i.e. by asking three questions each for these twelve variables in a five point scale and the scoring is done by averaging the scores for each variable. In this case also the average efficiency score ranges from 60 to 12 for each

worker. As a next step, workers' efficiency index is worked out by averaging the scores obtained for these twelve variables under supervisory evaluation and self evaluation put together. Here also the index varies from 60 to 12 points.

Index of satisfaction with work life

Similarly, to measure the level of satisfaction, seventeen variables were identified and assessed under self evaluation method. These variables include opinion relating to the work, pay and other financial benefits, promotion and training opportunities, job security, management and supervision, colleagues and co-workers, involvement in decision making etc.

These variables have been rated in a five point scale. The maximum obtainable score for a most satisfied worker will be 85 and a least satisfied worker will be 17. In other words the satisfaction score ranges from 85 to 17.

Identification of Motivating Factors

For the purpose of identifying the motivating factors, the constant sum scaling technique is used. A list of seven possible motivating factors have been identified from the available literature and each worker was asked to distribute a maximum of 100 points to these factors according to the preference given by each informant for each factor. Mean and standard

deviation values for each factor has been worked out and these values have been used for the analysis.

Variables used for the study

The following table shows the list of variables analysed for different purposes.

Table 1.1

List of Variables analysed

Purpose	No. of variables	Name of Variables
Measurement of labour efficiency	12	<ol style="list-style-type: none"> 1. Job knowledge 2. Quality of work 3. Quantity of work 4. Cost/Time control 5. Responsiveness to change or innovation 6. Commitment to the job and the organisation 7. Initiative 8. Care of machines, tools, equipment and records 9. Ability to work in co-operation with others 10. Absenteeism 11. Punctuality 12. Potential for handling high level responsibility

Measurement of satisfaction with work life	17	<ol style="list-style-type: none"> 1. Job satisfaction 2. Expectation of supervisor 3. Relation with supervisor 4. Work environment 5. Remuneration 6. Comparative ranking of income 7. Prospects to increase income 8. Running of canteen, housing, pension schemes etc. 9. Health, Maternity benefits and accident prevention 10. Involvement in decisions 11. Personal development - Training, Promotion etc. 12. Leave rules 13. Mode of settling disputes 14. Mode of communication 15. Style of management 16. Interpersonal relationship 17. Management's concern for workers
Identification of Motivating factors	7	<ol style="list-style-type: none"> 1. Immediate increase in income 2. Increase in income in near future 3. Promotion 4. Participation 5. Facilities at work site

		6.	Educational facilities for children
		7.	Medical facilities for family members
Profile of workers	11	1.	Age
		2.	Caste
		3.	Educational Qualification
		4.	Length of service
		5.	Nature of job
		6.	Monthly income
		7.	Place of domicile
		8.	Marital status
		9.	Occupation of parent
		10.	Interest in politics
		11.	Involvement in Trade Union

Tools used for Data Analysis

The collected data has been analysed by using both mathematical and statistical techniques, the details are given below:

1. Measurement of efficiency of labour: To measure the efficiency of labour, arithmetic mean and standard deviation have been used.
2. To examine the variability of mean efficiency level over different companies, age, caste, length of service and educational qualification of workers etc., analysis of variance technique is used and 'F' ratio is worked out.

3. To analyse the variability in the level of satisfaction of the workers with work life over different companies and the personal factors (antecedents), Variance Analysis is used.
4. For measuring the relationship between workers' satisfaction and expectation of motivational factors between different companies, regression analysis is done.
5. To establish the relationship between workers' satisfaction and expectation in aggregate, factor analysis is carried out.
6. To measure the variability of factors motivating the workers for better performance, between private and public companies, student 't' test is used.
7. To measure the variability in the factors motivating the workers in aggregate, MANOVA test is conducted and Wilk's Lamda values are worked out.

Limitations of the study

The study is purely a descriptive one. The whole analysis is done from a workers' perspective. Both the management and trade union perspective analysis is not done. Also peer evaluation has not been carried out. Moreover, the data collection was done mostly during the working hours of the units by meeting the workers individually. Hence the chance

of occurring minute mistakes due to lack of time may also affect the findings of the study. Since most of the data collected for the study are subjective in nature, the limitations of the subjective method like being biased, prejudiced, etc., may also affect the findings of the study. However, sufficient care has been taken to eliminate these chances for bias by averaging efficiency scores of supervisory evaluation and self evaluation.

Further, a baseline comparison of the efficiency level of workers with that of the industry has not been done as no standard figures were available for the whole industry.

Chapter Scheme

The whole study is structured in six chapters.

Chapter One, the introductory chapter, highlights the importance of motivational factors and labour efficiency. It also outlines the scope, objectives, hypothesis, sampling design, procedure of data collection, tools of data analysis and limitations of the study.

Chapter Two, contains a brief review of literature related to the topic under study.

Chapter Three, provides the theoretical background of some of the important theories of motivation - both Content Theories and Process Theories.

Chapter Four, deals with a brief account of the profile of the sample units.

Chapter Five, illustrates the analysis and interpretation of the data.

Chapter Six, the last chapter, summarises the whole study, lists the findings and offers a few suggestions.

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CHAPTER II

REVIEW OF LITERATURE

A large volume of literature is available on various aspects related with labour productivity, job satisfaction, workers' participation, work culture etc. Some of these studies are conducted in India while some others are done abroad. The methods used in collecting and analysing the data have been different in each case. Hence, it will be difficult to compare these studies on the basis of some common criteria. Still an attempt is made here to review some of the studies done earlier in the areas of job satisfaction, motivating factors, labour productivity, group dynamics, workers' participation etc. which are considered to be some of the important attitudinal variables to be significantly related to workers' performance.

Studies on Job Satisfaction

Job satisfaction is a popular concept, often linked to productivity, motivation, absenteeism, tardiness, accidents, mental health, physical health and general life satisfaction. Report Haprock defines job satisfaction as "any combination of psychological, physiological and environment circumstances that causes a person truthfully say: I am satisfied with my job." The earliest community wide study of job satisfaction was conducted by Haprock (1935)¹, in the town of New Hope, Pennsylvania. Out of 351

employees studied, 80 percent responded to the given questionnaire. The study revealed that, 85 percent of the sample had positive attitudes towards their jobs.

Arthur Kornhauser (1944)² stated that working people may be satisfied with many of the conditions of their employment and still be dissatisfied with other features of the job or of their working lives.

In addition to company based and community based studies of job satisfaction, many other investigations on job satisfaction were carried out in "incentive" approach to job satisfaction. It was believed that by providing financial and nonfinancial incentives, employees could be motivated to put extra effort to achieve the organisational goal.

Weitz (1952)³ opines that job satisfaction should be interpreted in the light of general satisfaction index. He believes that the worker with a high general dissatisfaction score is less likely to quit his job than one with low general dissatisfaction, even though both have a large number of specific job satisfaction. He developed a test of general satisfaction and found that score of this test was correlated.

The Hawthorne experiments conducted by Elton Mayo and his Harvard associates (1953)⁴ revealed the inter-relatedness of various elements at work and demonstrated that changes in physical conditions of work such as working hours, rest pauses, monotony, fatigue, incentives,

employee attitudes, the formal and informal organisations etc. are all inter-related. Better human relations in an organisation result in high morale, productivity and job satisfaction. As a result of Mayo's approach to human relations philosophy, management started thinking in terms of keeping their workers happy by maintaining good human relations.

Milton L. Blum (1956)⁵ in his study noted the significance of the relationship between job satisfaction and general satisfaction. He states that job satisfaction in part may be a function of general satisfaction or attitude towards life.

Brayfield, Wells and Strate (1957)⁶ have studied the relationship between job satisfaction and general satisfaction of male and female workers. There was a significant relationship in case of male workers but not in the case of female workers. They suggest that work is more important to men because job satisfaction plays an important role in determining general satisfaction. But for women worker does not have the same importance and hence, a non-significant relationship.

Herzberg, Mausner, Peterson and Capwell (1957)⁷ in their report based on sixteen different studies covering over 11000 employees, examined the relative importance of certain factors which could contribute to overall satisfaction or dissatisfaction of employees. Job security was rated high as a motivating factor. Opportunities for advancement were

rated as second, job benefit and ease of work being considered as least important.

In spite of all its plus points, the human relations approach was criticised by Whyte and Miller (1957)^{7a}, Georges Friedmann (1958)^{7b} and Etzioni (1965)^{7c}. Whyte & Miller remarked that human relations approach overemphasised the problem of communication and neglected the impact of larger economic and social environment on the internal social systems. Georges Friedmann alleged that this approach considered the factory as a closed social structure. A. Etzioni commented that better human relations can only be a partial explanation to the problem of job satisfaction. No one, can believe that increased communication and participation and granting of social rewards, with out wage increases would have improved the workers' life and job. To underline the argument, it is evident that many plants which have human relations programmes are among those in which pay is highest, working conditions best and unions most accepted.

Brophy (1959)⁸ has distinguished between the sociological and psychological roles of the worker. He has defined satisfaction in terms of discrepancies which exist between either:- (a) the workers' ideal role expectations and those of society or (b) the workers' ideal role and his real role. The basic proportion of the "satisfaction with a position is determined

by the degree of compatibility between one's perceived imposed role and his concept of ideal role for the position.

Happock (1963)⁹ states "instead of assuming that all vocational maladjustment is caused by emotional maladjustment, we might get nearer the truth if we explored the hypothesis that in 'some cases' emotional maladjustment causes vocational maladjustment while in 'some cases' vocational maladjustment causes emotional maladjustment." The concept of general adjustment seems to increase the understanding of job adjustment or satisfaction, yet it appears to be a partial explanation which overemphasises the personality aspects of an individual in explaining the phenomenon of job satisfaction.

The study conducted by H.C. Ganguly (1964)¹⁰ on Indian workers attempted to examine various factors leading to job satisfaction or dissatisfaction and ranked adequate earnings at the first place. Other factors which are ranked high are job security and opportunity for advancement. Other factors such as job status and prestige, working hours, relation with colleagues etc. have been ranked as low motivators.

Incentive approach has over emphasised the importance of "on the job factors" than "off the job factors" in studying job satisfaction, and hence it is a unidimensional approach. It states that by removing disincentives at work (such as bad working conditions, longer working hours etc.) and

providing rational incentives (such as piece rate earnings, opportunities for earning more money and other fringe benefits) a positive attitude towards work can be created. The incentive approach overstresses the economic aspects of job and seems to neglect other factors such as better interpersonal relations and other social aspects of the work environment, which could affect the satisfaction derived from work.

As a result of the investigation on providing a theoretical frame work to explain the concept of job satisfaction, researchers have brought to light some theories like Herzberg's "two factor" theory, Maslow's need hierarchy theory etc. Herzberg's 'Two factor' theory (1964)¹¹ otherwise popular as 'Motivation - Hygiene' theory of job attitudes, is the result of a depth interview of 200 engineers and accountants representing Pittsburgh industry. The two factors which Herzberg projected in his hygiene theory are "Satisfiers" and "Dissatisfiers". He is of the opinion that the hygiene factors meet man's need to avoid unpleasantness. People want their lives to be hygienically clean ie. they do not want the dissatisfiers. On the other hand, they want the satisfiers (motivators) as these are motivating factors which make them happy with their jobs.

In a report based on an extensive six-year study of motivation research undertaken by the management of Texas Instruments in America, Myers (1964)¹² concluded the following:

What motivates employees to work effectively is a challenging job which allows a feeling of achievement, responsibility, growth, advancement, enjoyment of work itself and earned recognition.

What dissatisfies workers is mostly factors which are peripheral to the job - work rules, lighting, coffee breaks, titles, seniority, rights, wages, fringe benefits and the like.

Workers become dissatisfied when opportunities for meaningful achievement are eliminated and they become sensitised to their environment and begin to find fault.

Myers found that satisfaction of the motivation needs arose typically from such factors as delegation, access to information, freedom of action, atmosphere of approval, involvement, goal setting, problem solving, performance appraisal, merit increases, discretionary awards, profit sharing, utilised aptitudes, work itself, inventions, publications, company growth, promotions, education and training, etc.

Harrell (1964)¹³ has given a list of the determinants of job satisfaction by grouping them into three broad factors:

- (a) Personal factors: Sex, age, number of dependants, time on job, intelligence, education and personality.

- (b) Factors inherent in the job: Type of work, skill required, occupational status, geography and size of the plant.
- (c) Factors controlled by management: Security, pay, fringe benefits, opportunity for advancement, working conditions, co-workers, responsibility and supervision.

Turner and Lawrence (1965)¹⁴ argued that enriched jobs characterised by variety, autonomy, responsibility etc. would lead to increased attendance and job satisfaction. Like Herzberg they viewed job enrichment as a motivating variable. They acknowledged the existence of two sets of important moderators in the job scope-outcome relationship. It was observed that workers from urban settings were more satisfied with low scope jobs than were workers from rural settings. Further it was found that situational factors, viz., supervisory style and co-worker relations also moderated the impact of job scope and satisfaction and absenteeism. These points highlight the significant role of individual and situational variables in the relationship of job design with workers' attitude and behaviour.

Dunnette, Campbell and Hakel in their study (1967)¹⁵ "Factors contributing to job satisfaction and job dissatisfaction in six occupational groups" commented on Herzberg's hygiene theory as "satisfaction or dissatisfaction can reside in the job content, job context or both jointly. Moreover certain job dimensions - notably achievement, responsibility, and

recognition are more important for both satisfaction and dissatisfaction than certain other job dimensions - notably working conditions, company policies and practices and security".

Haller Gilmer (1967)¹⁶ comments about dissatisfied worker. People who are dissatisfied with their jobs are less outgoing and friendly, are more emotionally unbalanced, and show more boredom, day-dreaming, and general discontent than do their satisfied co-workers. It is common to find low job satisfaction among workers in the lower social strata where family ties are weak, housing is substandard, and the opportunities for achieving stable work habits are limited. One basic consideration is that high productivity accompanies high morale only when the attitudes of the job group favour maximum output. It can be concluded that workers with positive job attitudes out-produce workers with negative job attitudes when the psychological climates favour high production, where there is good supervision, and where the employee really wants to produce and get ahead. It is also found that a reduction in the skill requirements of a job increases the dissatisfaction of the more skilled worker, where as it would not affect the less skilled worker.

Lawler and Porter (1967)¹⁷ suggest that performance causes satisfaction rather than the other way around, and this causal connection occurs only when employee perceives that intrinsic and extrinsic rewards

are associated with superior performance. When the performance leads to intrinsic and extrinsic rewards, which leads to higher job satisfaction, performance will be positively correlated with each other. When performance does not lead to intrinsic and extrinsic rewards in such a situation performance and satisfaction will not be positively related.

J.A.C. Brown (1969)¹⁸ in his work says that incentive approach provides only a partial explanation of 'job satisfaction'. Various other aspects of work also may have some relationship with the satisfaction a worker derives from his job, but this cannot explain those situations where morale of the individual is high inspite of bad working conditions and lower wages. Brown points out that 'of all the incentives known to man, money is the least important. Opposite findings are also available in the literature: in some cases, wages stand at the very top of the list, in others, it is given an intermediate position.

Crites (1969)¹⁹ has distinguished between job attitudes, job satisfaction, vocational satisfaction and morale. He observes: if it is some specific aspect of the job, such as duties and tasks or working conditions, then the concept which is defined would be job attitudes. If it is overall job in which the individual is presently employed, then; the concept would be job satisfaction, if it is type of work in which the individual has been trained or has gained experience several jobs, then the concept would be

vocational satisfaction. And if the referent includes the work group or employing organisation, as well as job or vocational satisfaction, the concept would be morale.

Locke (1969)²⁰ explains satisfaction in terms of discrepancy between desired and actual condition and assumes that a person will be satisfied, whenever there is no discrepancy between the desired and actual conditions. A person will be dissatisfied if there is any discrepancy between the desired and actual job characteristics and greater the gap between desired and actual goals, their dissatisfaction is more.

Pestonjee (1973)²¹ in a review of job satisfaction studies, identified on-the-job as well as off-the-job factors. They consist of many intertwined job aspects. Job and management areas comprise on-the-job (intrinsic) factors. Likewise, personal adjustment and social relations areas encompass off-the-job factors.

In a study by Argyle (1974)²², the relation between productivity and satisfaction is presented. He suggests a probable relationship between satisfaction and productivity for highly skilled workers or for those workers involved deeply with their work. The 'average' workers will work hard when satisfied. But some workers may work hard in order to forget their lack of contentment, and other workers are more content when their work requires little effort. He also examined the relationship between job

satisfaction and absenteeism, and labour turnover. Both are affected by factors other than job satisfaction, but it is concluded that there is a lower level of voluntary absenteeism, and of labour turnover, when there is a high level of job satisfaction.

Roy and Menon (1974)²³ reviewed the researches and concluded that satisfaction and performance were uncorrelated, happy workers are not necessarily productive, the facts that produce higher performance are by and large independent of the factors that produce satisfaction, high performance may result in high satisfaction but satisfaction analysis is largely irrelevant to performance analysis.

Vasudeva and Rajbir (1976)²⁴ commented that although a number of factors: intrinsic wages, opportunity of advancement, security, company and managements, social aspects of job, communication and benefits are related to job satisfaction, it is the interaction among these factors than any one of them in isolation, that accounts for job satisfaction.

Malviya and Ganesh (1976)²⁵ have found that a number of investigations have been directed toward searching out the effect of various psychological and environmental components that may affect the level of performance or productivity of workers and this is inevitable because productivity is the central goal of all the industrial organisations.

Brandstadler and Bernitake (1978)²⁶ observed that satisfaction with work atmosphere, diversity of job activities, professional esteem and perceived socio-political importance of one's endeavours seem to contribute most to overall job satisfaction.

Srivastava of Punjab University (1978)²⁷ indicated that life satisfaction improves when the employee's position in the organisational hierarchy improves. Upper status, supervisors were more satisfied with their lives than supervisors in lower position in the hierarchy. Life satisfaction also improved as income increased, and this was true even when occupational level was kept constant. Top level executives, however, had the highest mean number of anxiety symptoms and those in the middle category the least.

Grumberg (1979)²⁸ in his study states that there is no one, comprehensive theory to explain job satisfaction. Some workers may be satisfied with certain aspects of their work and dissatisfied with other aspects. There does, however, appear to be a positive correlation between satisfaction in different areas of work.

B.R. Sharma (1980)²⁹ in his study makes an indepth analysis of some important factors which are significantly associated with job satisfaction. The sample of 150 executives was drawn from eight well-known industrial organisations. The findings reveal that each independent variable is

positively related not only for job satisfaction but also to every one of the other independent variables. While income and occupational aspirations are not positively related to job satisfaction, the recruitment policy of the firm affects it very much.

Sutaria (1980)³⁰ conducted a study among 181 textile technicians to investigate the relationship between personality and Herzberg's two-factor theory of work motivation. The author opined that the tendency to desire satisfaction and dissatisfaction from job factors would depend to a large extent on personality development and the fulfilment of psychological and social needs.

Bamundo and Koppeloman (1980)³¹ examined the moderating effects of seven variables related to occupation, age and urbanisation. As hypothesised, education and income positively and strongly moderated the job satisfaction and life satisfaction relationship. Self employment also had a significant impact. Occupation had only a modest effect. Age and job longevity exhibited strong, curvilinear effects. Urbanisation did not lessen the relationship. In view of national work force trends towards increased education, professionalisation, income and age, the relationship between job and life satisfaction will like become stronger and more relevant over time.

Kumar, Singh and Verma (1981)³² studied job-expectations of 117 supervisors and managers in a public sector organisation in Varanasi. Among the 11 job expectation factors studied, job security obtained the first rank, followed by opportunity for advancement, pay according to merit, working conditions etc. Among the four groups they found high inter-factor (expectations) correlations (0.61 to 0.90). Out of the 14 motivating and 14 maintenance factors studied, as many as 23 were found to be associated with job satisfaction.

The relationship between job satisfaction and performance is again reflected in the book written by Luthans (1981).³³ He suggests that there are three generally recognised points of view:

- a) that satisfaction leads to performance, a view associated with the early human relations approach;
- b) that the relationship between satisfaction and performance is moderated by a number of variables, a view which is still reflected in research studies; and
- c) a more recent view that performance leads to satisfaction. The level of job satisfaction is affected by a wide range of variables relating to individuals, social, cultural, organisational and environmental factors.

Individual factors include: personality, education, intelligence and abilities, age, marital status, orientation to work.

Social factors include; relationships with co-workers, group working and norms, opportunities for interaction, informal organisation.

Cultural factors include: attitudes, beliefs and values.

Organisational factors include: nature and size, formal structure, personnel policies and procedures, industrial relations, nature of the work, technology and work organisation, supervision and styles of leadership, management systems, working conditions.

Environmental factors include: economic, social, technical and governmental influences.

Pestonjee (1982)³⁴ pointed out that job satisfaction, like any other attitude, represents a complex assemblage of cognitions (beliefs or knowledge), emotions (feeling, sentiments or evaluations) and behavioural tendencies. He added that a job is not an entity but a complex inter-relationship of tasks, roles, responsibilities, interactions, incentives and reward etc. According to him job satisfaction is a summation of employee's feelings in four important areas:

- 1) Job area: nature of work, hours of work, fellow workers, opportunities on the job for promotion and advancement, overtime,

overtime regulation, interest in work, physical environment, machines, tools etc.

- 2) Management: Supervisory treatment, participation, reward and punishment, praises and blames, leave policy and favouritism etc.
- 3) Personal adjustment: Emotionality, health, home and living conditions, finance, relation with family members etc.
- 4) Social relation: Neighbours, friends and associates, attitude toward people in community, participation in social activities, sociability and caste barriers etc.

In the study conducted by Singh and Shrivastava (1983)³⁵ at the Diesel Locomotive works, Varanasi, it was observed that the need for achievement appears to represent an important variable in the job performance - job satisfaction relationship. The satisfaction level is significantly higher for need achievement groups than for their counterparts. The findings of the study covering 150 blue collar workers clearly indicate that there is a strong relationship between achievement and productivity as also between satisfaction and productivity. The performance level for a high need achievement group is better than that for a low need achievement group. There are no cross-cultural differences between Indian and American workers so far as the effect of achievement on job satisfaction and job performance is concerned.

A survey was conducted by Pratap and Srivastava, (1983)³⁶ to study the relationship between job satisfaction and the organisational climate. Sixty employees - supervisors and executives - of a public sector undertaking in Uttar Pradesh was selected as the sample. All the employees were administered a job satisfaction and organisational climate scale test. The study revealed that the relationship between job satisfaction and organisational climate was not significant.

A research conducted by Singhal (1983)³⁷ on 88 workers in a medium size Indian industry showed that work and social adjustment factors were indispensable and important components of job satisfaction. Personal factors included ego-strength, need-achievement, marital adjustment, income, education and length of service.

Jyoti (1983)³⁸ conducted a research work on this subject and it was hypothesised that (1) there would be a positive relationship between achievement, motivation and job satisfaction, and (2) high and low achieving supervisors would differ significantly with regard to job satisfaction. The result supports hypothesis number 1, but not hypothesis number 2. Finding indicates that no true relationship exists between high and low achievement with regard to job satisfaction. Supervisors job satisfaction was associated with positive feeling of task accomplishment.

The important finding that emerged out of the research work of Pathak (1983)^{38a} was that supervisors, regardless of job involvement, wanted more decision making authority, opportunity for personal growth and development, and recognition for good work done. One factor for job involvement appeared to be satisfaction through recognition for good work done. Both tangible and symbolic forms of recognition of good work may increase job involvement.

Singh and Srivastava (1984)³⁹ conducted a study on 136 white-collar workers and 72 blue collar workers employed by a bank. They were administered a union scale and job involvement scale. Their finding indicates that pro-union workers had lower job involvement, whereas workers having a less favourable attitudes towards trade union were highly involved in their job.

Mottaz (1984)⁴⁰ indicates that education had an indirect positive effect but a direct negative effect on overall work satisfaction. His results suggest that education may have increased work satisfaction by increasing work rewards. Moreover it appears that most of the educational pay off was in terms of intrinsic rewards, such as task autonomy, task significance and task involvement. However, it is also seen that education did not lead to greater intrinsic rewards significantly reduced work satisfaction. Supervisors who reported equal level of intrinsic rewards, work satisfaction

tended to be considerably lower among better educated supervisors. This effect appears to be due to higher aspirations of work values associated with increased education.

Another study conducted by Khaleque and Chowdhary (1984)⁴¹ examined regarding the factors relevant to overall job satisfaction among 35 top and 51 bottom industrial managers. Their study revealed that top managers considered the nature of work as the most important factor and fringe benefits as the least important factor for job satisfaction. On the other hand, the bottom managers considered job security as the most important factor and wage as the least important factor for job satisfaction. Results showed that while in the case of top managers 80% were satisfied with their jobs, 20% dissatisfied. 76% of the bottom managers were satisfied and 20% dissatisfied with their jobs respectively. Satisfaction with family life is significantly related to overall job satisfaction of both top and bottom managers. Overall job satisfaction of industrial managers seems to be influenced by the personal and job related factors and the degree of satisfaction appears to depend on the satisfaction of the number of job facets as well as their importance.

Khandwalla and Jain (1984)⁴² conducted a study based on a sample of 47 managers as to how enterprise goals affect job satisfaction at lower management levels. The study observed that for Indian corporate

managements, the entrepreneurial goals of higher profitability and sales may be more important than the development goal of meeting national priorities or greater management professionalisation or efficiency. Lower management reported greater satisfaction with personal growth and achievement than in meeting power altruistic needs. Job satisfaction may be more of a consensus phenomenon than an independently derived state of being or cognition about satisfaction. The goals of management may be a significant determinant of forces that lead to a consensus with in a group about job related attitudes.

Studies on Motivation

Motivation is essential to the operation of organisations. No matter how much machinery and equipment an organisation has, these things cannot be put to use until they are released and guided by people who have been motivated. In other words, motivation turns on the power to keep the organisation going.

Pareek and Keshote (1981)⁴³ conducted a study of Malaysian and Indian bank managers to know their preferences of motivator and hygiene factors in the two cultures. The authors concluded that need perceptions do not vary with the level of management and that the Malaysian bank departmental heads and the Indian middle managers show higher

preference for the motivators compared to the Malaysian top managers and management trainees.

Another study was conducted by Karla (1981)⁴⁴ on the factors that lead 100 middle and junior level officers to change their jobs in the past three years. The sample was drawn from the participants attending various management development programmes at the National Institute for Training in Industrial Engineering, Bombay. It was found that salary was one of the most important decisive factors behind the change. This finding is different from some other studies on managerial motivation which stressed non-economic factors as strong motivators for managers. In this respect this study indicates the possibility of a difference in the managers' 'projected self' and 'real self' in relation to motivation factors. The study also indicates that with the increase in the age (particularly above 40 years), Indian managers seem to be looking more for extrinsic factors which play a more important role in motivating them to change jobs than intrinsic ones.

The study by Hugh & Roy (1981)⁴⁵ was conducted among junior and middle level administrators and equivalent grade scientific and professional civil servants. In a questionnaire of job satisfaction based on the 'critical incident' approach popularised by Herzberg, respondents were asked to describe situations in which they felt 'especially good' and 'especially bad' about the work they were doing. The study covered 300

higher executive officers, 150 senior executive officers, 60 graduate specialists and another 30 executive officers, from one single department. The respondents identified several factors being present at times when they felt "really bad" about their work. The study concluded that "failure to achieve" is closely associated with dissatisfaction and low motivation.

In a study conducted at the Heavy Engineering Corporation Limited by Chirayil (1982)⁴⁶, an attempt was made to understand the factors which motivate or demotivate the employees and those which act as strong motivators in the present situation. 140 respondents were 'interviewed' with the help of a questionnaire, out of which three-fourth were technical employees and the rest were attached to the shop. The strong motivating factors which depended upon external stimuli are:

- a. Proper work organisation
- b. Opportunity for advancement
- c. Competent supervision and proper guidance
- d. Recognition
- e. Human interest shown by supervisors
- f. Higher wages and incentives.

Some of these factors are given more weightage by the workers. Here the supervisor has a decisive role in the proper placement and utilisation of

the work force. He should provide proper guidance, give recognition to good work done and be impartial in his dealings with workers.

A study by Pathak (1983)⁴⁷ drawing a sample of 150 bank officers from four major public sector banks in India, investigated the relationship between job involvement and need satisfaction. It could not find any significant relationship. The important finding that emerged was that the bank officers, regardless of their job involvement, wanted more 'decision making authority', opportunity for 'personal growth and development' and 'recognition for good work' done.

A study on Bureaucracy and work motivation by Jain (1984)⁴⁸ used a sample of 194 school superintendents and attempted to explore the relationship between the higher level educational bureaucracy and intrinsic and extrinsic motivations. The result secured from the stepwise multiple regression analysis demonstrated that demographic data are more effective in predicting work motivation than the level of bureaucracy. Education, experience and age were found to have a significant predictive relationship with intrinsic motivation. The demographic data also failed to predict external motivation. Thus neither a high nor a low level of bureaucracy was able to predict extrinsic motivation at a significant level.

Bhatia (1985)⁴⁹ conducted a study among executives up to the senior management level in a design and engineering department. According to

the study a majority of the executives are satisfied with the job content factors and derive job satisfaction. The general trend is that the more senior the executives, the better is their degree of perception of job content variables. A large number of executives stated that they did not face stagnation in their present jobs. This indicates that satisfaction came from the work as also the opportunities available to them for advancement. More over majority of the respondents have a positive view on all the job characteristics such as job clarity, job variety and job significance.

In a study by Sharma (1985)⁵⁰ on middle level executives of Delhi Administration it was reported that working conditions were not conducive to effective functioning. The nature of job did not provide opportunities to utilise these officers fully. Lack of incentives and recognition for good work made them indifferent and non-committed towards work.

A study by Mukhopadhyay (1989)⁵¹ listed twelve important factors relating to work, organisation and self. The respondents were divided into three occupational groups. The first group consisted of 43 senior IAS officers, the second group of 26 professionals such as managing directors, managers, directors, engineers etc. and the third group comprised of 26 welfare officers. They were asked to tick off the twelve factors in the order of preference. Then they were interviewed with reference to their work goal preference to know the reasons for the same. It was observed that 'job

satisfaction' is the most important work goal among senior and junior level officers. Personal interviews with the officers revealed that the factors responsible for causing dissatisfaction were: job pressures, content of the job, Denial of autonomy, uselessness of the job, feeling of powerlessness, lack of challenge etc. For middle level officers, money was the most important work goal, though they also chose job satisfaction as their second most important factor. 'Salary' was the third most important work goal for senior and junior officers. On the otherhand 'recognition' was chosen as the third goal by middle level officers. Senior officers felt that 'challenge' was the second most important factor for work motivation. It is important to note that human needs are subjective and are influenced by certain socio-economic conditions irrespective of occupational and educational levels.

Studies on Group Dynamics, Alienation, Job design, etc.

The social process by which people interact face to face in small groups is called group dynamics. Two important research works on group dynamics are that of Elton Mayo and Kurt Lewin in 1920s and 1930s. Mayo showed that workers tend to establish informal groups that affect job satisfaction and effectiveness. Lewin opined that different kinds of leadership attitudes produced different responses in groups. Groups have properties of their own that are different from the properties of the individuals who make up the group.

Allport's (1920)⁵² research was an experimental comparison of behaviour when an individual worked alone and when he worked in the company of others who were also carrying out the same tasks. An effort was made to minimise rivalry and competition among individuals in the latter situation, and there was no over interaction among them. Allport found evidence of social facilitation in that at least some subjects on some tasks showed a quantitative increase in output under social conditions. Extremity of judgement was reduced in the social as compared with the individual situation.

The Achievement motivation model proposed by Murray (1938)⁵³, which was later developed by McClelland and Atkinson (1953)^{53a} examines the process by which changes in the job situation influence behaviour. The focus of attention here is on employee personality, specifically, on employee's need for achievement. The theory suggests that employees with a high need for achievement will be more likely to respond favourably to enriched jobs than will employees with a low need for achievement. Enriched jobs stimulate the achievement motive which ultimately leads to higher levels of performance, involvement and satisfaction.

Blum (1949)⁵⁴ assumes that a person is predisposed to job satisfaction or dissatisfaction prior to being employed. Adjustment on the job is dependent up on the individual's abilities, interests and personality. When

the specific job factors are related to one's make-up, job satisfaction is possible. But when they clash there is job dissatisfaction and the extent of the clash determines the depth of dissatisfaction. Hence, one who is able to adjust in his general life is able to have high occupational adjustment and hence forth, experiences high job satisfaction.

The nature of technology and work organisation is a major influence on job satisfaction. In a study in an American car assembly plant, Walker and Guest (1952)⁵⁵ examined the effects of mass production, assembly-line work on employee behaviour. They described the characteristics of assembly-line work as: repetitions and machine paced; involving a minimum of skill; using predetermined techniques with no choice of tools or methods. The workers were able to perform their jobs with only 'surface mental attention'. The nature of the job, the technological lay out and the high level of noise restricted the amount of social interaction and contacts that workers could have with each other. There was little contact with the managers and as a result relationships with management were of little importance.

Morse (1953)⁵⁶ reports a study on 635 white-collar workers in which it was found that 55 percent of men and 35 percent women were dissatisfied with their jobs. Possibly women have lower ambitions and financial needs. She added that the more dependents one has the less

satisfaction he has with job. Perhaps the stress on greater financial needs bring about greater dissatisfaction with one's job.

Horwitz (1954)⁵⁷ conducted an experiment concerned with the question of whether group goals function the same as do individual goals. He set up a situation in which groups of girls each represented a sorority (group of women students in a University in U.S) in a contest with groups from other sororities. The groups task was to instruct the experimenter as to moves to make in completing a series of jig-saw puzzles, and a certain degree of agreement had to be achieved for the experimenter to act. Horwitz found that an important factor in recall was the previous agreement of the individual with the group decision. The study suggests that group goals and motives can be established and function in a manner similar to the way they work with individuals. It further indicates that there will be individual variations in the way and extent to which the group members will be affected by the group goal.

French's (1956)⁵⁸ results showed that the conditions present at the time the performance and motivation are significant to the results obtained. She observed that the selection of work partners with whom one performs a task is related to motivation. Given choices, high need achievers who are low in need for affiliation will select partners who are competent, rather

than friends. Subjects high in need for affiliation but not in need for achievement tend to select friends rather than competent work partners.

Atkinson (1957)⁵⁹ has interpreted some of the interactions shown in the case of need for achievement in the following way. While need for achievement is a stable disposition, it must be engaged by situational cues. He suggests that the degree of arousal is some function of motive strength and expectancy of goal attainment in the situation, incentive value is also involved. Which one is dominant in an individual will determine just how the interaction of motive, situation, expectancy and incentive value will turn out.

Moeller and Applezweig (1957)⁶⁰ used a forced-choice questionnaire to select female college subjects with high motivation for either social or self-approval. The inventory gives behaviour samples together with four possible reasons for each behaviour, with the subject orders according to likelihood as the reason for the behaviour. Subjects were selected who were high in giving reasons related to social-approval but low in giving reasons related to self-approval; they were contrasted with subjects with the reverse pattern as well as with subjects who were high in both social and self-approval patterns. It was found that the subjects high in social approval yielded more often to the majority than the girls high on both needs.

Krebs (1958)⁶¹ studied male college students classified as to level of need achievement and scores on a self-report measure of independence training. A conformity situation involved memory for whether a given slide had been presented in one set or in another. The greatest conformity was found in subjects who were low in need for achievement and who also reported lateness of independence training.

Cartwright & Zander (1960)⁶² compliment Allport's view on group dynamics, when one is a member of a group there are a number of reasons that he will tend to change his way of acting, thinking, believing or feeling in the direction of the norms of the group. The pressures of others are brought to bear on the individual and frequency of interaction is a factor. As a group member, one must forego some of his individuality, if the group is to maintain itself, to achieve and to provide atleast some satisfaction for its members. The fact of increased uniformity as a result of group membership is well established in many instances.

Blauner (1964)⁶³ in his study, further extended the concept of alienation. He describes alienation interms of four dimensions: powerlessness, meaninglessness, isolation, and self-estrangement. Blauner examined these dimensions in a comparative analysis of four different technologies: Craft, machine minding, assembly line and automated process. He suggested that all modern bureaucratic organisations have

inherent alienating tendencies and found most manual workers were alienated to some degree. The extent of alienation experienced is likely to be a function of the nature of technology. Assembly line technology was found to be most alienating. Machine minding and automated process were in the middle, Craft technology was the least alienating.

The activation theory advanced by Scott (1966)⁶⁴ emphasises on the physiological processes involved in job redesign. Activation is defined as the degree of excitation of the brain stem reticular formation and has been found in laboratory experiments to have a curvilinear relationship to performance. Further, researches suggest that performance suffers at both, very low or very high, activation levels. Thus, jobs which are dull and repetitive may lead to low level of performance because they fail to activate. On the other hand, jobs which are more enriched should lead to an appropriate level of activation and hence, result in increased performance.

Myers (1968)⁶⁵ in his study examined the nature of meaningful work. How the meaningfulness of a job can be determined is through a series of questions: 1) in terms of the supervisor's insight in to the scope of meaningful work and 2) an analysis of work by the job incumbents themselves. It was concluded that an effective supervisor is one who "provides a climate in which people have a sense of working for

themselves." In terms of day-to-day relationships the primary role of the supervisor was staying out of the way to let people manage their work."

One approach to job satisfaction is in terms of frustration and alienation at work. Alienation refers to the detachment of the person from his or her work role. This concept of alienation is associated originally with the views of Marx (1969)⁶⁶. He saw the division of labour in pursuit of profit and exploitation by employers, as a denial of the worker's need for self expression. Workers became estranged from the product of their work. Work no longer provided a satisfying experience in itself, but represented a means to satisfying other external demands.

The socio-technical systems model developed by Eric Trist and Lou Davis (1974)⁶⁷ suggests that an appropriate starting point for understanding job design is to consider the psychological requirements of tasks in order for them to be motivating. These principles include the need for a job to provide: reasonably demanding contents, an opportunity to learn, some degree of autonomy or discretion in decisions affecting one's job, social support and recognition and a feeling that one's job leads to a desirable future. In this way, the socio-technical systems approach attempts to be a truly systematic approach to work design.

Hackman and Oldham (1976)⁶⁸ have proposed a model specifying how job characteristics and individual differences interact to affect the

satisfaction, motivation and productivity of individuals at work. The model is specifically intended to be used in planning and carrying out changes in the design of jobs. Three psychological states are postulated as critical in affecting a person's motivation and satisfaction on the job:

- a) Experienced meaningfulness: The person must experience the work as generally important, valuable and worthwhile.
- b) Experienced responsibility: The individual must feel personally responsible and accountable for the results of the work he performs and
- c) Knowledge of results: The individual must have an understanding, on a regular basis, of how effectively he is performing the job.

The more these three conditions are present, the more people will feel good about themselves when they perform well .

Ganguly (1977)⁶⁹ opined that motivation for participative management, depends on three very important factors: 1) that the participative style is certainly a step forward in the voluntary ladder; 2) that the participative philosophy is perhaps the only concept which offers sufficient scope for both the employer and employee to fulfil their needs at all levels - physiological, security and safety, social power, ego prestige and self-realisation or self-actualisation and 3) that participation promises to

ease all those problems in organisations which arise out individual to individual, individual to group and group to group relationship and interactions.

A study by Gyllenhammar (1977)⁷⁰ on The Volvo Project is a famous example of a socio-technical, team working approach in the Kalmar Car plant in Sweden in 1974. The aim was to increase the work content of individual workers through greater use of team working. The teams of workers are responsible for the assembly and checking of a complete sub-system at one station. The members of each group are free to manage themselves, elect their own leader and organise and distribute work among themselves.

The analysis of the results of two surveys of employee attitudes conducted by the University of Michigan and the Swedish Institute for Social Research, Karasek (1979)⁷¹ examined the relationship between mass production work and stress. It was suggested that stress was related to two main job characteristics: work load and discretion in how to do the work. The most stressful jobs were those that combined high work load with low discretion. Both the American and Swedish surveys supported this argument. Karasek suggests that the use of mental ability, exercising judgement and making decisions is not usually stressful. Stress can be reduced, if workers are given greater discretion in how their work is

performed. As discretion can be increased without changing work loads, mental health could be improved without affecting productivity.

Grunberg (1979)⁷² in his study states that restructuring the nature of work itself, and providing job enrichment by making it more interesting and challenging, does increase job satisfaction.

From a review of developments in the field, and case study evidence, Taylor (1980)⁷³ concludes that theories of job enrichment and employee motivation do work. Taylor found that the situations people find most satisfying and rewarding are invariably those which provide the opportunities to satisfy job content (shown in the inner circle). If any of the job context factors (shown in the outer circle) are allowed to deteriorate in any way, a climate of dissatisfaction and tension, frustration and friction will prevail and people will not perform at their best.

Task identity - the extent to which a job involves completion of a whole piece of work with a visible outcome.

Task significance - the extent to which a job has a meaningful impact on other people, either inside or outside the organisation.

Autonomy - the extent to which a job provides freedom, independence and discretion in planning the work and determining how to undertake it.

Feedback - the extent to which work activities result in direct and clear information on the effectiveness of job performance.

From these five core job dimensions Hackman and Oldham have formed an equation which gives a single index of a person's job profile, by answering the Job Diagnostic Survey. They claim that people with enriched jobs and high score levels on the Job Diagnostic Survey, experienced more satisfaction and internal motivation.

As part of the study of the psychological importance of work undertaken by the Social and Applied Psychology Unit at the University of Sheffield, Warr (1983)⁷⁵ has examined variations among jobs, and aspects and types of work which enhance psychological well-being. Controlled experiments are carried out to change the content of jobs in a direction predicted to increase employee well-being. Jobs were redesigned to shift responsibilities from supervisors to teams of shop-floor workers. The

workers were given greater control over the pacing of their work, distribution of tasks among themselves, and general organisation of their time and effort. Information on employee attitudes, well being and performance was gathered before the changes and then six and eighteen months later. Results indicated that employee well being increased substantially. Overall job satisfaction was significantly greater and psychological distress also declined remarkably.

In addition to the above study Jonsson (1983)⁷⁶ and Ferguson (1988)⁷⁷ also examined the impact of autonomous work groups in the Kalmar plant. Both the studies show improved working environment of the plant. Quality of working life was also improved. Turnover, absenteeism and sickness were reduced. Later, after 10 years from the start of the project, the vice-president of 'Volvo' stated that the kalmar plant had achieved 20 percent higher productivity than the goal set for the project. Volvo here now extended the concepts of Kalmar to most other plants.

Studies on Productivity, Performance, etc.

Productivity is a result of three inter related dimensions: input-output relationships, attitudinal factors and quality of service indicators. Hence productivity should be measured as a whole keeping all the three dimensions in view.

Robert Levering (1988)⁷⁸ in his book examines the idea of a great place to work as an end in itself, not just a means to increase profit or productivity. He states: "there is mis-match between what we want to do during our working hours and what we are allowed to do in our work place. This discrepancy translates, on a personal level, to a profound feeling of alienation. Socially, it represents a tragic waste of human energy."

Kathy E. Lanham (1988)⁷⁹ in his book deals with relationship between junior and senior managers in one corporate setting. The book targets three distinct audiences, viz. individuals at all career stages; practising managers and employees; and human resource specialists or organisational researchers. It is evolved in to a search based programme designed to clarify the nature, the benefits and the limitations of a variety of relationships between colleagues.

The book edited by Eli Gizberg (1988)⁸⁰ is a collection of nine papers written by different authors on the evolving human resource function. They discuss new trends, ways to maintain corporate productivity, the roles and functions of tomorrow's managers etc. It also covers other areas influenced by demographic and value changes concerning training and education.

Shetty and Vernon (1988)⁸¹ have studied improvement strategies from industry, labour and higher education. Central themes of the book include competition in the global market, proven productivity strategies and the efficient use of information technology. A good number of case studies are used to illustrate specific improvements.

The research work of G.K. Suri and R.C. Monga (1988)⁸² throws light on the practices of linking wages with productivity in the USSR, United States, West Germany, Japan and India. In the USSR, the state fixes the upper limit of all bonuses and incentive payments along with wage rates. Labour productivity is measured on the basis of set standards followed by detailed technical studies. In the United States, employees are free to suggest productivity improvement schemes who will get a reward equal to 1 to 5% of first year's saving resulting from the implementation of the suggestion. There is a present trend in some industries to pay a lumpsum amount for higher productivity instead of a wage increase.

In West Germany, the productivity linked wage payment system is very scientific and viewed in the national perspective. The industries are prepared to share the gain in higher productivity through national consensus - selection of the right performance measure must satisfy a number of criteria like increasing output, reducing labour and other costs, improving quality or timeliness of delivery, encouraging co-operation

amongst work groups, enhancing adaptability and innovations, improving quality of work life etc.

The Japanese attribute their success in linking productivity with wages to workers participation in introducing and monitoring the productivity linked wage system. It is practised in different forms such as joint consultation, collective bargaining etc.

In India many industries offer incentives to employees by way of cash payments for achieving production levels that exceed the base level performance by atleast 50%. Most of the industries have reported that the incentive scheme introduced has not resulted in a reduction of overtime expenses, Labour turnover, absenteeism etc.

Suri and Jagdish Kumar (1988)⁸³ in their study present the critical strategies, approaches, methods and processes of four successful organisations - BHEL, NFL, L & T and TISCO - in stepping up productivity at the enterprise level. The book brings out the manner in which the 'precept' of productivity has been translated into 'practice' through successful experiments in these four organisations. These organisations have succeeded in developing among 'employees' a sense of commitment or emotional involvement interwoven into a corporate culture by the top management, in terms of structure, staff, super-ordinate goals, systems, skills, styles and shared values. They believe that the key to people

orientation is 'trust'. They lay greater emphasis on improving the quality of employees through an upgradation of their conceptual, managerial, behavioural and technical skills. The attitude of the employees in the organisation and the work culture play a dominant role in achieving positive results in terms of productivity gains.

Bhabani (1989)⁸⁴ in his work on Industrial Relations and Participative Management, provides detailed discussions on the concept of workers' participation and experiences of participative management in selected countries including India. The study conducted in leading public sector steel plants, offers a methodological scheme which can be adopted for future reference. The conclusions are based on the working of participative scheme at the unit level as well as on the global and Indian experience.

The book written by Thomas L. Quick (1989)⁸⁵ helps us to examine the needs, wants, attitudes, expectations and behaviour of the people who work for us. Once we understand the behavioural aspects of the employees as individuals, and as parts of a group, we can help them to meet their goals as well as those of the company.

In the book written by Pandey (1989)⁸⁶, one could see an incisive and instilling account of the philosophy of Tata Steel which has been responsible for creating the work culture, work ethos and values as practiced in Tata Steel. It presents the story of the synthesis between man

and machine, the logic of its interdependence and its symbiosis which is hall mark of Tata Steel.

Joseph Prokopenko (1990)⁸⁷ in his research work explains various facts of productivity - concepts, analysis, techniques, organisation effectiveness, human resource management and productivity promotion at the national level. The conceptual frame work covers the changing dimensions of productivity from efficiency to effectiveness, concern for linkages between profitability and productivity on the one hand and between productivity and quality of work life on the other. The researcher says that 'people' are the most important and promising area for productivity improvement. High quality work force is characterised by its productive behaviour which is dependent on: work attitudes, knowledge and skills and opportunities to use manpower resource effectively. The study emphasises to give more attention to the role of management, motivation, participation, training and work organisation.

William N. Cooke (1990)⁸⁸ conducts a balanced examination of the costs and benefits of labour - management co-operation, building a theoretical model in the process, but also testing it with survey data. Cooke offers specific recommendations on how to make temporary alliances in to long term trust building relationships. He makes a good case for bringing labour further in to decision making and sharing of gains.

Another study by Edward E. Lawler (1990)⁸⁹ describes about organisational strategies and pay systems. Pay is a potential source of competitive advantage to an organisation that views pay as a strategic variable. The author identifies the choices to be made in developing a pay strategy in a way that will appeal to all managers, not just compensation specialists. It discusses the problems of individual incentive pay, merit pay, and how to determine the base pay.

Thomas M. Rohan's case study (1990)⁹⁰ about Nucor Steel and its chairman Ken Iverson states that Nucor is twice as productive as the average of the steel industry, based on highly motivated small work teams with an extremely good gain sharing structure. The work rules concerning absenteeism are severe, but the employees are in it for the long term and support the necessary discipline. Substantial technological investment has been made successfully.

A study by Sardane and Prem Vrat (1991)⁹¹ views productivity management as a formal and integrated approach. Corporate policy must declare that the organisation is committed to the philosophy of achieving a continuous growth in productivity at all levels and at all times. Technology plays an important role in bringing down costs of production, upgrading quality and service and improving productivity. Human resources factor is equally important. A motivated involved human resource is a precondition

without which the gains of technology cannot be achieved. The foundations of a national systematic approach to productivity improvement rests on organisational factor, the human factor and the technology factor.

Rama Murthy Kuppachy (1992)⁹², in his study, has analysed some research, findings in group dynamics and their impact on team work and motivation for higher productivity. It covers the evolution of the concept of industrial democracy and participative management in Europe, USA and other Asian countries. Four models of workers participation at the enterprise level have been discussed, namely - the West German co-determination; the Yugoslav self management; Israel's collectives and Union-owned Enterprises and the Japanese Consensus Decision-Making. These models and experiences in employee participation cover a broad spectrum, ranging from voluntary to legislated forms; from informal consensus modes of integration to formal consultative and co-operative process; from recommendatory to vetoing powers to decision making with management at all levels etc. These results of participation vary from country to country.

The paper on "Productivity and Tradeunionism" prepared by P.K. Mohanty (1993)⁹³ describes the developments in British Steel to improve productivity through reorganisation during 1980s. The structure of Trade Unions in India is completely different from British Trade Unions. Here it

is general in nature, while specific craft oriented in Britain. As a result of the multiplicity of unions, inter-union rivalry is a common feature at the work place level leading to more disputes and low productivity. The Trade Unions in British Steel, remarkably contributed in the move to improve productivity by creating an awareness among the workers and by helping management in all the changes effected.

Studies on Workers' Participation

Participation means the identification with and involvement in the day-to-day functioning for the achievement of the goals of the enterprise taking into account the reality of situations which enables the worker to undertake the responsibilities. In such a situation, he naturally becomes a partner in the decision-making process of the organisation.

Morse and Reimer (1956)⁹⁴ conducted an experiment and proved that participation enhances satisfaction. They selected workers of four parallel divisions of a clerical operations of a large insurance company. Two programmes of change were introduced, namely, the 'autonomy' programme and the other as "hierarchically controlled programme." The first was introduced in two division and was designed to increase the role of rank and file employees in decision making. The second programme was introduced in the remaining two divisions to increase the role of upper management in decision-making. Increase in productivity was recorded

under both the programmes. Increase in satisfaction was recorded under the autonomy programme and decrease under the hierarchically controlled programme.

The maturity - immaturity theory of Argyris (1957)⁹⁵ considers workers participation in management as a means to give the workers more control over their environment and an attempt to make them capable of behaving in a more mature fashion. By maturity he meant: (1) the job maturity: to develop the ability and technical knowledge to do the task and (2) Psychological maturity to gain self confidence and self-respect about oneself as an individual.

Vroom (1960)⁹⁶ has suggested that there are important individual differences in the effects of participation in decision making on performance and satisfaction. It was reported that the amount of participation was most positively related to the satisfaction and performance of individuals high in need for independence and low in the authoritarianism and vice versa.

The study conducted by Kolasa (1961)⁹⁷ at a Yugoslav factory displayed a more successful patterns of management - worker co-operation in the sharing of decisions in the enterprise. This was due to a large measure to the fact that the employees held more responsibilities and had a greater degree of identification with the factory.

Keith Davis (1962)⁹⁸ in "Human Relations at Work" defines the concept of participation as the mental and emotional involvement of a person in a group situation which encourages him to identify himself with group goals and share responsibility in them. The industrial policy resolution also stated that "in a socialist democracy, labour is a partner in the common task of development and should participate in it with enthusiasm." It is neither a process of sharing the decision-making power of the management as certain writers put it, nor a ground for more collective bargaining as many trade union leaders interpret it.

Strauss (1963)⁹⁹ has identified three forms of superior subordinate decision-making: (1) those made by superior (director), 2) those made in some sense jointly by the superior and the subordinate (consultation), and 3) those which the superior permits the subordinate to make on his own (delegation). Consultations refer to the concepts of participation when it is narrowly defined. As it was in the three studies, while delegation refers to a higher degree of autonomy in decision-making.

Giri. V.V. (1965)¹⁰⁰, a trade unionist, claimed that a good number of benefits will flow from workers' participation in management. Such an association of labour with management at all level would lead to promotion of increased productivity for the general benefit of the enterprise. "Satisfaction of the urge for self-expression in employees, thus leading to

industrial peace, better relations and increased co-operation, will serve as an effective connecting link between labour and management at each level, will enable employers to win confidence and co-operation of labour and will impart a new meaning to their instruments of co-operation."

Blumberg (1966)¹⁰¹ concludes that "there is hardly a study in the entire literature which fails to demonstrate that satisfaction in work is enhanced or that other generally acknowledged beneficial consequences occur from genuine increase in workers decision-making power." Participation in decision-making is assumed to result not only in greater job satisfaction but also in higher productivity.

Davis (1967)¹⁰², an eminent human relations specialist of international repute, has claimed that in various types of organisation under different operating situations, participation has helped to produce one or more of the following benefits: higher productivity, employee satisfaction, improved quality of work, team work, acceptance of change, creativity, responsible behaviour, commitment to goals, reduced turnover, reduced absenteeism etc.

Obradovic (1970)¹⁰³ studied twenty Yugoslav factories in order to relate participation with job satisfaction. he compared two main groups. The workers and members of workers' councils across three different technologies and found greater job satisfaction among handicraft

mechanised workers but not among the automated workers who participated in the workers' councils.

Ruh and White (1973)¹⁰⁴ focussed on the interrelationships among job involvement, values, personal background, participation, decision making and job attitudes for a sample of 2775 employees of six manufacturing organisations. A correlation coefficient of +0.53 between participation in decision-making and job involvement was found by them. The authors have investigated the moderating effect of job involvement on the relationship between participation in decision making and job attitudes. They found the relationship did not decrease monotonically from high to low job involvement groups.

Ranade (1976)¹⁰⁵ is of the opinion that the objectives of workers' participation in India include improving productivity performance, quality and result as well as working as a form of redressing grievances of the workers. Infact it is difficult to identify a few general objectives on the basis of practices in India. The objectives set by management, workers and government are entirely different. While workers wish to achieve security of employment, better wages, satisfactory bonus, good treatment and working and living conditions, etc., employers aim at maximising productivity and profit. The Government aim at resolving industrial disputes, establishing industrial peace and harmony and increasing

productivity. Thus, workers' participation in management has got wide range of objectives in India.

Gardner (1977)¹⁰⁶ has pointed out that participation incorporates two of the very strong social motives, namely, self respect and social approval. The former comes in to play when the worker is doing a job which he understands and of which he approves. The latter is seen to operate when employees' participation as a group in such a way that each knows that he is obtaining the approval of the other member of the group by doing his assigned task.

Jain (1979)¹⁰⁷ has observed that workers' participation would not prove helpful unless workers took keen interest in projects and helped increase production. More sitting on the Board of Directors would not serve any purpose. It would appear that there had not been any serious attempt by trade unions to involve themselves in participative management presumably because the unions considered such arrangements as instruments that impinged up on their field work competence and eroded their value as pressure groups.

Claim (1984)¹⁰⁸ perceived effect of direct and indirect participation by employees. He surveyed 272 employees from 7 firms, 40% of whom were managers and 60% workers, on their perception of participation in decision-making in their firms. The results indicate that direct employee

participation is positively associated with stronger perceived participation where as indirect participation is associated with activity, perception of delay in decision and the belief that supervisors are not likely to take more responsibility than is necessary.

Warrier and Vora (1984)¹⁰⁹ presented a case study of an Indian company that provided workers' participation in management in the early 1960's. Their findings suggest that the experiment did not improve the quality of decision-making or decision implementation; nor did increase workers' committment, identification or involvement. At the same time, middle management has expressed alienation over the practice. It is suggested that Indians are not yet ready for participative management and that trade unionism undermines trust and co-operation.

It is, thus, seen that several studies have been made in India and abroad relating to the different aspects of motivation and labour productivity. Every attempt is made to review some of the major works on job satisfaction, motivation, productivity, performance, participation, organisatonal climate, job enrichment, group dynamics etc.

For perfect job satisfaction there should exist a one to one relationship between the perception of how well the job-life fulfils the various needs and expectations of the individual and the extend to which these needs are actually fulfilled.

Work has an economic, mechanical and psychological aspect. A variety of individual and situational variables have some influence on the performance or work of employees on a given job. The productivity or performance is the consequence of the total effects of individual and situational variables.

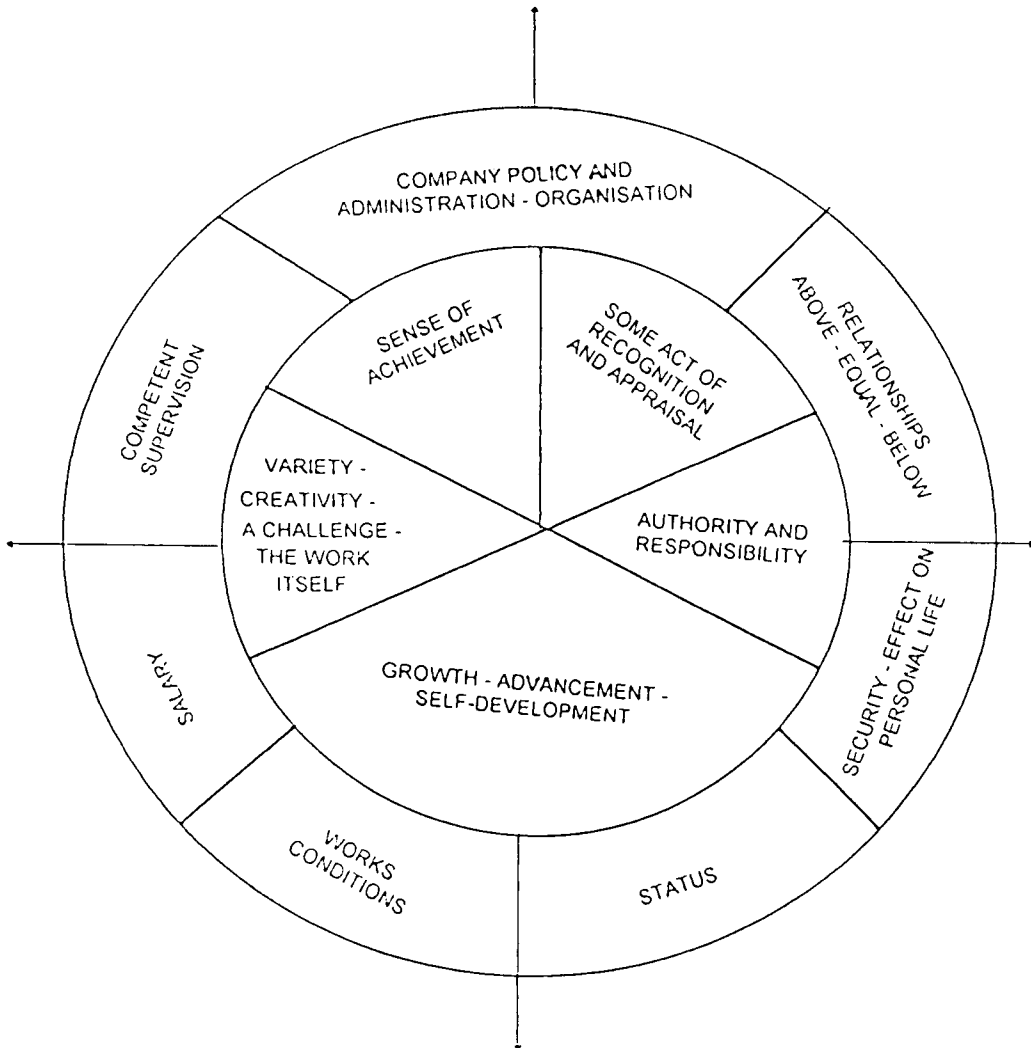
Workers performance is influenced by the total job enrichment and its various aspects. Favourable organisational factors create the ground for ensuring a satisfactory level of performance.

Organisational climate, organisational culture and the overall management policies contribute significantly in making human resources effective and productive. Various terms such as efficiency, productivity, profitability and organisational growth are often used interchangeably to denote organisational effectiveness.

In order to increase work motivations, the emphasis should be laid on augmenting the efforts of the employees towards improving their performance. Unless rewards are related to efforts, the resulting satisfaction will not lead to high performance.

The term reward includes recognition, appreciation, salary increase, promotion etc., named as positive reinforcers. Punishment, on the other hand, includes criticism, admonishment, holding back salary increment, demotion, termination of service etc., termed as negative reinforcers.

MOTIVATION TO WORK



What motivates individuals to work.

Hackman and Oldham (1980)⁷⁴ in their study, have developed a comprehensive model of job enrichment in terms of increasing five core job dimensions:

Skill variety - the extent to which a job entails different activities and involves a range of different skills and talents.

Generally positive reinforcement helps in promoting approach dimension and negative reinforcement in promoting avoidance dimension.

Salary is found to be one of the important factors influencing motivation among Indian managers. Other features like task identity, task significance, autonomy etc. may also lead to increased satisfaction with the job and motivation to work.

Studies also show that proper job security and opportunities to participate in decision-making are relevant factors in developing job satisfaction. While reviewing the available literature, it is learned that there is hardly any comprehensive and indepth study about the practices prevailing in Kerala. Hence the researcher thought it appropriate and timely to conduct a study on the impact of motivational factors on employees' efficiency, concentrating on the industrial labour in Kerala. The state has a unique model to putforth - the Kerala model - before the national economy, with the tragic irony of a low per capita income and a high standard of living. This factor also led the researcher to look into the level of remuneration of the labour force of the units studied.

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CHAPTER III

THEORIES OF MOTIVATION

The study of motivation is concerned with why people behave in a certain way, and why they choose a particular course of action in preference to others. The underlying concept of motivation is some driving force within individuals by which they attempt to achieve some goal in order to satisfy some need or expectation. Individuals have a variety of changing, and often competing, needs and expectations which they attempt to satisfy in a number of different ways.

One useful threefold classification of individual needs and expectations at work is economic, intrinsic and social. If a person's motivational driving force is blocked before reaching a desired goal, there are two possible sets of outcomes - constructive behaviour or frustration. Main reactions to frustration are aggression, regression, fixation and withdrawal.¹

The development of different approaches to organisation and management have highlighted the changing concept of motivation at work. These different approaches have led through the rational-economic concept of motivation, the social concept of motivation, the self actualisation concept of motivation, to the complex-person concept of motivation.

There are many competing theories to explain motivation at work. These theories are not conclusive and all have their critics or have been subject to alternative findings, particularly the content theories. However, it is because of the complexity of motivation that these different theories are important to the manager. They show that there are many motives which influence people's behaviour at work. They provide a framework within which to direct attention to the problem of how best to motivate staff to work willingly and effectively.

The different theories of motivation may be divided into two contrasting groups: content theories and process theories. Main content theories include: Maslow's hierarchy of needs model; Alderfer's need hierarchy model; Herzberg's two-factor theory; and McClelland's achievement motivation.

Process theories place emphasis on the actual process of motivation. These theories are concerned with the relationships among the dynamic variables which make up motivation, and with how behaviour is initiated, directed and sustained. Many of the process theories cannot be linked to a single writer but include: expectancy-based models; equity theory; and Porter-Lawler model.

These different theories provide a basis for study and discussion, and for review of the most effective motivational style. The manager must

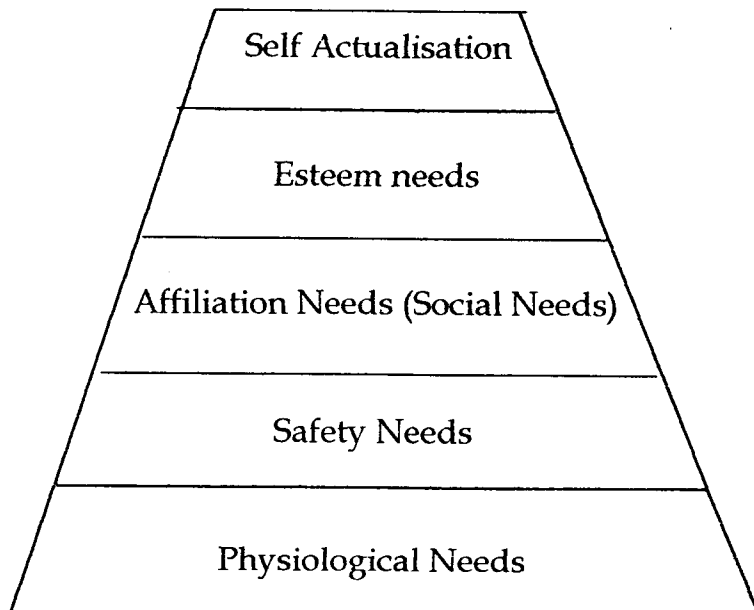
judge the relevance of these different theories and how best to apply them to particular work situation.

Content Theories of Motivation

Content theories place emphasis on what motivates and are concerned with identifying people's needs and their relative strengths, and the goals they pursue, in order to satisfy these needs. Main theories in this group are:

Abraham Maslow's Hierarchy of Needs

Maslow placed the human needs under five categories on a hierarchy as below:



Physiological needs which are of urgent nature appear first, at the bottom of the hierarchy. Once these primary needs are satisfied further higher levels of needs appear. When the physiological needs are gratified they may no more remain the prominent motivating factors. Then a higher need "safety need" becomes a priority need which acts as a motivating factor and so on.² Self-actualisation needs are placed at the top of the hierarchy of needs according to Maslow. A job, which provides an opportunity for fulfilment will be a source of happiness and job satisfaction. The greater the job satisfaction greater would be the morale and the greater would be the productivity.

Alderfer's Modified Need Hierarchy Model

A modified need hierarchy model has been presented by Alderfer. This model condenses Maslow's five levels of need into only three levels based on the core needs of existence, relatedness and growth (ERG Theory)³. Existence needs are concerned with sustaining human existence and survival, and cover physiological and safety needs of a material nature. Relatedness needs are concerned with relationships to the social environment, and cover love or belonging, affiliation and meaningful interpersonal relationships of a safety or esteem nature. Growth needs are concerned with the development of potential and cover self esteem and self actualisation.

ERG theory states that an individual is motivated to satisfy one or more basic sets of needs. Therefore if a person's needs at a particular level are blocked then attention should be focussed on the satisfaction of needs at the other levels.

Herzberg's Motivation Hygiene Theory

Herzberg's theory is based on a study conducted on 200 accountants and engineers, formulated as "two factor theory". The two factor hypothesis suggested that the factors involved in producing job satisfaction were separate and distinct from the factors that led to job dissatisfaction. ie. the opposite of job satisfaction would not be job dissatisfaction, but 'no job satisfaction'; and the opposite of job dissatisfaction is not job satisfaction, but 'no job dissatisfaction'. The two factors projected by Herzberg are: satisfiers and dissatisfiers."⁴ Factors like achievement, recognition for achievement, intrinsic interest in the work, responsibility and advancement lead to workers' satisfaction (Satisfiers). The company policy and administrative practices, supervision, interpersonal relationships, working conditions and pay contribute very little to job satisfaction (Dissatisfiers). 'Hygiene factors' are the dissatisfiers and motivators are the satisfiers. This theory has a scope for interpreting the industrial relations from two angles: (1) what makes an employee happy? and (2) what makes him unhappy?

Hygiene Factors	Motivators
Proper Company Policy and Administration	Achievement
Working conditions (Conducive)	Advancement
Pay (Proper remuneration)	Recognition
Interpersonal relations with superiors, co-workers and subordinates	Responsibility
Quality of supervision	Growth opportunities

Relationship among Maslow's, Alderfer's and Herzberg's theories

Maslow's Hierarchy of Needs	Alderfer's ERG theory	Herzberg's two-factor theory
Physiological	Existence	Hygiene Factors
Safety		
Love	Relatedness	
Esteem		
Self-Actualisation	Growth	Motivators

Need Theory of McClelland

'The need for power' is considered as a desire to influence others which comes between Maslow's esteem needs and self actualisation needs. The positive or socialised face of power is characterised by a concern for group goals, for finding those goals that will move men, for helping the

group to formulate them, for taking some initiative in providing members of a group with the means for achieving such goals, and for giving group members a feeling of strength and competency they need to work hard for such goals.

The need for achievement can also be placed between Maslow's esteem needs and self-actualisation. This need is satisfied with the process to successfully complete the work meant for achievement. People with high achievement motivation must be given tasks and powers enabling them to make their full potential effective resulting in achievement at the expected level. Giving opportunities to make their efforts for higher achievements can be considered as motivation for them.

The need for affiliation is identical to Maslow's affiliation needs. People dominated by affiliative need would be attracted to jobs that allow considerable social interaction. Managers should establish a bridge with such people, maintain a benevolent posture, and encourage them to affiliate themselves so that their affiliative needs are satisfied.

McClelland's contribution on need concept of motivation concentrates on three types of needs: Need for power, need for achievement and need for affiliation.⁵

Process Theories of Motivation

Under process theories of motivation, need satisfaction is not the only aspect of a person's content behaviour. Individual perceptions, expectations, expected outcome of a given behaviour etc. also play a vital role in motivation. Three major process theories are Expectancy theory, Equity theory and Porter-Lawler model.

Valence Theory (Expectancy Theory)

This theory is associated with the work of Victor Vroom. According to him need must be backed by an expectation to achieve the need satisfaction.

When the people have an expectancy that a particular work environment will provide them with what they are looking for, they are motivated to work. Workers are rational individuals who think about what they have to do to get the rewards they expect. The environment, from which they can get their expectation fulfilled, will motivate them to work in that environment. thus the valence theory focuses its attention on the environment first and then on the individual needs.⁶ Three determinents of motivation under this theory are:

1. The expectancy is that effort which result in performance. Effort Performance Expectancies (EP).



2. The expectancy is that performance will result in rewards. Performance Outcome Expectancies (PO) and
3. There is valence of rewards. Valence refers to the personal value workers assign to the rewards for making a particular performance. ie. the rewards which workers may get, would make little motivation if the reward is of little value for them.

A worker can be highly motivated if all these three factors are high. It also means that motivation may not be effective if any one of these is absent.

$$\text{Motivation} = \text{EP} \times \text{PO} \times \text{Valence}$$

Equity Theory

J.S. Adams has put forth an equity concept of how individuals channel and maintain their efforts to achieve goals. This theory states that individuals subjectively determine the ratio of reward received and effort made on every performance. They compare such ratios with those of other people doing similar work, for determining the equity aspect of the rewards. If the individual notices inequity or imbalance in the remuneration, the one who gets lesser reward may have psychological tension. He may then try to reduce tension by changing his efforts level or the reward received for restoring balance (equity). Thus equity theory

embarks on equity of rewards. ie. equity exists when an individual concludes that his own outcome/input ratio is equal to that of other people.

Porter-Lawler Model

Porter and Lawler have put forth their model of motivation incorporating the important aspects of both expectancy and equity theories. Performance is determined by an individual's effort, abilities, traits and perception of his role. Effort is influenced by the perceived value of the reward and the expectation that a certain level of effort will result in a certain reward. Thus a positive relationship is established between rewards and performance. Five important variables are projected in the model; effort, perception, performance, rewards and satisfaction. Porter and Lawler tried to explore the complex relationship between motivation, satisfaction and performance and point out that effort does not directly lead to performance.⁸ Performance is a function of three important factors:

1. one must be motivated
2. one must have necessary abilities and traits, and
3. one must have fairly clear role perceptions.

Other Theories

Douglas McGregor's Theory X and Theory Y

Theory X is based on three primary assumptions:

1. The average human being dislikes work and will avoid it, if possible.
2. Because of this dislike for work, most people must be coerced, controlled, directed, threatened with punishment to bring them towards the achievement of organisational goals; and
3. The average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition and wants security above all.

Thus, under theory X, management is considered as the process of getting things done through others, using any or all of the methods like persuasion, punishment, direction and control.⁹

But in course of time, management thinkers and practitioners emphasised the need for motivation rather than the relevance of theory X. Maintaining better human relations and motivating the workforce to contribute better are, therefore, considered important. Consequently, McGregor himself has initiated the Theory Y.

Theory Y:

Major postulates of Theory Y

1. External control and the threat of punishment are not the only means for bringing about effort towards organisational objectives. Human

beings have the capacity to exercise self control and self-direction towards the corporate objectives.

2. Average individual learns not only to accept but to seek responsibility.
3. Commitment to objectives can be a function of the rewards expected or offered for it.
4. Making physical or mental effort in work is as natural as play or rest.

All individuals cannot be indolent and lazy, since the effort and willingness to work are natural. Ability for self-control, self-direction and self-restraint can be treated as part of any human personality. Hence individuals can be motivated if a proper organisational philosophy, organisational climate and organisational culture conducive to self-control can be created. In this way, theory Y represents a human resource motivation approach.

An ideal organisation is the one which provides opportunity and motivation for its people to make their best contribution to the goals and objectives of the organisation and to their own personal growth and development.

Theory Z

Theory Z is a new way of viewing the essential nature of man and the factors that motivate him. It has originated from the Japanese management

philosophy. Management experts had tried to analyse "how the companies in Japan are doing exceptionally well" and the result of their analysis is the "Theory Z." There are three apparent reasons for the relative success of Japanese system - their technology, culture and the management system. William Ouchi and Alfred Jaeger have been responsible for this theory 'Z', who have been exploring the differences in styles of management of American and Japanese companies.¹⁰ Theory 'Z' companies will combine some characteristics of type A companies (American Companies) with some characteristics of type J companies (Japanese companies), mainly in the following six factors.¹¹

1. Longterm employment of type J firms.
2. The formal controls of type A firms.
3. The longterm thinking of type J firms.
4. Frequent cross-training and job rotation of type J firms.
5. Participative decision making of type J firms.
6. Quality work life of type J firms.

Rensis Likert (1903-1972)

Management of human resources is the focal point of management concentrated on employee-centred supervision than on job-oriented supervision for higher productivity. Clear-cut objectives and freedom of

action are the two prerequisites for greater productivity and higher performance according to Likert.

He has identified four types of supervision.¹²

1. Exploitative autocratic supervision (No trust in subordinates).
2. Benevolent autocratic supervision (Master-servant relation)
3. Participative supervision (Substantial trust in subordinates)
4. Democratic supervision (Complete trust + confidence in subordiante)

Though the first two are common in most of the organisations, the 4th form of supervision results in higher productivity, low cost, favourable attitudes and good labour relations. He has advocated a group-to-group (not person to person) supervisory pattern.

Goal Theory or The Theory of Goal Setting

This theory is mainly based on the work of Locke. The basic premise of goal theory is that people's goals or intentions play an important part in determining behaviour. Locke accepts the importance of perceived value as indicated in expectancy theories of motivation, and suggests that these values give rise to the experience of emotions and desires. Goals guide people's responses and actions. Goals direct work behaviour and performance, and lead to certain consequences or feed back. People with specific quantitative goals (such as a defined level of performance, or a

given deadline for completion of a task) will perform better than people with a vague goal. People who have difficult goals will perform better than people with easier goals. Locke subsequently pointed out that 'goal-setting is more appropriately viewed as a motivational technique rather than as a formal theory of motivation.¹³

Attribution Theory

This theory is initiated by Heider, who suggests that behaviour is determined by a combination of perceived internal forces and external forces.

Internal forces relate to personal attributes such as ability, skill, amount of effort or fatigue.

External forces relate to environmental factors such as organisational rules and policies, the manner of superiors or the weather.

Behaviour at work may be explained by the locus of control, that is whether the individual perceives outcomes as controlled by themselves, or by external factors. Employees with an internal control orientation are more likely to believe that they can influence their level of performance through their own abilities, skills or efforts. Employees with an external control orientation are more likely to believe that their level of performance is determined by external factors beyond their influence.¹⁴

Maturity-Immaturity Theory

Chris Argyris has introduced a descriptive and multidimensional developmental process along which individuals in an organisation grow. Argyris examined industrial organisations to determine the effect of management practices on individual behaviour and their personal growth within work environment.¹⁵ He noticed seven basic changes that take place in the mature people over the years:

Immaturity	Maturity
Passive as an infant	Active as an adult
Dependence on others	Independence
Behave only in a few ways	Behave in many different ways
Having shallow, casual abilities	Developing a few abilities in depth
Having a short time perspective	Long time perspective
Subordinate position	Subordinate or equal position
Lack of awareness of self	Awareness and control over self

Argyris poses a challenge before the management to provide a work climate in which everyone has a chance to grow and mature as individuals. He places a high value on autonomy, inner direction and the quest for maximum self development.¹⁶

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CHAPTER IV

PROFILE OF THE SAMPLE UNITS

MALABAR CEMENTS LIMITED **Walayar, Palakkad, Kerala - 678 624** **Company Profile**

Malabar Cements Limited is the only Major Portland Cement factory in the State of Kerala. The Company was incorporated in April 1978 and commenced production in 1984. This industrial unit having a capital outlay of Rs.68 crores has a paid up equity capital of Rs.26 crores and is fully owned by the Government of Kerala. The factory rated to produce 4.2 lakh tons of cement per annum (1200 TPD) had to face substantially much more teething troubles during the initial periods than normally expected in a cement plant of this size, resulting severe losses which had eaten away even the entire share capital. A number of short term and long term measures taken by the Company helped it to turn around and by the middle of 1993-94 the entire losses were wiped off. It is working profitably since then.

In terms of capacity utilisation, this plant has been operating above the national average of the cement industry and almost double that of the public sector cement units. During the year 1998-99 the capacity utilisation was 85.7% as against the industry average of 78.3%. The capacity utilisation of the public sector cement units during the year was only 32.6%. During the first half of the current financial year the company could

achieve a record capacity utilisation of 113.2%. The performance during the last five years is given below:

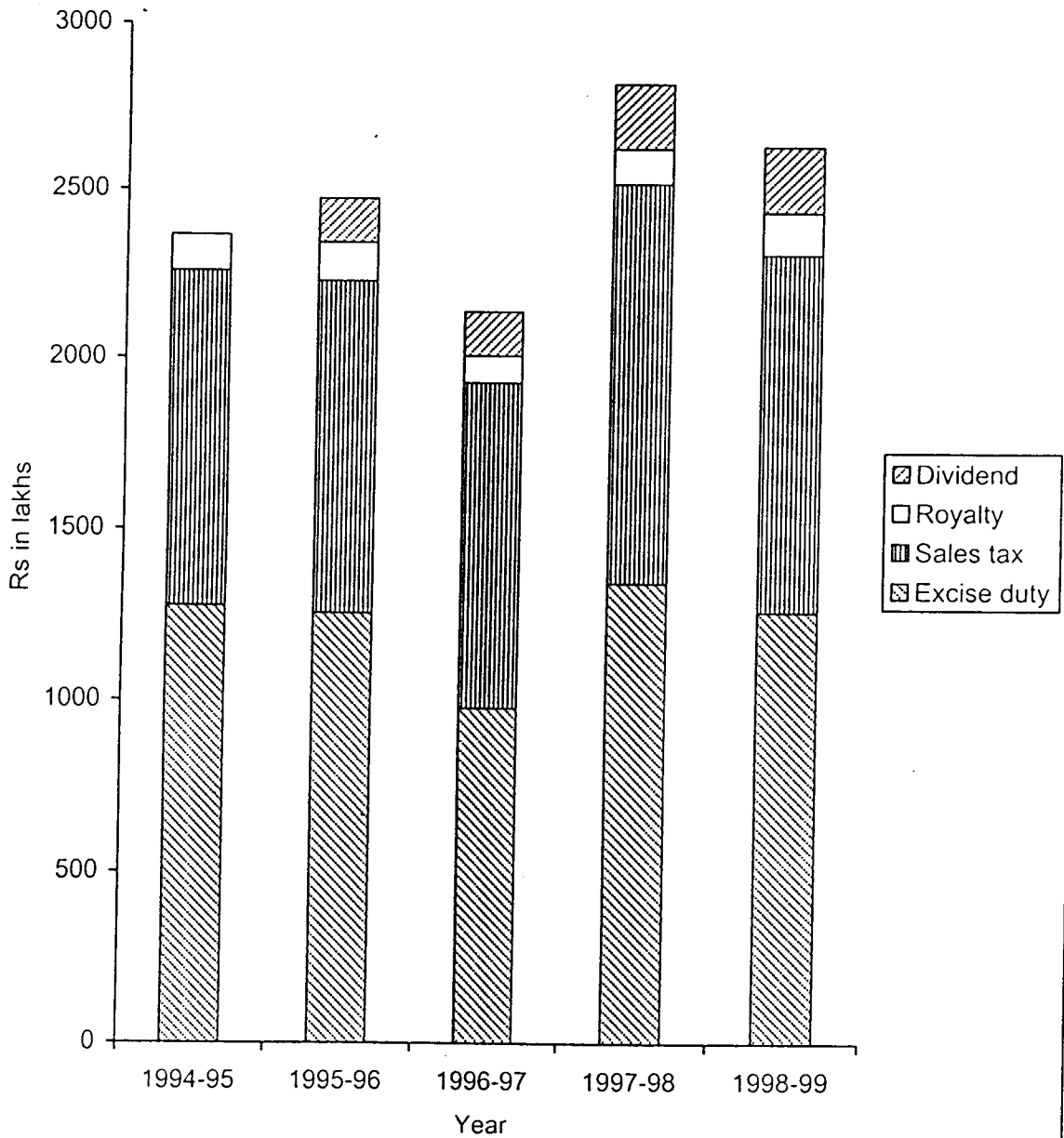
		1994-95	1995-96	1996-97	1997-98	1998-99
Cement Production	(lakh MT)	3.84	3.65	2.79	3.81	3.60
Cement Sales	(lakh MT)	3.86	3.59	2.79	3.84	3.60
Capacity utilisation	(%)	91.4	87.0	66.5	90.8	85.7
Turnover	(lakh Rs.)	9392	10135	8711	11468	10318
Net profit before Tax	(lakh Rs.)	1330	2473	1498	2004	919

Despite there was severe competition in the market the Company could earn a net profit before tax of Rs.919 lakhs for the year 1998-99. This was possible by implementing stringent cost effective measures.

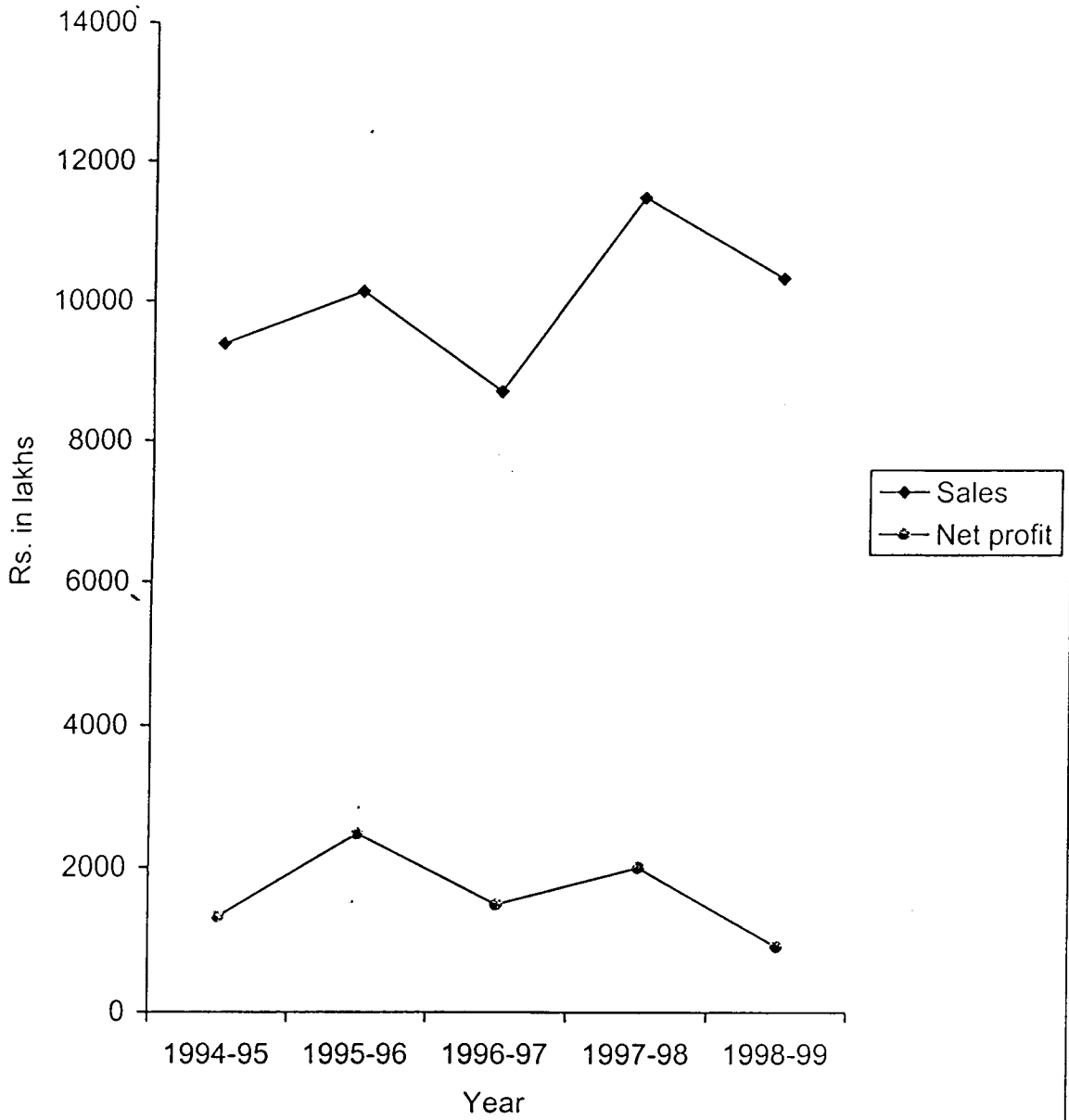
Financial Position

The Company has substantially cleared the debt burden during the period. Out of the total long term loan, substantial portion of the principal amount has been repaid. The installments of interest have also been paid in time and there has been no instance of default. The accumulated net profit as on 31.3.1999 is Rs.4797 lakhs. Various modification and technological upgradation projects were carried out by the company's own fund.

**Malabar Cements Limited
Contribution to the Exchequer**



Malabar Cements Limited Profitability



Contribution to Government Exchequer

The contribution to the Government Exchequer by way of Excise Duty, Sales Tax, Income Tax and Royalty in a year is more than the Equity contribution of the Government. Apart from the above contributions, the company declared dividend to the Government for the last four years. The contribution to the Exchequer during the last four years is given below:

(Figures in Rs. Lakhs)

	1994-95	1995-96	1996-97	1997-98	1998-99
Excise Duty	1276.99	1256.59	978.72	1345.45	1261.36
Sales Tax	981.63	971.27	949.58	1171.57	1046.40
Income Tax	--	883.00	655.00	695.00	250.00
Royalty	106.76	114.36	78.63	104.31	124.51
Dividend	---	130.00	130.00	195.00	195.00
Total	2365.38	3355.22	2791.93	3511.33	2877.27

The Process & Technology

Crystalline limestone, mechanically mined from the rugged hill ranges of Walayar region on the northern side of 'Palakkad gap' is crushed in a two-stage crushing system at the Mines. The crushed limestone is screened, and then conveyed to a stockpile at the plant site by a 6.28 KM monocable aerial ropeway to a preblending stacker reclaimer system for pre-homogenisation. Pre-homogenised and correctly proportioned raw mix

using electronic weigh feeders is finally ground in a raw grinding mill and then transported by Bucket elevators to homogenising silos. This raw meal is then passed to the rotary Kiln through the four stage suspension preheater. The Clinker thus produced is cooled in high efficiency grate cooler. The Clinker is ground in a ball mill with proper blend of gypsum and fly ash to produce Cement.

Malabar Cements has the state-of-the art, dry process technology for manufacturing superior quality cement - much above the Bureau of Indian Standards. The most modern technological features such as Precision Control of all feeding systems by most modern electronic weigh feeders with closed loop control, optimised operation using centralised Kiln and Cooler control with Kiln fuzzy Logic control system, effective monitoring and control of process parameters through extensive instrumentation with computer backup, etc. ensure the superior quality, and the dedicated quality control system makes double sure the consistency of quality.

The Product & Market

Malabar Cement is famous for superior quality - claim thousands of customers spread throughout the State of Kerala. It is the quest for excellence. 'Malabr Super' (43 grade OPC) and Malabar Classic (PPC) are the two premium brands manufactured and marketed by the company.

Malabar Cements has the largest dealer network in Kerala for cement sales, i.e., more than 500 retail outlets.

ISO Certification

The Company obtained the recognition of ISO 9002 certification from the Bureau of Indian Standards accredited by Raad Voor Accreditatie, Netherlands, in November 1996. The ISO 9002 certification is a rededication of its commitment to customer satisfaction. Malabar Cements is the first public sector cement company to receive this distinction. This is an important milestone in the Company's march towards Total Quality Management.

Projects

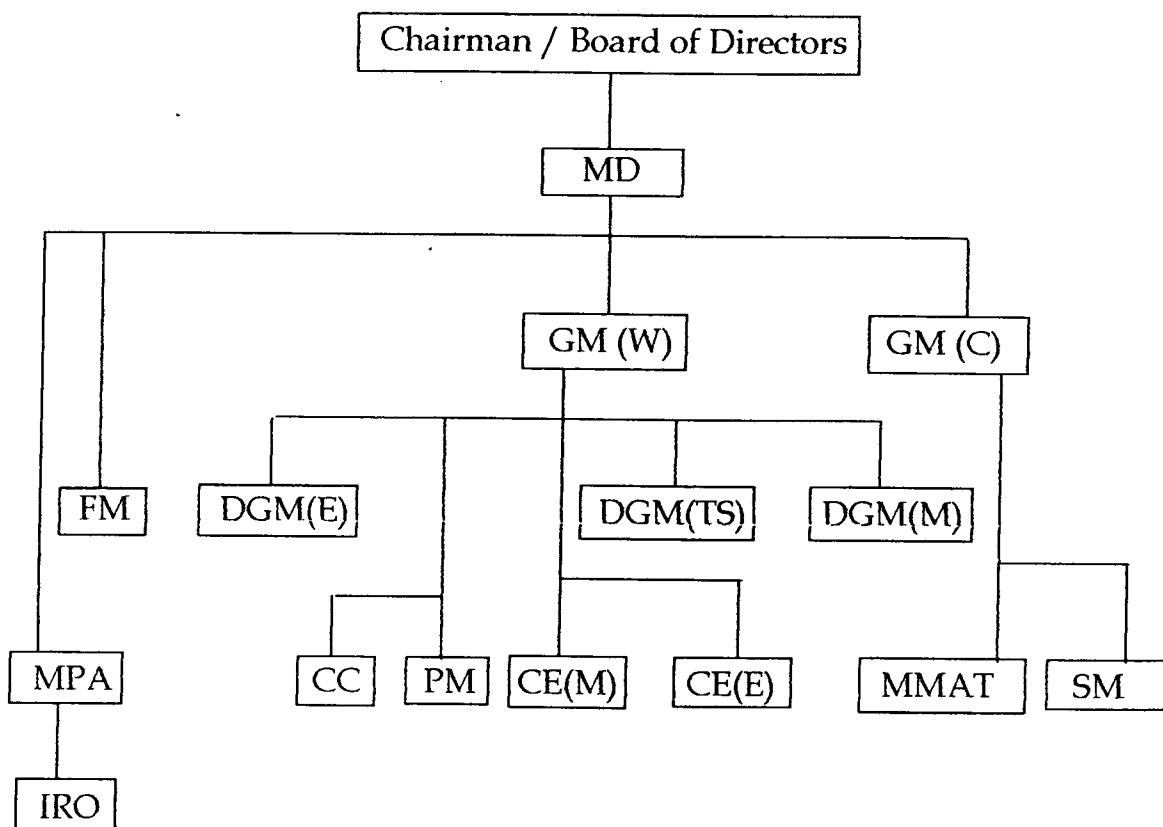
Various projects were implemented by the Company's inhouse project management team without resorting to any external support thereby developing the technical talent of its own team. The first 2.5 MW multi-fuel power plant of the Company was commissioned in June 1998 to complement 25% of total power requirement. The erection and commissioning of this Rs.850 lakh project was completed within the shortest possible time and is the largest single project ever undertaken by the Malabar Cements Ltd.

Two Belt bucket elevators were installed, by spending Rs.275 lakhs, to replace the energy intensive conventional pneumatic transport system as measure of energy conservation. As part of mill modification the mill internals of the Cement Mill were changed with classifying liners and flow control diagram during September 1998. This will improve the productivity and energy consumption in the cement mill. To render better customer service ensuring accurate weight in each bag of cement packed from the company modernisation activities of the packing plant is already commenced.

Management

The management of the company is vested in the hands of a Board of Directors Comprising of a Chairman, a Managing Director and Directors. The Government of Kerala appoint Directors from time to time. The representatives of the bankers and other contributing agencies, like LIC are nominated to the board.

Organisation Structure



MD	Managing Director
FM	Finance Manager
GM(W)	General Manager (Works)
GM(C)	General Manager (Commercial)
DGM(E)	Dy. General Manager (Engg.)
DGM(TS)	Dy. General Manager (Tech. Services)
DGM(M)	Dy. General Manager (Mines)
MPA	Manager (Personnel & Admn.)
CC	Chief Chemist
PM	Production Manager
CE(M)	Chief Engineer (Mech.)
CE(E)	Chief Engineer (Electrical)
MMAT	Materials Manager
SM	Sales Manager
IRO	Industrial Relations Officer

The work force

There are about 1100 employees in the MCL. They are classified as Non-managerial employees, Managerial employees and the casual labour pool. The break-up of the employees are as follows:

Non-managerial Employees (workers)	860
Managerial Employees (officers)	100
Casual Labour Pool	130

Total	1090
	=====

Wage Structure

Workers are classified in to Operatives and Tally checkers, Clerical, Lower grades on the basis of their service and are divided as unskilled, semi skilled, skilled, Highly skilled and supervising. The operatives are graded as follows:

Table

	Grade	Wage structure
Supervisory	A	Rs.630-26 x 20 = 1150
Highly skilled	B	Rs.590-20 x 20 = 990
Skilled	C	Rs.559-15 x 20 = 859
Semiskilled	D	Rs.533-11 x 20 = 753
Unskilled	E	Rs.520-8 x 20 = 680

The tally checkers, clerical, lower technical and supervisory staff are graded as follows:

Table

TC	Rs.545 - 13 x 20 = 805
I	Rs.560 - 16 x 20 = 880
II	Rs.580 - 20 x 20 = 980
III	Rs.600 - 22 x 20 = 1040
IV	Rs.625 - 28 x 20 = 1185
V	Rs.650 - 32 x 20 = 1290
VI	Rs.675 - 36 x 20 = 1395
VII	Rs.700 - 40 x 20 = 1500

Welfare Measures

The Malabar Cements Ltd. undertake the following labour welfare measures.

Uniform clothes: Two pairs of cloth for pants and shirts are given to the employees alongwith stitching charges @ Rs.200/- twice a year. A safety shoe is issued to all employees once in a year.

Other safety measures like rain coat, helmet, face masks, gum boot, wollen jersy, goggles etc. are provided to those workers who work in plants, mines and workshops.

A dungry cloth of .5 metre is allowed twice a year and a life bouy soap once in a month to the technical employees.

Heat Allowance

Heat allowance at the rate of 5% of the basic salary is granted to those working in specified area.

Dust Allowance

The company provides dust allowance, 60 grams of jaggery and 20 grams of coconut oil per worker per day.

Washing Allowance

A washing allowance at the rate of Rs. 10 per month is given to all employees.

Acting Allowance

Acting allowance is given as an amount equal to the difference in the basic pay.

Heavy Duty Allowance

Those operating heavy equipments, heavy duty allowance is given at the rate of Rs.26/- per month.

Dearness Allowance

D.A. is based on consumer price index.

Convenyance Allowance

Workers are allowed convenyance allowance @ Rs.150/- per month. Officers get car allowance @ Rs.360/- pm and scootter allowance @ Rs.135/- pm.

The company operates a vehicle between Walayar and Palakkad. School children of employees, employees and residents in the company's township also make use of this facility.

Education Allowance

Education Allowance is given @ Rs.80/- pm. to the employees except officers. Further the company advances Rs.1000/- for education expenses during the period of reopening of schools and colleges.

Medical Facilities

A full fledged dispensary is functioning in the township with two ambulances and full time doctor and attendents.

Employees can get reimbursement of medical expenses to the extent of 1.5 times of their basic pay annually. For treatment due to accidents while on duty, full salary is paid for the period of treatment.

Leave, P.F., Gratuity, Pension etc.

The company allows casual leave for 7 days and earned leave @ one day for every 20 days worked. Officers get privilege leave for 30 days in lieu of earned leave.

A contributory Provident Fund is available in which a maximum of 10% of the basic salary can be deposited by the employees and an equal amount will be contributed by the company.

Gratuity is allowed @15 days salary for every completed year of service. Six days full pay leave is allowed for family planning surgery.

There is no pension scheme prevailing in the company except the family pension scheme as per the EPF Act.

Other Welfare Measures

Quarters: The company has constructed 300 quarters in the township. There is a recreation club, a library, an open air theatre, a ladies club etc. in the township. A Kinter Garden, post office, telephone exchange etc. are also functioning in the township. The employees have opened a Consumer Co-operative Society in the township which cater all items including provisions.

A subsidised canteen is working in the factory premises. There are sufficient rest rooms and provision of washing facilities in all sections.

There is active involvement in sports and games also. The company sponsors three teams viz. Foot ball, Volley ball and Badminton who participate in the district level competitions during the May day celebrations.

Employees' Welfare Fund

It is a fund created jointly to provide financial assistance for medical treatment, accident etc. or at the time of retirement or death. Workers subscribe @ Rs.50 per month to the fund and an equal amount is contributed by the company too.

Housing Loan Scheme

It is a new scheme to assist the housing needs of the employees. Those who have completed 10 years of service, are eligible to avail this loan @ 40 times of basic pay or Rs.100000, whichever is less. Interest will be charged @ 9% and the loan amount will be reimbursed in 15 years.

Vehicle Loan Scheme

This is also a recently introduced scheme where by the employees and officers are eligible to get loan facilities to own vehicles. A car loan @ 20 times of the basic pay or Rs.100000 which ever is less @ 15% interest will be granted to the officers. Similarly, the workers are provided with a Scooter loan of a maximum of Rs.16000/- @ 9% interest.

The plant works three shifts a day ie. 6 AM to 2PM, 2 to 10 PM and 10 PM to 6 AM alongwith a general shift, mainly for office staff, from 8.30 AM to 5 PM.

It requires special mention that the company lost not a single day since the commencement of production in 1984, due to strikes, lay off or lockout etc. There are trade unions with different political affiliations, but there exists a cordial atmosphere among them. The company conducts refresher courses, training programmes etc. to the employees to help career development and improve efficiency.

Trade Unions

There are three registered trade unions in the company:

- MCLEU : Malabar Cements Ltd. Employees' Union sponsored by CITU
- MCLEA : Malabar Cements Ltd. Employees' Association formed under INTUC
- MCLSU : Malabar Cements Ltd. Staff Union formed as an independent association.

These unions extend creative support for the smooth functioning of the company since its inception.

Industrial Relation

Industrial relations has all along been peaceful and cordial. It would appear as a legend that there was no mandays lost either due to strike or lock out since 1985. Issues concerning the employees are discussed across the table and settled then and there. A Welfare fund, a Housing Loan Scheme and a scheme for reimbursement of interest subsidy have been implemented during the last year as welfare measures to the employees.

THE COMMONWEALTH TRUST INDIA LIMITED

The Christian missionaries who disembarked at the beautiful coast of Calicut on 14th October 1834, went to Mangalore and set up the Basel Mission. Along with the missionary work, the mission started schools and built churches and made attempts to rehabilitate the new converts. The Basel Mission Industries came in to existence to provide ways and means of livelihood for their first converts.

The first lithographic press was set up in 1841 followed by a weaving unit in 1844. A book binding department was started in 1854 and a carpentry unit in 1856 at Calicut.

In the year 1865, the first tile factory was started at Jeppoo, Mangalore, the second one at Calicut in 1873, the third in 1882 at Kudroli, a suburb of Mangalore, the fourth one at Malpe, near Udipi in 1886, the fifth

factory at Codacal, near Edakulam, the sixth at Palghat and the seventh tile factory at Feroke in the year 1905. The wide range of finished products manufactured by these units include flat roofing tiles, ridge tiles - both plain and ornamental, sky-lights and ventilators, ridge and hip terminals and finials of various kinds, grooved spire tiles, hanging wall tiles, ceiling tiles of varying designs, hourdis or ceiling slabs, common and ornamental clay flooring tiles, victoria cement flooring tiles, well and chimney bricks, salt-glazed stone and earthen ware drainage pipes, terracotta vases, flower-pots, architectural terra-cotta ware etc.

In 1919, by the fall out of 1st world war, The Basel Mission Industries was taken over by the British Government and a new company was incorporated under the name, "The Commonwealth Trust Limited" to look after the commercial ventures. Commonwealth Trust Limited was formed on the understanding that the netprofits of the company after paying a fixed dividend of 5% per annum shall be paid over to the trustees of the Commonwealth Education and Welfare Trust (CEWT) for application of such amount for charitable purposes.

In 1977, as a result of the operation of the Foreign Exchange Regulation Act (FERA) and the Government of India's policy of indianisation of foreign companies, the company was passed on to the Indian hands under the name and style of "The Commonwealth Trust (India) Limited," with its registered office at Calicut.

At present the company has five tile factories and two handloom weaving factories, in which nearly 2500 people, are working. Out of these about 650 to 700 are working in the textile factories and the rest in the tile factories.

The Commonwealth Trust India Ltd. is the pioneer in India for the manufacture of terrecotta tiles and hand-wooven fabrics. The products of the company are well known for their quality and the brand name "COMTRUST" has come to be widely recognised as a symbol of quality and trust both in India and abroad.

It redounds to the Company's credit that it has been able to maintain the noble tradition of service to the public set by its founders - The German Basel Mission - as back as one hundred and fifty years, even to this day. The latest example is the multimillion rupee eye hospital at Calicut, the foundation stone being laid by the President of India on February 10, 1995. This eye hospital now meets much felt needs of the people of this region and is a true reflection of the humanitarian work of the company.

The tile and textile factories of Commonwealth Trust India Limited acquired the prestigious ISO 9002 certificate during the year 1997 and became the first handloom textile and clay tile producer in India to bag it. In 1998 the company was awarded the ISO 9000 certificate by The BVQI, Netherland for the two textile factories and the tile factory at Feroke. This

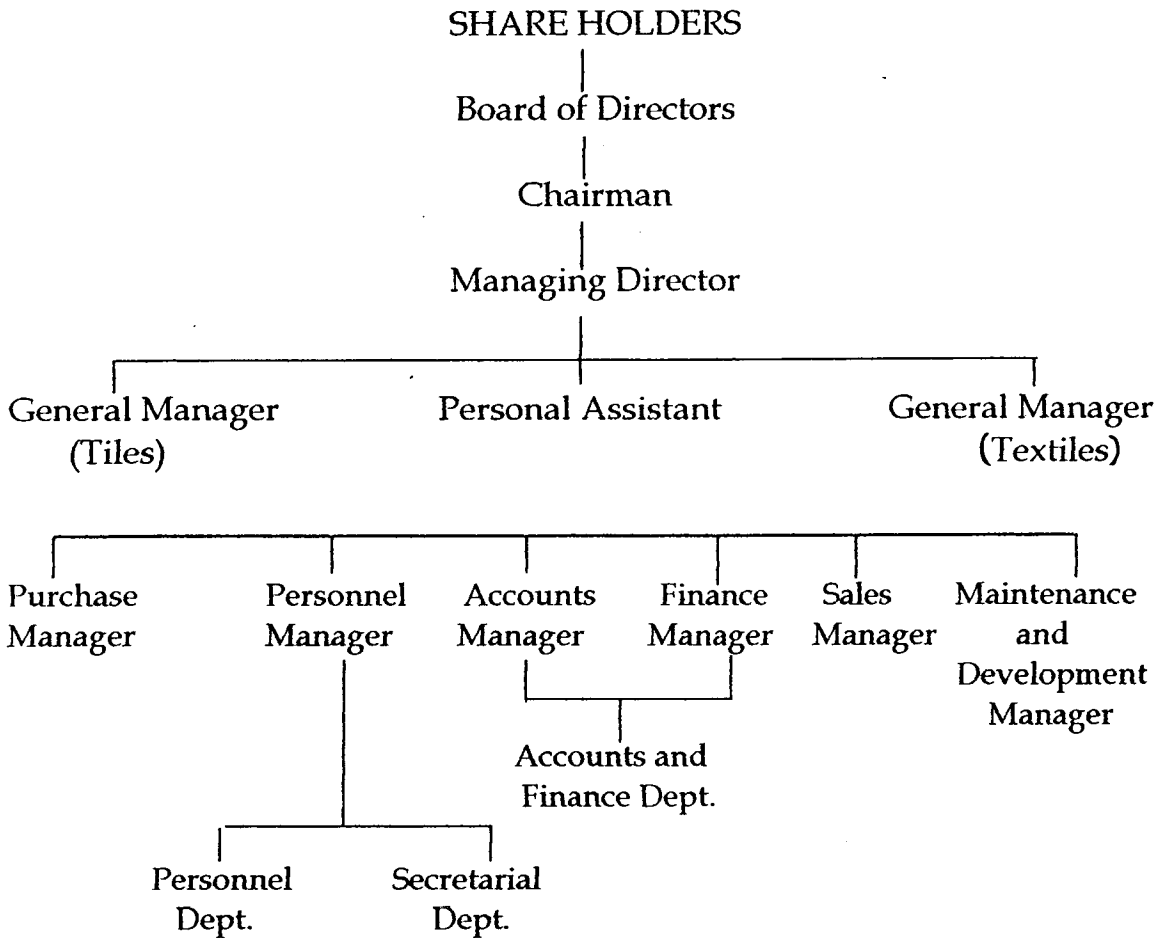
is for the first time that handloom weaving factories and a terracotta tile factory are conferred with this meritorious award in the Asian continent. The company has also acquired the ISO 9001 certificate from the BVQI.

Ownership and Capital Structure

The Commonwealth Trust India Ltd. is a public limited company in the private sector. The ownership of the company is vested in the shareholders contributing to the total capital of 125000 equity shares of Rs.10/- each. ie. Rs.12,50,000. It follows a stable dividend policy where the average rate of dividend is 15% for the last five years. The company runs a charitable trust to which all profits after paying dividends to the shareholders are appropriated, for the relief of the poor.

Organisation Structure

Comtrust is administered by a board of directors consisting of nine members including a Chairman and Managing Director. The Chairman is the head of the Board and has ultimate control over the affairs of the company and other important matters. The Managing Director is assisted by General Managers and Deputy General Managers. The tile and textile divisions have separate managers. The board meets atleast four times in a year on quarterly basis. The company conducts annual general meeting once in a year. The period of the Board is three years.



Manufacturing Activities

The company employs about 2500 employees, out of which about 600 workers are employed in the textile division and 1900-2000 workers in the Tiles division. The two handloom weaving textile factories are situated in Calicut and the tile factories at Feroke, Puthiyara and Olavakkode in Kerala and Jeppoo and Kudroli in Mangalore. Among the tile factories, Feroke Tiles is the largest one and there are two units working under it. The popular brands are BASEL MISSION, TRUST, FORT and SUPER FORT.

The tile factories produce roofing tiles, ridges, terrace slabs, hourdis, ventilating tiles, skylight tiles, flooring tiles, flower pots, water coolers, goglets etc. and to add in the list, the latest being the glazed tiles.

Installed Capacity

A. Tiles

<u>Factory</u>	<u>No. of pieces per annum</u>
Olavakkode	50,00,000
Feroke	1,19,60,000
Puthiyara	52,92,000
Jeppoo, Mangalore	79,32,000
Kundroli	77,12,000

	3,78,96,000
	=====

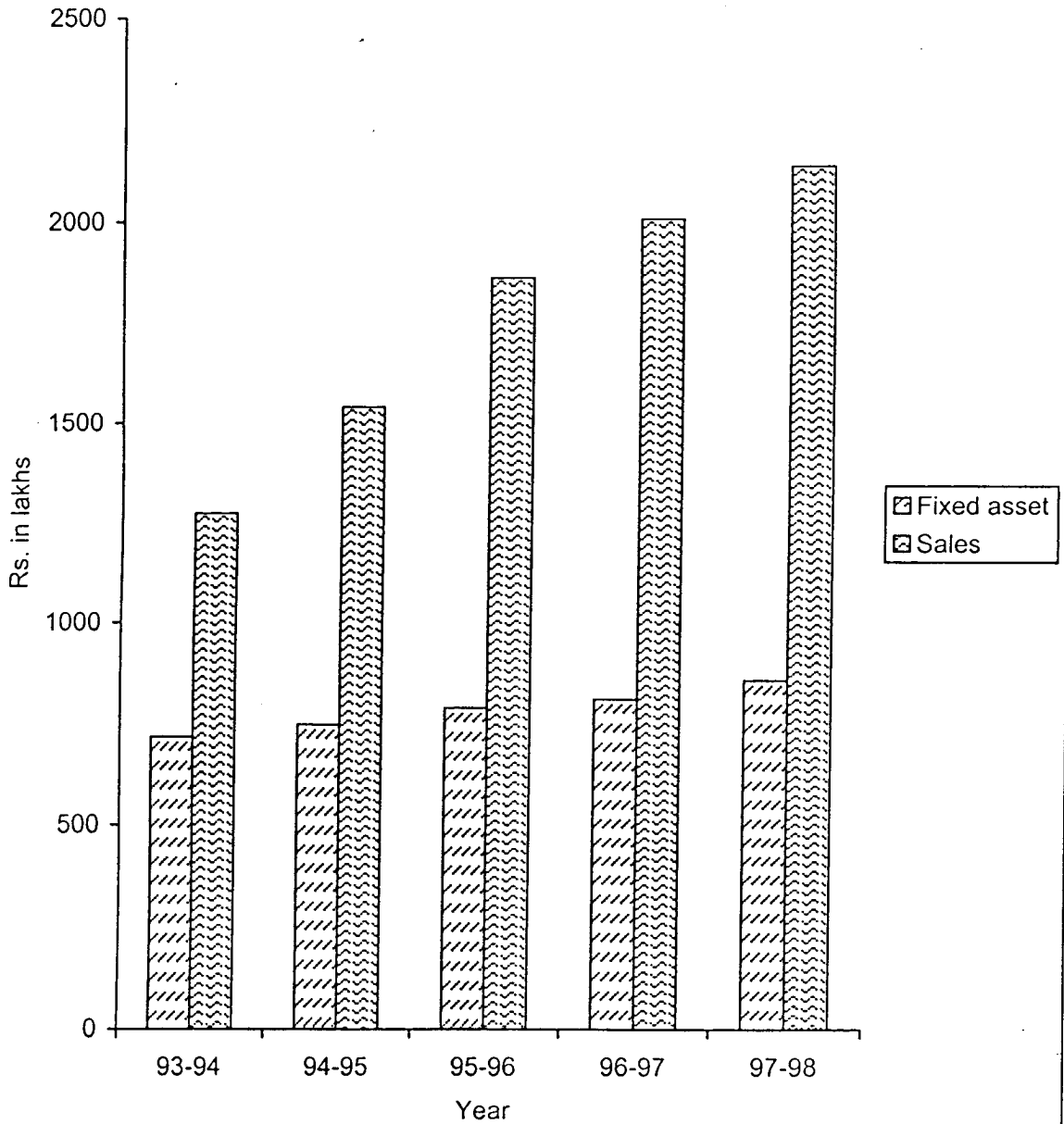
B. Textiles

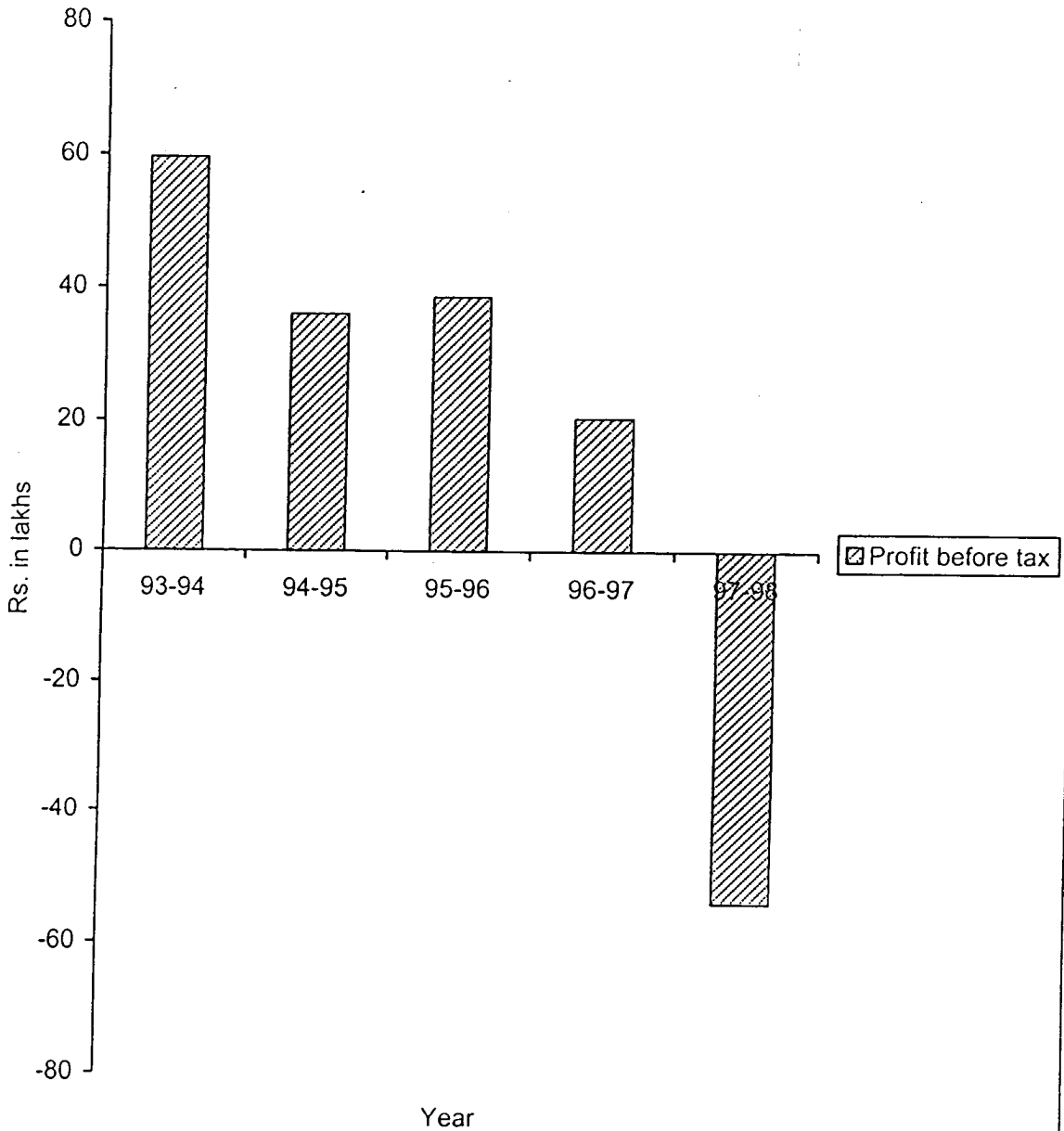
Calicut : Handloom	270 looms
Power loom	3 looms
Beach Road, Calicut	109 looms

Performance at a glance : The overall performance of the company with major indicators:

	1993-94	94-95	95-96	96-97	97-98
Production pieces (in lakhs) Tiles only	328	325	323	314	274
Sales (Rs. lakhs) (Tiles + Textiles)	1273	1542	1863	2008	2137
Profit before tax (Rs. lakhs)	59.59	36.00	38.57	20.31	(53.96)
Provision for Tax (Rs. lakhs)	13.00	10.18	3.50	6.19	--
Reserves and surplus (Rs. lakhs)	652	668	687	695	636
Fixed Assets (Gross Block) (Rs. lakhs)	715	746	789	811	859
Earnings in Foreign exchange (Rs. lakhs)	278	302	393	475	385
Staff expenses (Wages, salaries etc. (Rs. lakhs)	587	664	807	936	934

In spite of the steady increase in turnover, the company's profitability aspects are showing a declining trend over the years under review. Further, the company has incurred a heavy loss in the year 1997-98 alongwith a steep fall in the production of tiles. The major chunk of the foreign exchange comes from the export of textiles which has also declined considerably in the year 1997-98.

Commonwealth Trust Ltd.**Sales and Fixed Assets**

Commonwealth Trust Ltd.**Profit before Tax**

As a joint venture with Redlands International PLC., U.K., Comtrust has started a glazed clay tile roofing project at Feroke.

Feroke unit

The Commonwealth Tiles Ltd., Feroke, being the largest tile unit, produces over one lakh tiles per day. The factory has two modern mechanised units - 'A' unit and 'B' unit. Both the units have utilised about 98% of the capacity. There are 505 workers in the roll, grouped in five categories as A, B, C, D and E.

Wage structure

The wage structure in force for the five categories are:

Category	Pay in Rupees
A	1310-13-1375-16-1455-19-1550-22-1660
B	1295-12-1355-15-1430-18-1520-21-1625
C	1280-11-1335-14-1405-17-1490-20-1590
D	1265-10-1315-13-1380-16-1460-19-1555
E	1250-9-1295-12-1355-15-1430-18-1520

A dearness allowance of Rs.1358/- and a flat rate of Rs.180/- on all these scales are allowed in addition to the pay.

Welfare measures

Provident Fund: A 12% contributory Provident Fund is existing in the company. An amount equal to the money deposited by the employees are contributed by the company.

Medical facility: The statutory ESI facility is applicable to the employees.

Benevolent Fund Scheme: A new scheme introduced, where both the company and workers contribute in the proportion of $\frac{1}{4}$ th; $\frac{3}{4}$ th respectively. Out of the fund, scholarship is given for the children of employees, a retirement benefit of Rs.750/- as a lumpsum is paid, a maximum non-refundable allowance of Rs.2000/- for medical treatment expenses is paid, group insurance premium is also paid.

Death benefit: An amount of Rs.3500/- is paid as a lumpsum at the time of death of employees.

Leaves: Ten days casual leave and earned leave of one day for every 20 days of work is also available.

Women welfare scheme: The scheme is to imbibe vocational training to the girl children of employees in trades of stitching, embroidery, book binding etc.

Employees Recreation Club: There is an employees recreation club involved in sports and games in view of the annual day celebrations. Every year, 25th January, is celebrated as the Annual Day.

Charitable Trust: There is a charitable trust to which the profit in excess of the dividend payment @ 15% is credited. The fund will be utilised for charity purposes such as scholarship for the children of employees, medical treatment expenses etc. Eye care treatment at concessional rates are offered at the company's eye hospital at Calicut.

Textile materials are given to employees at concessional rates on instalment basis.

Canteen: A full fledged canteen is functioning in the factory premises which offers subsidised food for the workers: Tea @ 30 paise snacks @30 paise and a vegetarian lunch @ Rs.2.10.

Trade Unions

There are different trade unions affiliated to various political parties such as:

Calicut Tile Manufacturers' Association in which the company is a member.

Tile Workers Union, affiliated to the CITU.

Tile Workers Labour Union, affiliated to the INTUC.

Feroke Area Tile Workers Union affiliated to the INLC of Congress S.

AITUC Tile Workers Union, affiliated to the AITUC.

Staff Level Associations

Mercantile Employees Association, affiliated to INTUC.

Comtrust Staff Association, affiliated to CITU and

Cochin Commercial Employees Association (Independent).

Industrial Relations

The multiplicity of trade unions backed by political interests, at times, lead to some sort of restlessness between the management and the employees. Still, wilful attempts are made to bring the matter of dispute to the table where both the representatives discuss it with mutual consensus.

GRASIM INDUSTRIES LIMITED, MAVOOR

Grasim Industries Limited was established in the year 1947 as a small textile manufacturing unit under the name of "Gwalior Rayon Silk Manufacturing (Weaving) Company Limited." Later on the Company Changed its name to "Grasim Industries Limited", with its registered office at Birlagram, Nagda (Madhya Pradesh).

Grasim is one of the largest and lowest cost manufacturer of Viscose Staple Fibre globally. It has built significant brand equity in the suiting

fabrics market also. Grasim's "Gwalior Suitings" and "Graviera" brands have been successfully built on a distribution net work that spans over 185 franchisee showrooms. Grasim is also a major player in the Indian Cement Industry. The diversified manufacturing activities could lead Grasim to the position of market leader in the world. G.D. Birla, the founder, became the chairman of the company in 1952, in whose tenure Grasim Industries Ltd. flourished to be a multi-product and multi-locational company. Later Aditya Vikram Birla (1943-1995) the grandson of G.D. Birla, became the chairman of the group of companies known by the name A.V. Birla group companies.

The multiple range of products of Grasim include Viscose Staple Fibre, Rayon grade pulp, textiles, Cement, sponge iron, white cement, caustic soda, sodium sulphate and software; produced from plants situated at different parts of the country, namely:

Sl. No.	Activity	Locatin	State
1	2	3	4
1.	Staple Fibre Division	Nagda	MP
2.	Staple Fibre Division	Mavoor	Kerala
3.	Pulp Division	Harihar	Karnataka
4.	Pulp Division	Mavoor	Kerala
5.	Textile Division	Gwalior	MP

1	2	3	4
6.	Textile Division	Bhiwani	Haryana
7.	Spinning Division	"	"
8.	Vikram Cement	Jawad	MP
9.	Grasim Cement	Raipur	MP
10.	Aditya Cement	Shambhupure	Rajasthan
11.	Sponge Iron Division	Raigarh	Maharashtra
12.	Vikram Ispat	"	"
13.	Vikram Shipping Division	"	"
14.	Engineering Division	Nagda	MP
15.	Engineering Division	Harihar	Karnataka
16.	Chemicals Division	Nagda	MP
17.	Grasilene Division	Harihar	Karnataka
18.	Birla Consultancy and Software Services	Mumbai	Maharashtra
19.	Birla Industrial Marketing Corporation	Delhi	Delhi
20.	Birla Cellulose Division	Birladham (Karooh)	Gujarath

Capital Structure and Performance

The authorised capital of Grasim Industries Ltd. is Rs.80.5 crores out of which the issued, subscribed and paid up capital is Rs.72,31,39,700/- (Rupees seventy two crores thirty one lakh thirty nine thousand and seven hundred only).

The performance during the last five years is given below:

(Figures in Rs. crores)

	1994-95	95-96	96-97	97-98	98-99
Fixed Assets Gross Block	1630	1917	2140	3549	4704
Shareholders fund	2403	3199	3274	2341	2638
Turnover	2403	2879	3600	4023	4325
Net Profit	309	332	275	231	164
EPS	43	46	38	32	20

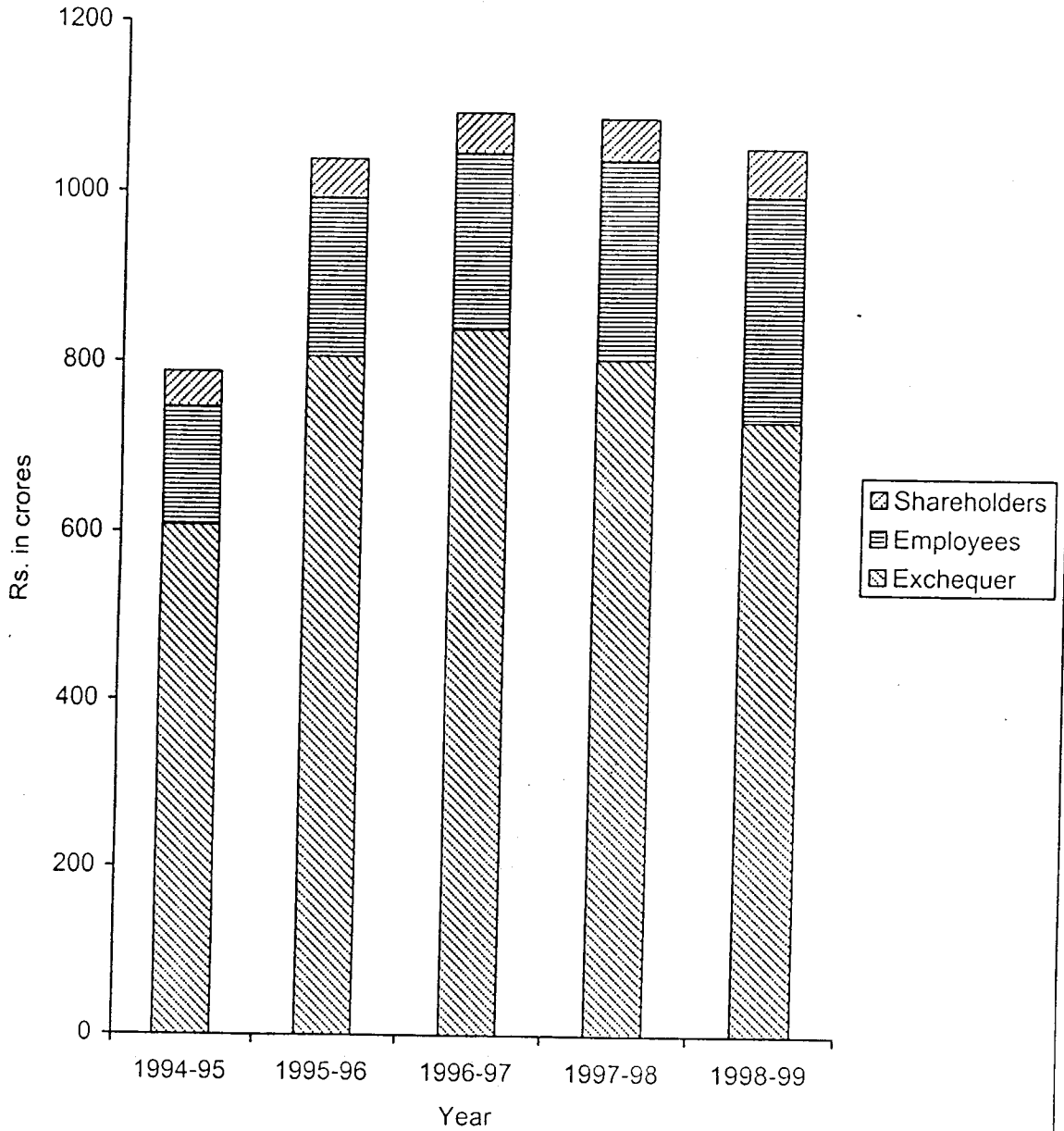
Though there is a steady increase in the turnover the net profit as well as earnings per share have fallen in the year 1998-99, considerably.

The company's contribution to the national economy is shown in the following table:

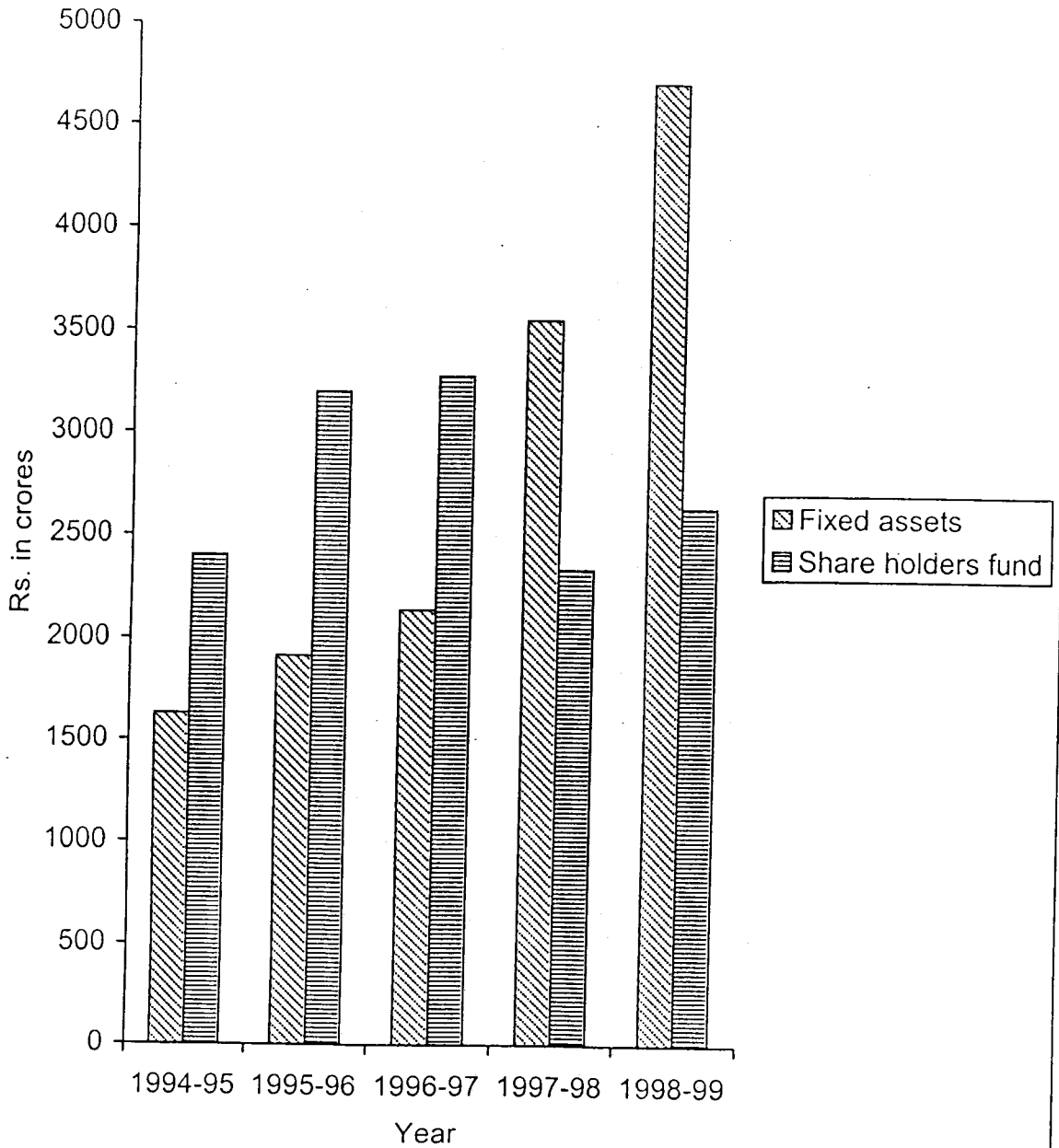
Contribution to National Economy (Rs. crores)

	1994-95	95-96	96-97	97-98	98-99
Exchequer (Excise Duty and Other taxes)	608	806	839	804	731
Employees	139	187	207	234	265
Shareholders	41	45	47	49	56

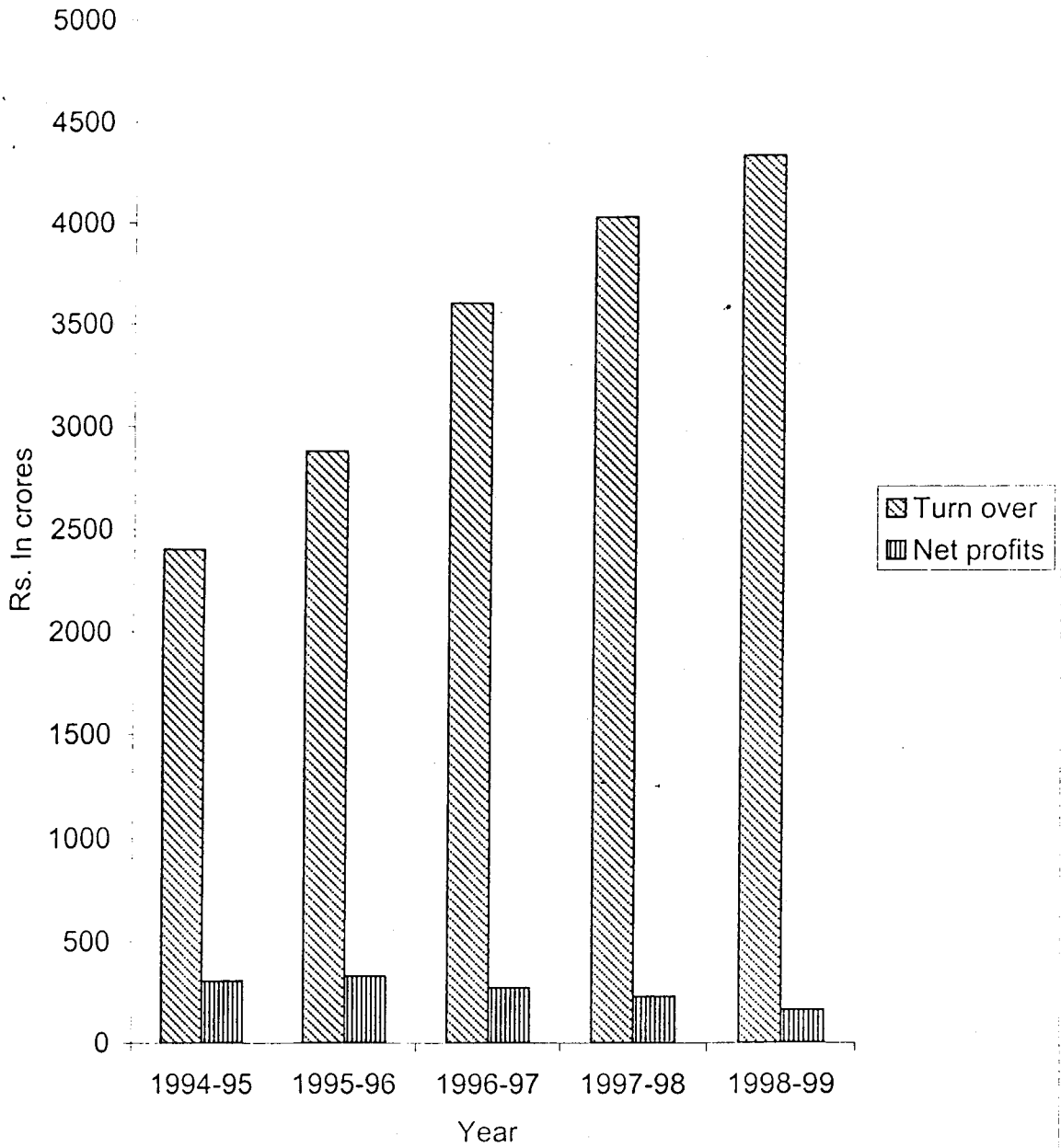
Grasim Industries Ltd.
Contribution to national economy



Grasim Industries Ltd. - Growth during the last five years



Grasim Industries Ltd. - Profitability



The company's net profit declined by 29% from Rs.231 crores in 1997-98 to Rs.164 crores in 1998-99, due to lower operating profits, a drop in other income and higher interest and depreciation charges during the year. Considering the contribution to the national economy, the company pays more than Rs.1000 crores a year in the form of excise duty and other taxes to the exchequer, payments to the employees in the form of wages, bonus and other allowances and to the shareholders in the form of dividends.

The company's strategy to enhance shareholder value is three pronged: efficient utilisation of existing assets, better control over costs and focus on emerging opportunities in its core business for growth. It is focusing on the cement business for its future growth, especially given the mature nature of the fibre industry and challenging outlook for the textiles and sponge iron industries. The cement industry offers an excellent growth opportunity given the likely recovery in the economy and a pick-up in the housing and infrastructure sector. The company is considering various projects in this line. It is the setting up of a 900000 tons p.a cement plant in Tamil Nadu, expected to commence production by the end of 1999-2000, the acquisition of Dharani Cements etc. are only two examples in that direction.

Grasim Industries Ltd., Mavoor

Grasim Industries Ltd., Mavoor comprises of two divisions: Pulp Division and Staple Fibre Division. The Pulp division was started in 1958 on the banks of river Chaliyar. The company produced rayon grade pulp from bamboo for the first time in the world in 1963. In the later years, when bamboo became scarce, a combination of bamboo, mixed hardwood and soft wood was evolved and continued to produce high quality rayon grade pulp. The pulp division has an installed capacity of producing 200 tons per day. The company could utilise about 70% of the capacity due to many reasons.

The Staple Fibre Division was commissioned in 1968 to produce Viscose Staple Fibre. The unit has an installed capacity of producing 70 tons per day. Sodium sulphate, sulphuric acid, carbon-di-sulphide etc. are produced as by products.

Both the pulp division and fibre division have received ISO 9002 certificate.

Pulp Division

The installed capacity of the pulp division was 200 tons rayon grade pulp per day. There are 1562 employees comprising of 260 staff category and 1302 workers.

Categories of workmen and their wage structure

The workmen in the pulp division are classified as follows:-

- a) Permanent workmen
- b) Casual or Badli or Reserve workmen

a) **Permanent workmen:**

Group	Pay Scale (Rupees)
I Sweeper, Cleaner, Gardner	452-15-527-17-612-19-707
II Peon, Attender, Boys	472-16-552-18-642-20-742
III Scaffolder, Mazdoor, Oiler, Watchman etc.	482-18-572-20-672-22-782
IV Shift commander, Bearer, Cook, Garage cleaner	497-20-597-22-707-24-827
V Fitters, Welders, Turners, Driver	522-22-632-26-765-35-937
VI Fitter A, Welder A, Turner A	542-26-672-30-822-36-1002
VII First Operator, Boiler Attendant, Checker, Sr. Welder	582-35-757-40-957-45-1182
VIII Serang (Mechanical)	632-40-832-45-1057-50-1307
IX Spl. Group	682-50-932-55-1207-60-1507-65-1832

STAFF
Group

I	Clerk B, Typist B etc.	522-22-632-26-762-35-937
II	Clerk A, Typist A	582-35-757-40-957-45-1182
III	Asst. B, Steno A, Chemist A	632-40-832-45-1057-50-1307
IV	Asst. A, Chemist A	682-50-932-55-1207-60-1507
V	Spl. group	732-55-1007-60-1307-65-1632

A variable D.A. @ 29 paise per point over 500 points of cost of Living Index.

A fixed D.A @Rs.60/- per month is added with it.

Welfare Measures: Amenities:

Supply of uniform cloth: Two pair pants and two pair shirts of gwalior suiting is given once in a year. One pair leather shoe and one pair PVC shoe and socks are given once in a year. Three polyester sarees and three blouse pieces are issued once in a year. Stitching charges @ Rs.80/- per pair for men and @ Rs.10/- per pair for ladies are given. One pair of leather and one pair of Sandak chappals are issued for ladies once in a year, mostly in May, every year.

Supply of rain coat: Rain coats are supplied to loading and unloading workers in Bamboo yard and Watchmen, drivers, Khalasi etc. once in two years.

Umbrella: A folding umbrella of good quality is supplied once in two years.

Medical Facilities

- a. **Medical check-up:** A medical check-up is made to all the workmen once in a year. Arrangements for further check-up will also be provided, if necessary
- b. **By-stander allowance** for outsiders @ Rs.40/- per day and for co-worker @ Rs.20/- per day is granted.

Risk Insurance: Janatha Insurance scheme is extended to all workmen by the New India Insurance Company.

Educational Facilities

The children of the retired/deceased workmen are allowed to continue studies in the company school, on condition of payment of fees. Free education for children of workmen and staff are provided up to SSLC class in the company school.

Scholarship: for the children of employees are provided as follows:

1. For PDC/Plus Two/ITI/ITC/Polytechnic/TTC etc. @ Rs.600/- per year.
2. For Degree Students @ Rs.800/- per year.

3. For Post Graduate Courses @ Rs.800/- per year.

Students who pass SSLC examination in First Class with 75% marks in any one subject is eligible to get the scholarship under the scheme.

Transport Facilities: The company provides bus facility to the employees at concessional rates, ie. by collecting only 40% of the actual fare from the employees. Students are given concessions, collecting only 20% of the fare from them.

Loan Schemes

Housing loans: A housing loan scheme of Rs.25000/- and Rs.40000/- for workers and staff respectively is provided, which will be reimbursed within five years, being interest charged @ 8%.

Fan loan: Two fans are supplied to 25 workers in a month on loan basis, the cost of which will be recovered in 12 equal monthly instalments.

Scooter Loan: A vehicle loan of Rs.10000/- for workers and Rs.15000/- for the staff are provided by the company.

Funeral expenses: The company will pay an amount of Rs.600/- for funeral expenses, in the event of the death of an employee.

Recreation facilities: An amount of Rs.5000/- per year is granted as subsidy to the Recreation Club. The amount granted to the ladies Recreation club is Rs.2500/- p.a.

Accident Death Relief/Death Relief Fund

- a) The accident death relief amount is enhanced to Rs.15000/-.
- b) The death relief fund contribution of the management is enhanced to Rs.4500/- per death.

Leave and Holidays

- a) Pilgrimage leave is granted for five months.
- b) Family planning leave for seven days
- c) Blood donor's leave: A worker who donates blood to his co-worker or to his legal dependent, three days leave is granted with wages.

Special long leave with out pay

The workers are granted special long leave with out pay for a period of a maximum of five years.

Employment to dependents: In case a worker dies while in service, his male dependent is given training for a period of six months on payment of stipend and later, if found satisfactory, will be considered for regular employment when vacancies arise.

Gratuity: The scheme of gratuity is applied as follows:

Above 5 years and up to 10 yrs of service	15 days wages inclusive of DA for each year of service
Above 10 yrs and up to 15 yrs of service	17 days wages inclusive of DA for each year of service
Above 15 yrs of service	21 days wages inclusive of DA for each year of service

The following other allowances are also available:

Outstation meals allowance is given Rs.10/- and tiffin allowance Rs.5/-, mileage allowance 10 paise per km, safety driving allowance Rs.225 per year, washing allowance to watchmen, drivers, peons etc. Rs.23/- per month, washing allowance to other workmen Rs.20/- per month; special allowance (Saturday allowance) Rs.50/- per month, night shift allowance - for B shift duty Rs.1.50 per shift and for C shift duty Rs.5/- per shift. House rent allowance Rs.90/- per month, ferry allowance Rs.13/- per month, acting allowance Rs.15/- per shift, cash handling allowance Rs.1.10 per thousand, gate clerk allowance Rs.10/- per shift, Risk allowance Rs.20 p.m.

Home travel allowance: first class A/C charges are paid and leave travel assistance Rs.200/- per year.

Supply of Dasamoolarishtam: 600 ml. dasamoolarishtam is supplied once in two months.

Quarters: There are 150 quarters for staff with rent @ Rs.25/- p.m. and 506 quarters for workers with rental charges @ Rs.10 to 18 p.m with water and electricity supply at free of cost.

Canteen Facility

There is a canteen in the premises to provide food for the workers at concessional rates. It works for 24 hours, with 7 staff to function. The subsidised rates are:

Tea	:	Rs.0.08
Uppumavu	:	Rs. 0.10
Spl. tea	:	Rs. 0.12
Veg. lunch	:	Rs. 0.35
Curd	:	Rs. 0.15

A canteen committee is working to monitor the functioning of the canteen and give suggestions for improving the quality of food served.

Staff club: Recreation facilities like Table Tennis, Caroms, Chess, Badminton, Cards and other outdoor games are provided by the club. A library and reading room are also working in the club. Staff club provides

cable T.V. facilities in the residential quarters of staff and workers at nominal rates.

Auditorium: "Grasim Cultural Centre" is the name of the auditorium. It is utilised for conducting social gatherings and cultural programmes on special occasions like Onam, Deepavali etc. All the members of the Grasim family are invited to participate in the variety entertainment programmes.

Mahila Mandal: A 'Mahila Mandal' is also functioning to facilitate the development of cultural and creative talents of the wives and children of staff members.

Guest House: A well furnished guest house is maintained to entertain the guests of the company.

Co-operative Society: A full-fledged consumer's co-operative society is functioning for the benefit of the staff and workers. Textiles, groceries and stationary items are provided on credit basis which will be deducted at source from the salary.

Rural and Community Development: Rural and Community Development Society conducts employment oriented training programmes in the field of seri-culture, mushroom cultivation, flori-culture etc. This is done with a view to promote self employment for the needy rural folks of the neighbourhood.

Trade Union

There are a number of trade unions affiliated to different political parties. Some of them are:

Gwalior Rayons Employees Association (AITUC)

Gwalior Rayons Employees Union (INTUC)

Gwalior Rayons Pulp and Fibre Workers Union (CITU)

Swathanthra Thozhilali Union (STU)

Gwalior Rayons Employees Sangh (BMS)

Gwalior Rayons Workers Organisation (GROW)

Gwalior Rayons Staff Association

Gwalior Rayons Staff Union, etc.

Industrial Relations

Long term agreements in the form of memorandum of settlement are entered into between the representatives of management and trade unions so that both parties are bound to obey the terms of agreement, though there are instances of exceptions too at times.

CHAPTER V

MOTIVATION AND EMPLOYEES' EFFICIENCY

This chapter is the core of the study. It deals with the "effects of motivational factors on employees' efficiency." This chapter is divided into two parts - Part A & B. In part A a brief profile of the sample population is given to get an overall idea about the background information of the respondents. In part B, the effect of motivational factors on labour efficiency is analysed.

PART A

SAMPLE PROFILE

Agewise distribution of Sample Population

The agewise distribution of the sample presented in Table 5.1 shows that majority of the respondents are middle aged people. About 55% of the informants belongs to this group of 40 to 50 years of age. 29% of the respondents are youngsters below 40 years of age and remaining 16% are elderly people in the age group of above 50 years. Companywise no major difference exists in the age pattern of the respondents.

TABLE 5.1

Agewise Classification

Age \ Company	MCL	CTL	GIL	TOTAL
< 40 yrs	31 (43)	14 (25)	10 (16)	55 (29)
40 - 50 yrs	36 (50)	35 (63)	35 (55)	106 (55)
> 50 yrs	5 (7)	7 (12)	19 (29)	31 (16)
Total	72	56	64	192

Figures in bracket indicate percentages.

Castewise Distribution of Sample

The castewise distribution of the respondents given in Table 5.2 reveals that majority of the workers are from 'Other Backward Communities'. While 62% workers are from this category, 29% workers belongs to forward caste and the remaining 9% are from Scheduled Caste and Scheduled Tribe category.

TABLE 5.2

Caste wise Classification

Company Caste	MCL	CTL	GIL	TOTAL
Forward	20 (28)	17 (31)	18 (28)	55 (29)
SC/ST	3 (4)	8 (14)	7 (11)	18 (9)
OBC	49 (68)	31 (55)	39 (61)	119 (62)
Total	72	56	64	192

Figures in bracket indicate percentages

Companywise, almost similar pattern is seen for all the three companies. However, it will be worth mentioning that in the private sector companies - CTL and GIL about 14% and 11% belong to SC/ST category.

Qualification wise Distribution of the Sample

The total workers are classified on the basis of their educational qualifications and presented in Table 5.3 under three heads - primary, secondary and others representing Degree, PG and any other professional degree holders.

TABLE 5.3

Qualificationwise Classification

Company Qualification	MCL	CTL	GIL	TOTAL
Primary	3 (4)	28 (50)	24 (38)	55 (29)
Secondary	52 (72)	27 (48)	38 (59)	117 (61)
Others	17 (24)	1 (2)	2 (3)	20 (10)
Total	72	56	64	192

Figures in bracket indicate percentages

It may be noticed that 29% of the sample possesses primary school education, 61% have secondary school education and around 10% are graduates or above. Looking companywise it is clear that the major share of workers in Malabar Cements Ltd. and Grasim Industries Ltd. are from the category of secondary school education ie. 72% and 59% respectively. The Commonwealth Tiles Ltd. has 50% of its sample from the primary school group. Workers with Degree, P.G. or other certificates are considerably high in Malabar Cements Ltd. (24%) when compared to Commonwealth Tiles Ltd. (2%) and Grasim Industries Ltd. (3%).

Length of Servicewise Distribution of the Sample

The servicewise distribution of the sample is done under three heads: Those below 10 years of service, 10 to 15 years and above 15 years, in the three companies (Table 5.4).

TABLE 5.4

Length of Servicewise Classification

Company Service	MCL	CTL	GIL	TOTAL
Below 10 yrs	7 (10)	17 (30)	2 (3)	26 (14)
10 to 15 yrs	38 (53)	7 (13)	11 (17)	56 (29)
Above 15 yrs	27 (37)	32 (57)	51 (80)	110 (57)
Total	72	56	64	192

Figures in bracket indicate percentages

It can be seen from the Table 5.4 that majority respondents are from the workers with above 15 years service. 57% are from this category, 29% from 10 to 15 years service group and the balance from below 10 years category. In Grasim Industries Ltd. about 80% of its sample is possessing above 15 years of service, while it is 57% in Commonwealth Tiles Ltd. and 37% in Malabar Cements Ltd.

Nature of Jobwise Distribution of the Sample

On the basis of the nature of job workers are grouped into three categories, namely - workers who are involved purely on manual labour, purely on mechanical labour and those involved in both type of labour. This classification is presented in Table 5.5.

TABLE 5.5

Nature of Jobwise Classification

Company Nature of job	MCL	CTL	GIL	TOTAL
Manual	14 (19)	42 (75)	18 (28)	74 (39)
Mechanical	14 (19)	1 (2)	4 (6)	19 (9)
Both	44 (62)	13 (23)	42 (66)	99 (52)
Total	72	56	64	192

Figures in bracket indicate percentages

It is clear from the table 5.5 that the Lion's share of the sample are from the third category, i.e. about 52%. Only 9% are involved in mechanical labour and 39% in manual labour. It is worth mentioning that in The Commonwealth Tiles Ltd., 75% of the sample are from the 'manual labour' class, where as 62% of the Malabar Cements Ltd., and 66% of the

Grasim Industries Ltd. are from the third group, ie. workers doing both manual and mechanical jobs.

Income wise Distribution of the Sample

Table 5.6 shows the incomewise distribution of the workers in the three companies under study. The classification is done under three groups, ie. those with an income less than Rs.3000 a month, Rs.3000 to Rs.4000 a month and those with above Rs.4000 a month.

TABLE 5.6

Incomewise Distribution

Company Income in Rs.	MCL	CTL	GIL	TOTAL
< 3000	--	56 (100)	15 (23)	71 (37)
3000 - 4000	4 (6)	--	36 (56)	40 (20)
> 4000	68 (94)	--	13 (21)	81 (43)
Total	72	56	64	192

Figures in bracket indicate percentages.

The table shows astonishing facts about the workers income in these three companies. While in Malabar Cements Ltd. (a public Ltd. Company) no worker is drawing an income less than Rs.3000 a month, the total

sample, ie. 100%, of The Commonwealth Tiles Ltd. are drawing less than Rs.3000 a month. Further, 94% of the workers in Malabar Cements Ltd. are in the group of income more than Rs.4000/- a month, it is only 21% in the Grasim Industries Ltd. Considering the overall figures, out of the sample of 192 employees, 37% are included in the first group, 20% in the second group and 43% in the third group of above Rs.4000 a month (Table 5.6).

Domicile wise distribution of the Sample

On the basis of the place of domicile of the workers, they are classified under two heads - local and outstation - and shown in the table below:

TABLE 5.7

Place of Domicilewise Classification

Company \ Domicile	MCL	CTL	GIL	TOTAL
Local	41 (57)	51 (91)	46 (72)	138 (72)
Outstation	31 (43)	5 (9)	18 (28)	54 (28)
Total	72	56	64	192

It is observed from the table that 72% of the sample are from the local areas of the three companies. In the case of Malabar Cements Ltd. the local employees constitute about 57%, The Commonwealth Tiles Ltd., 91% and Grasim Industries Ltd. it is 72% . Outstation employees are the lowest in number (5) in Commonwealth Tiles Ltd., which is only 9%.

Residential Statuswise Distribution of the Sample

The following table shows the residential status of the employees. They are classified under three groups - those staying with family, those with joint family and those staying alone or away from family.

TABLE 5.8

Residential Statuswise Classification

Company Status	MCL	CTL	GIL	TOTAL
With family	50 (70)	51 (91)	60 (94)	161 (83)
With joint family	10 (13)	4 (7)	4 (6)	18 (10)
Alone	12 (17)	1 (2)	--	13 (7)
Total	72	56	64	192

Figures in bracket indicate percentages

The table shows that majority of the workers, ie. 83% of the sample are staying with their family, 10% with joint family and 7% staying alone. In Commonwealth Tiles Ltd. 91% are staying with family while it is 70% in the case of Malabar Cements Ltd. and 94% in Grasim Industries Ltd.

Marital Statuswise distribution of the Sample

The total sample is grouped under two heads - 'married' and 'unmarried' and presented in the following table:

TABLE 5.9

Marital Statuswise Classification

Company \ Status	MCL	CTL	GIL	TOTAL
Married	68 (94)	55 (98)	62 (97)	185 (96)
Unmarried	4 (6)	1 (2)	2 (3)	7 (4)
Total	72	56	64	192

Figures in bracket indicate percentages.

It is evident that 96% of the sample are married while the unmarried category is negligible, ie. only 4%. The proportion of married workers is more in the Commonwealth Tiles Ltd., where it is 98% and in the Grasim Industries Ltd., where it is 97%. In the Malabar Cements Ltd., the percentage of married workers is 94.

Parental Occupationwise Distribution of the Sample

The following table shows the distribution of the sample on the basis of their parental occupation. The parental occupation is classified under five major heads as 'agriculture', 'trade', 'industry', 'business', 'service', and 'others' a sixth group to record the other occupation which cannot be listed under the five groups above.

TABLE 5.10

Parental Occupationwise Classification

Company Parental Occupation	MCL	CTL	GIL	TOTAL
Agriculture	34 (47)	18 (32)	23 (36)	75 (40)
Trade	7 (10)	2 (4)	7 (11)	16 (8)
Industry	2 (3)	8 (14)	6 (9)	16 (8)
Business	4 (6)	6 (11)	--	10 (5)
Service	5 (7)	3 (5)	4 (6)	12 (6)
Others	20 (27)	19 (34)	24 (38)	63 (33)
Total	72	56	64	192

Figures in bracket indicate percentages

The table 5.10 shows that the major parental occupation is agriculture, the proportion being 40% out of the total sample. It is 47% in the Malabar Cements Ltd., 32% in the Commonwealth Tiles Ltd. and 36% in the Grasim Industries Ltd. When 33% of the total sample belong to the parental occupation group "others" who have no specific occupation identifiable to the other groups, almost the same pattern is found in the three companies under study.

Political Interestwise Distribution of the Sample

Political affiliation and interests of the workers are studied and presented in the table below (Table 5.11). They are categorised as those showing 'very active' 'interest, 'light interest', 'neutral' and 'inactive'.

TABLE 5.11

Political Interest-wise Classification

Company Political interest	MCL	CTL	GIL	TOTAL
Very Active	21 (29)	15 (27)	20 (31)	56 (29)
Light Interest	31 (43)	24 (43)	28 (44)	83 (43)
Neutral	13 (18)	8 (14)	11 (17)	32 (17)
Inactive	7 (10)	9 (16)	5 (8)	21 (11)
Total	72	56	64	192

Figures in bracket indicate percentages

It is interesting to note from the table 5.11 that on an average 43% of the sample shows light interest in politics, which is almost the same for all the three companies. A similar result could be seen in the case of workers showing very active interest in politics, which comes to be 29% of the sample. The proportion of workers inactive in politics is 11% on an overall basis.

Trade Union Involvementwise Distribution of the Sample

Apart from political relationship, the workers' attitude towards the trade union movement is presented in table 5.12. The degree of involvement is grouped under three heads: "very active", "average" and "neutral".

TABLE 5.12

Involvement in Trade Unionwise Classification

Company TU Involvement	MCL	CTL	GIL	TOTAL
Very active	23 (32)	12 (21)	25 (39)	60 (31)
Average	31 (43)	28 (50)	25 (39)	84 (44)
Neutral	18 (25)	16 (29)	14 (22)	48 (25)
Total	72	56	64	192

It may be noted that on an average 44% of the sample shows only 'average' interest and involvement in trade unionism, where 31% are very active 25% are neutral. The proportion is almost in the same order in Malabar Cements Ltd. and Grasim Industries Ltd. In the case of Commonwealth Tiles Ltd. 50% shows average interest, while 21% are very active and 29% 'neutral' participation.

PART B

EFFECTS OF MOTIVATIONAL FACTORS ON EMPLOYEES' EFFICIENCY

Efficiency of Workers

As per the procedure explained in the methodology part, in this study, the efficiency level of workers have been computed and presented in the following table:

TABLE 5.13

Mean efficiency Level of Workers

Company	Mean	SD
Malabar Cements Ltd. (MCL)	45.67	4.19
Commonwealth Tiles Ltd. (CTL)	43.83	4.32
Grasim Industries Ltd. (GIL)	45.95	4.82
Aggregate	45.23	4.51

It could be observed from the table that the aggregate mean efficiency score of the workers for the whole sample is 45.23 with a standard deviation of 4.51 as against the maximum obtainable score of 60. This indicates that the efficiency level of workers is two-third of the maximum. Grasim Industries top in the efficiency level of workers with a mean value of 45.95 followed by MCL with 45.67 and CTL with 43.83 mean values. This variation is statistically significant at 5% level.

Componentwise Analysis of Efficiency

To get a micro level view about the area in which workers are strong and weak, the aggregate efficiency score has been divided into different components and the componentwise mean score has been worked out and presented in the following table.

TABLE 5.14
Componentwise Efficiency Scores

	Variables	MCL		CTL		GIL		AGGREGATE	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
1.	Job knowledge	3.70	0.58	3.29	0.68	3.59	0.69	3.54	0.67
2.	Quality of work	3.95	0.51	3.70	0.63	3.90	0.63	3.86	0.59
3.	Quantity of work	3.60	0.51	3.31	0.35	3.50	0.56	3.48	0.50
4.	Cost/Time control	4.06	0.63	4.24	0.78	4.35	0.65	4.21	0.69
5.	Responsiveness to change or innovation	3.87	0.54	3.72	0.64	3.74	0.67	3.78	0.62
6.	Commitment to the job and the organisation	3.76	0.53	3.49	0.51	3.70	0.54	3.66	0.54
7.	Initiative	3.45	0.52	3.04	0.63	3.33	0.79	3.30	0.67
8.	Care of machines, tools, equipment and records	3.66	0.56	3.57	0.74	3.81	0.69	3.68	0.66
9.	Ability to work in co-operation with others	4.27	0.60	4.39	0.39	4.27	0.62	4.31	0.55
10.	Absenteeism	3.61	0.58	3.46	0.58	3.63	0.55	3.57	0.57
11.	Punctuality	4.18	0.57	4.40	0.51	4.31	0.57	4.29	0.56
12.	Potential for handling high level responsibility	3.55	0.76	3.77	0.80	3.84	0.82	3.57	0.82

The table 5.14 shows that the average scores are weak in some factors such as initiative, quantity of work, job knowledge, absenteeism, potential for handling high level responsibilities etc.

Considering the aggregate scores on the efficiency level of workers among the three companies under observation and the possible factors that are expected to explain the variations, naturally age, qualification and

service of the workers may stand top. Hence an attempt is made here to present the data in a two way classification format with the company on the one side and age, caste, educational qualification and length of service on the other.

Agewise classification of efficiency level of workers

The mean efficiency level of the workers in the different age groups are presented in Table No.5.15 along with their respective standard deviation.

TABLE 5.15

Mean Efficiency Level of Workers : Age Group-wise

Company \ Age	< 40 yrs	40-50 yrs	>50 yrs	Aggregate
MCL	44.45 (3.65)	46.44 (4.45)	47.69 (3.95)	45.67 (4.19)
CTL	44.16 (5.39)	43.56 (4.10)	44.51 (3.39)	43.83 (4.32)
GIL	48.74 (6.27)	45.61 (4.61)	45.10 (4.01)	45.95 (4.82)
Aggregate	45.16 (4.88)	45.22 (4.52)	45.39 (3.89)	45.23 (4.51)

Figures in bracket indicate standard deviation

It can be noted from the table that there is only slight variation in the efficiency level of workers of these three age groups. Further, to test the

statistical significance of the variation of efficiency level with age group, analysis of variance is carried out and the result is presented in Table 5.16.

TABLE 5.16

Analysis of Variance

Source of variation	Sum of squares	DF	Mean squares	F
Company	156.734	2	78.367	4.053*
Age	0.956	2	.478	0.025
Company & Age Interaction	189.719	4	47.429	2.802
Explained	347.409	8	43.426	2.241
Residual	3538.230	183	19.335	
Total	3885.639	191	20.344	

From the results, it may be seen that the variation in the mean efficiency level of workers in different age groups is not statistically significant at 5% level of significance as the calculated F-ratio is only .025 which is less than the tabular F-value, i.e., 3.000.

Castwise classification of efficiency level of workers

Table 5.17 provides castewise distribution of mean efficiency level of workers which shows that efficiency is at different levels for the various caste groups.

TABLE 5.17

Castewise - Mean Efficiency Level of Workers

Company \ Caste	Forward	SC/ST	OBC	Aggregate
MCL	46.25 (3.23)	43.47 (6.00)	45.57 (4.43)	45.67 (4.19)
CTL	44.19 (2.62)	40.13 (3.10)	44.59 (4.89)	43.83 (4.32)
GIL	46.26 (4.48)	43.25 (5.16)	46.29 (4.87)	45.95 (4.82)
AGGREGATE	45.61 (3.63)	41.90 (4.50)	45.55 (4.70)	45.23 (4.51)

Figures in bracket indicate standard deviation

From the mean table, it can be observed that the mean efficiency is less for the SC/ST category of workers when compared to the forward caste and OBC groups. The analysis of variance is done to test the statistical significance of the variation of efficiency level and the result is presented in table 5.18.

TABLE 5.18

Analysis of Variance

Source of variation	Sum of squares	DF	Mean squares	F
Company	127.655	2	63.828	3.318*
Caste	190.735	2	95.367	4.957*
Company & Caste Interaction	46.789	4	11.697	.608
Explained	365.179	8	45.647	2.373
Residual	3520.461	183	19.237	
Total	3885.639	191	20.344	

It is clear from the ANOVA table that the castewise variation in the mean efficiency level of workers is statistically significant at 5% level as the calculated F-value of 4.957 is higher than the tabular F-value.

Educational Qualificationwise Classification of Efficiency level of workers

It is generally believed that the level of education attained by a person influences the performance efficiency: To test this assumption the mean efficiency level of workers were distributed educationwise and is presented in Table 5.19. It could be observed from the table that the mean efficiency level of workers who are in the primary school level of education is found to be the least compared to the other two groups.

TABLE 5.19

Qualification wise Classification of Mean Efficiency Level of Workers

Qualification Company	Primary	Secondary	Others	Aggregate
MCL	47.28 (6.33)	45.34 (4.15)	46.41 (4.05)	45.67 (4.19)
CTL	42.53 (4.79)	45.12 (3.45)	45.50 (0.00)	43.83 (4.32)
GIL	45.19 (5.35)	46.37 (4.51)	46.90 (5.23)	45.95 (4.82)
AGGREGATE	43.95 (5.25)	45.62 (4.12)	46.42 (3.91)	45.23 (4.51)

Figures in bracket indicate standard deviation

TABLE 5.20

Analysis of Variance

Source of variation	Sum of squares	DF	Mean squares	F
Company	108.986	2	54.493	2.779
Qualification	88.363	2	44.182	2.253
Company & Qualification Interaction	99.857	4	24.964	1.273
Explained	297.206	8	37.151	1.895
Residual	3588.433	183	19.609	
Total	3885.639	191	20.344	

However, it can be noted from the results of the analysis of variance presented in Table 5.20, that educational qualifications of the workers are

found to be not one of the important factors for variations in the efficiency level. The variation is not significant as the calculated F-value is less than the table F-value.

Length of servicewise classification of efficiency level of workers

Table 5.21 shows the servicewise classification of mean efficiency level of workers.

TABLE 5.21

Length of Servicewise - Classification of Efficiency Level of Workers

Service \ Company	<10 yrs	10-15 yrs	> 15 yrs	Aggregate
MCL	44.21 (2.57)	45.74 (3.86)	45.95 (4.94)	45.67 (4.19)
CTL	42.36 (5.31)	43.70 (5.13)	44.64 (3.40)	43.83 (4.32)
GIL	46.30 (6.08)	48.55 (5.87)	45.37 (4.44)	45.95 (4.82)
AGGREGATE	43.16 (4.76)	46.04 (4.60)	45.30 (4.29)	45.23 (4.51)

Figures in bracket indicate standard deviation

It is seen from table 5.21 that there is variation in the mean efficiency level of workers in the three service groups. The mean score of those who have put in less than 10 years of service, seems to be the least ie. 43.16, as against 46.04 of the service group of 10 to 15 years.

Further, to test the statistical significance of the variation, ANOVA table has been prepared as follows:

TABLE 5.22
Analysis of Variance

Source of variation	Sum of squares	DF	Mean squares	F
Company	80.257	2	40.129	2.061
Length of Service	71.727	2	35.863	1.842
Company & Length of Service Interaction	171.243	4	42.810	2.199
Explained	323.227	8	40.403	2.076
Residual	3562.412	183	19.467	
Total	3885.639	191	20.344	

It can be inferred from the results of ANOVA that the variation in the mean scores of different service groups is not significant as the calculated F-value is less than the tabular F-value.

The main findings of the above analysis are:

1. The average efficiency level of workers is two-third of the maximum efficiency.
2. Level of efficiency varies among workers of the three companies. The highest mean efficiency is in Grasim and the lowest in CTL.

3. The efficiency scores are seen to be different among different caste groups. However, their length of service, qualification and age turn out to be not significant.

Testing of Hypothesis

On the basis of the above findings,

1. The first hypothesis that "the average efficiency level of workers in Kerala is medium" is found true.
2. The second hypothesis that "there is no significant difference in the level of efficiency of workers in the public sector and private sector units in Kerala" is found not true.
3. The third hypothesis that "there is no significant relationship between the level of efficiency of workers and their antecedents" is found true.

There is an exception to this generalisation in the case of castewise distribution of mean efficiency level of workers where some difference is noticed.

Analysis of satisfaction of worklife

After analysing the efficiency level of workers in the preceding pages, in this section an attempt is made to analyse the level of satisfaction of workers with work life.

It is generally believed that a smooth working atmosphere will create a favourable environment for better performance and high efficiency which may finally lead to high productivity. "People" are the most important area for productivity improvement. The chief characteristics of a high quality work force is its productive behaviour which is the result of a number of variables such as work attitudes, job knowledge and skills, opportunities for personal development etc.

As stated in the methodology, for measuring the level of satisfaction of work life 17 variables have been taken and rated on a five point scale. The mean satisfaction level for all the three companies under study has been worked out and presented in table 5.23.

TABLE 5.23

Mean Satisfaction with worklife - Companywise

Company	Nors.	Mean	SD
Malabar Cements Ltd.	72	56.32	8.17
Commonwealth Tiles Ltd.	56	52.29	7.09
Grasim Industries Ltd.	64	47.88	5.76
Aggregate	192	52.33	7.93

From the table, it can be observed that the aggregate mean satisfaction of working environment and other related factors is 52.33 as

against the maximum score of 85. This indicates that the workers are only moderately satisfied with the working conditions.

Looking the data companywise, it can be noticed that the level of satisfaction with the working environment is maximum in the public limited company - MCL (56.32) and minimum in the private limited company - Grasim Industries Limited (47.88). In both the private companies under study, the worker's level of satisfaction with the work life is below the aggregate mean.

Analysis of Componentwise Satisfaction

Similar to the analysis of componentwise efficiency scores, a componentwise analysis of satisfaction scores have been made to probe into the specific areas where the workers are less satisfied and more satisfied. The elementwise mean figures are exhibited in the following table.

TABLE 5.24
Componentwise Satisfaction Scores

	Variables	MCL		CTL		GIL		AGGREGATE	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
1.	Job Satisfaction	4.07	0.70	3.64	0.88	3.63	0.83	3.80	0.82
2.	Expectation of Supervisor	3.94	0.82	3.88	0.83	3.95	0.70	3.93	0.78
3.	Relation with Supervisor	3.71	1.29	3.00	1.50	3.31	1.14	3.37	1.34
4.	Work environment	3.78	0.88	3.32	0.92	3.42	1.04	3.53	0.96
5.	Remuneration	3.74	1.13	1.59	1.01	1.67	0.96	2.42	1.45
6.	Comparative ranking of income	2.90	0.56	2.30	0.78	1.50	0.76	2.26	0.91
7.	Prospects to increase income	4.10	1.02	3.93	1.28	3.42	1.37	3.82	1.25
8.	Running of canteen, housing, pension schemes etc.	2.21	0.96	2.96	0.99	2.66	1.00	2.58	1.03
9.	Health and accident prevention	2.44	1.01	2.54	0.91	2.61	1.05	2.53	0.99
10.	Involvement in decisions	2.97	0.79	3.04	0.66	2.56	0.77	2.85	0.77
11.	Personal development - Training, Promotion etc.	3.39	0.96	3.30	1.06	2.97	0.96	3.22	1.00
12.	Leave rules	2.58	1.02	2.63	1.05	2.66	0.91	2.62	0.99
13.	Mode of setting disputes	2.93	1.00	2.95	1.00	2.59	0.87	2.82	0.97
14.	Mode of Communication	3.11	1.23	3.21	0.97	3.02	1.29	3.11	1.18
15.	Style of management	3.39	1.04	3.29	1.09	2.72	1.05	3.14	1.09
16.	Interpersonal relationship	3.64	0.84	3.89	1.00	2.89	1.03	3.46	1.04
17.	Management's concern for workers	3.40	0.94	2.98	0.88	2.38	0.86	2.94	1.00

MCL - Malabar Cements Ltd., CTL - Commonwealth Tiles Ltd.,
GIL - Grasim Industries Ltd.

From the table 5.24 it could be observed that the level of satisfaction is comparatively less in areas like income, provision of facilities for health

and accident prevention, housing schemes, canteen, mode of settling disputes etc. Satisfaction is high in areas like expectation of supervisor, prospects to increase income, job satisfaction, etc.

The aggregate satisfaction scores are further analysed on the basis of other variables such as length of service, qualification, caste, nature of job, degree of involvement in trade union activities etc.

Length of Servicewise Classification

For studying the level of satisfaction of the workers on the basis of their length of service, the total workers are grouped in to three categories of service - those having less than 10 years service, those with 10 to 15 years of service and those above 15 years of service. The following table shows the mean satisfaction level of these three classes of workers.

TABLE 5.25

Length of Servicewise Classification

Service	Nos.	Mean	SD
< 10 yrs	26	55.88	8.16
10 to 15 yrs	56	53.84	8.61
> 15 yrs	110	50.72	7.11
Aggregate	192	52.33	7.93

It is clear from the table that the level of satisfaction with work life is maximum in the case of workers with less than 10 years service and it is the least for workers above 15 years service. Thus, it can be concluded that the level of satisfaction declines with the increase in the length of service.

Qualificationwise Classification

Table No.5.26 shows the mean scores of level of satisfaction of the workers on the basis of their educational qualification.

It can be inferred that there is no wide variation in the mean scores of level of satisfaction of workers considering their educational qualification.

TABLE 5.26

Qualificationwise Classification

Qualification	Nos.	Mean	SD
Primary	55	51.99	7.07
Secondary	117	52.60	8.10
Above secondary	20	54.15	8.96
Aggregate	192	52.33	7.93

Castewise Classification

Analysing the level of satisfaction on caste basis, it is observed from the table 5.27 that there is no significant variation between the mean satisfaction levels of the three caste groups, as the mean satisfaction score

ranges in between 51.11 and 52.51, being the lowest and the highest respectively.

TABLE 5.27

Castewise Classification

Caste	Nos.	Mean	SD
Forward	55	52.33	7.64
SC/ST	18	51.11	8.83
OBC	119	52.51	7.97
Aggregate	192	52.33	7.93

Nature of Jobwise Classification

It can be assumed that the nature of job may influence the level of satisfaction of workers. Table No.5.28 shows the mean satisfaction scores of the sample classified on the basis of the nature of job.

TABLE 5.28

Nature of Jobwise Classification

Nature of Job	Nos.	Mean	SD
Manual	74	51.86	8.43
Mechanical	19	54.47	8.05
Both	99	52.26	7.52
Aggregate	192	52.33	7.93

The table reveals that the difference in the nature of job does not make any considerable difference in the mean scores of satisfaction of worklife.

Trade Union Involvementwise Classification

The degree of involvement in trade union activities and the mean scores of workers satisfaction on work life are presented in Table No.5.29.

TABLE 5.29

Involvement in Trade Union Activities

Degree of Involvement	Nos.	Mean	SD
Very active	60	51.18	8.05
Average	84	53.52	8.12
Neutral	48	51.67	7.29
Aggregate	192	52.33	7.93

From the table, it can be concluded that there is only negligible difference in the mean scores with varying degree of involvement in trade union activities.

Thus a first analysis of scores on workers' satisfaction showed that there is not much of variation among the various categories of workers. However they are significantly different among the three companies under study. Among other variables only length of service is observed to be providing evidence to different levels of satisfaction among workers. Therefore a cross classification of the data on companywise and length of servicewise - is made and presented in Table 5.30.

TABLE 5.30

Length of Servicewise and Comapnywise Classification of Mean Satisfaction Scores

Length of Serivice Company	< 10 yrs	10-15 yrs	> 15 yrs	Aggregate
MCL	62.17 (4.34)	56.31 (8.05)	55.04 (8.51)	56.32 (8.17)
CTL	53.78 (8.19)	51.14 (6.09)	51.68 (6.68)	52.29 (7.09)
GIL	49.00 (0)	47.36 (8.42)	47.94 (5.24)	47.88 (5.76)
Aggregate	55.88 (8.16)	53.84 (8.61)	50.72 (7.11)	52.33 (7.93)

Figures in bracket indicate standard deviation

The table shows a declining incidence of the aggregate mean satisfaction scores for an increase in the length of service. Individually, the fall in the level of satisfaction is much higher in the public sector unit, MCL, than the private sector units, CTL and GIL.

Further, in MCL, the mean level of satisfaction of workers below 10 years of service is 62.17 and that of those above 15 years of service is 55.04. Where as in the case of CTL the mean satisfaction score decreases from 53.78 to 51.68 for those workers below 10 years of service and above 15 years of service respectively. In the case of GIL also, more or less the same pattern is seen.

In order to test the statistical significance of the variation in the mean level of satisfaction over different companies and different length of service, a two way analysis of variance is carried out and the result is presented in the following ANOVA table. The table shows the F-values which are significant at five percent level of significance.

TABLE 5.31

Analysis of Variance

Source of variation	Sum of squares	DF	Mean squares	F
Company	1948.826	2	974.413	19.569*
Length of Service	274.437	2	137.218	2.756
Interaction	467.421	4	116.850	2.340
Explained	2690.684	4	672.671	13.509
Residual	9311.645	187	49.795	
Total	12002.328	191	62.839	

Tabular value of F at 5% level is 3.000.

From the results, it can be seen that mean satisfaction scores is different for workers in different companies at five percent level.

Testing of Hypothesis

On the basis of the above findings - the fourth hypothesis that "there is no significant difference in the workers' level of satisfaction with regard to work life over different companies" is found not true.

Factors Motivating the Workers for Better Performance

As a step towards analysing scores on the expectation of motivating factors of the workers, the mean expectation score is obtained for the various categories. This is done for the whole data set in table 5.32.

TABLE 5.32

Motivating Factors

Variable	Mean	Standard Deviation
Immediate Financial Improvement	39.45	22.76
Future Financial Benefits	12.41	16.01
Promotion	10.94	12.41
Participation	6.64	11.59
Facilities at work site	10.96	10.58
Educational facilities for children	9.38	9.59
Medical facilities	10.17	9.30

It may be observed that 'Immediate Financial Improvement' is coming on top above other expectations while 'participation' receives the lowest score. The other expectations, which are related to personal benefits rather than anything connected with work and a work culture, are measured approximately equally. This may lead one to believe that the workers are more concerned with maintaining statusquo with increased facilities for them and their family.

Comparison between public and private sector

In the following analysis an attempt is made to verify whether there is any difference in the mean scores of motivational factors among the

public company and private companies under study. Student 't' test is used to determine the significance of difference.

Table 5.33 shows the mean values of studied variables and standard deviation of data classified under public company and private company along with 't' value.

TABLE 5.33

Comparison between mean values of Public & Private Companies

Variables	Public N=72		Private N=120		Mean Difference	't' Value
	Mean	S.D	Mean	S.D		
Immediate Financial Improvement	23.89	17.59	48.79	20.31	24.90	8.64
Future Financial Benefits	17.47	16.55	9.38	14.95	8.09	3.49
Promotion	14.79	14.18	8.63	10.63	6.16	3.42
Participation	8.39	12.02	5.58	11.25	2.81	1.63
Facilities at work site	14.65	11.02	8.75	9.71	5.90	3.88
Educational facilities for children	8.21	7.97	10.08	10.41	1.87	1.31
Medical Facilities	12.60	8.58	8.71	9.45	3.89	2.86

It can be observed from the table that there is no significant variation between the public and private companies in respect of variables like participation and educational facilities for children, as their computed 't' values are less than the table 't' value. The variation is significant in the case of other variables such as immediate financial improvement, future financial benefits, promotion, facilities at work site and medical facilities, as their calculated 't' values are more than the table 't' values. While the

workers in the private companies give highest rank for the variable "immediate financial improvement" the workers in the public company considered all the other variables as important.

Relationship between motivating factors and antecedents of employees

As a next step in the analysis, the relationship between motivational factors and antecedents of employees is studied here by using the following variables: age, caste, qualifications, length of service, nature of job and involvement in trade union activities.

Relationship between age and motivating factors

The mean scores of motivational factors and their Standard Deviation are presented age wise in the following table:

TABLE 5.34

Age-wise distribution of scores of motivational factors

Motivating Factors \ Age	Below 40 yrs N=55	40-50 years N=106	Above 50 yrs N=31	Aggregate N=192
Immediate Financial Improvement	31.73 (22.82)	40.47 (22.23)	49.68 (20.29)	39.45 (22.76)
Future Financial Benefits	15.00 (17.72)	12.48 (15.96)	7.58 (11.82)	12.41 (16.01)
Promotion	12.91 (14.55)	9.67 (11.24)	11.77 (12.01)	10.94 (12.41)
Participation	8.09 (12.49)	6.92 (11.60)	3.06 (9.28)	6.64 (11.59)
Facilities at work site	9.45 (10.44)	12.31 (10.74)	9.03 (9.95)	10.96 (10.58)
Educational Facilities for children	11.09 (12.12)	8.78 (8.55)	8.39 (7.57)	9.38 (9.59)
Medical Facilities	11.55 (9.99)	9.36 (8.45)	10.48 (10.75)	10.17 (9.30)

Figures in bracket indicate standard deviation.

It can be observed from the table 5.34 that the mean score of immediate financial improvement is the highest in the case of workers who are in the age group of 50 years and above. For all the other factors, workers below 40 years rank maximum priority except for facilities at work site, for which workers with in the age group of 40 to 50 years give highest preference.

Relationship between caste and motivating factors

As a next antecedent, the relationship between caste and motivating factors are studied and given in the table below:

TABLE 5.35

Caste-wise distribution of scores of motivational factors

Motivating Factors \ Caste	Forward N=55	SC/ST N=18	OBC N=19	Aggregate N=192
Immediate Financial Improvement	39.55 (22.01)	50.28 (23.17)	37.77 (22.78)	39.45 (22.76)
Future Financial Benefits	11.89 (16.68)	11.94 (16.73)	12.76 (15.72)	12.41 (16.01)
Promotion	10.27 (10.43)	9.17 (9.59)	11.51 (13.62)	10.94 (12.41)
Participation	7.64 (12.50)	5.28 (6.52)	6.38 (11.79)	6.64 (11.59)
Facilities at work site	11.45 (10.39)	9.44 (11.10)	10.97 (10.66)	10.96 (10.58)
Educational Facilities for children	7.55 (7.57)	6.39 (7.44)	10.68 (10.49)	9.38 (9.59)
Medical Facilities	11.73 (10.37)	7.50 (8.09)	9.85 (8.89)	10.17 (9.30)

Figures in bracket indicate standard deviation

It may be noted from the table 5.35 that the workers belonging to the SC/ST group consider top priority for immediate financial improvement while the forward caste opt for participation, facilities at work site, medical facilities etc. as more important. The OBC category stresses more on future financial benefits, promotion and educational facilities for children.

Relationship between Educational Qualification and Motivating factors

The following table exhibits mean scores of motivating factors and educational qualification of the workers.

TABLE 5.36

Education-wise Distribution of Scores of Motivational Factors

Qualification Motivating Factors	Primary N=55	Secondary N=117	Degree & above N=20	Aggregate N=192
Immediate Financial Improvement	51.00 (20.01)	35.85 (22.76)	28.75 (17.91)	39.45 (22.76)
Future Financial Benefits	7.45 (13.05)	14.70 (17.53)	12.65 (10.66)	12.41 (16.01)
Promotion	9.09 (11.39)	11.15 (12.64)	14.75 (13.42)	10.94 (12.41)
Participation	3.64 (8.47)	7.95 (12.70)	7.20 (11.19)	6.64 (11.59)
Facilities at work site	9.73 (10.90)	10.81 (10.00)	15.25 (12.40)	10.96 (10.58)
Educational Facilities for children	10.73 (9.55)	8.72 (9.85)	9.55 (8.07)	9.38 (9.59)
Medical Facilities	8.36 (8.87)	10.73 (9.47)	11.85 (9.15)	10.17 (9.30)

Figures in bracket indicate standard deviation

It is clear from the table 5.36 that mostly immediate financial improvement and educational facilities for children are considered as important motivators by the workers possessing primary school level of education. Those with a degree or other additional qualification, on the other hand, treat promotion, facilities at work site and medical facilities to be important next to immediate financial improvement.

Relationship between length of service and motivating factors

The table 5.37 discloses the mean scores and standard deviation of motivational factors in relation to the length of service of employees:

TABLE 5.37

Length of Servicewise Distribution of Scores of Motivational Factors

Length of Service Motivating Factors	Below 10 yrs N=26	10-15 yrs N=56	Abvoe 15 yrs N=110	Aggre- gate N=192
Immediate Financial Improvement	42.50 (24.95)	31.79 (24.20)	42.64 (20.66)	39.45 (22.76)
Future Financial Benefits	8.46 (10.93)	15.09 (14.32)	11.98 (17.63)	12.41 (16.01)
Promotion	10.00 (13.04)	13.93 (12.85)	9.64 (11.88)	10.94 (12.41)
Participation	9.62 (14.62)	6.52 (9.81)	5.99 (11.63)	6.64 (11.59)
Facilities at work site	8.46 (10.66)	11.34 (10.25)	11.36 (10.75)	10.86 (10.58)
Educational facilities for children	13.08 (8.01)	9.82 (11.44)	8.28 (8.71)	9.38 (9.59)
Medical facilities	7.88 (9.61)	11.52 (8.47)	10.02 (9.59)	10.17 (9.30)

Figures in bracket indicate standard deviation

It can be observed from the table that future financial benefits, promotion and medical facilities are the top priorities of workers with in ten to fifteen years service. While participation and educational facilities for children are important motivators for those with less than ten years of

service, immediate financial improvement and facilities at work site are preferred more by the workers in the service group above fifteen years.

Relationship between nature of job and motivating factors

The mean scores of motivating factors and the nature of job are depicted in table 5.38 below:

TABLE 5.38

Nature of Job-wise distribution of Scores of Motivational Factors

Nature of Job Motivating Factors	Manual N=74	Mechanical N=19	Both N=99	Aggregate N=192
Immediate Financial Improvement	46.01 (23.91)	31.05 (20.92)	36.16 (21.13)	39.45 (22.76)
Future Financial Benefits	10.61 (17.32)	10.95 (12.71)	14.04 (15.53)	12.41 (16.01)
Promotion	8.92 (10.89)	11.05 (12.31)	12.42 (12.37)	10.94 (12.41)
Participation	5.88 (11.71)	9.95 (13.36)	6.57 (11.15)	6.64 (11.59)
Facilities at work site	8.31 (9.23)	16.58 (14.44)	11.87 (10.22)	10.96 (10.58)
Educational facilities for children	10.07 (9.53)	7.95 (7.68)	9.14 (10.00)	9.38 (9.59)
Medical facilities	10.07 (9.77)	12.47 (7.97)	9.80 (9.20)	10.17 (9.30)

Figures in bracket indicate standard deviation

While analysing the scores one can understand that workers involved in manual labour consider immediate financial improvement and educational facilities for children as the highest motivators. Those who do

both manual and mechanical work stress future financial benefits and promotion as the important motivational factors. The workers indulged in mechanical work favour motivational factors such as medical facilities, facilities at work site and participation as more relevant than others.

Relationship Between Trade Union Involvement and Motivating Factors

The following table shows the mean scores and standard deviation of motivating factors and the trade union involvement of workers.

TABLE 5.39

Degree of Involvement in Tradeunion-wise Classification of Motivational Factors

Trade Union Involvement Motivating Factors	Very Active N=60	Average N=84	Neutral N=48	Aggregate N=192
Immediate Financial Improvement	36.00 (22.47)	41.43 (22.98)	40.34 (23.66)	39.45 (22.76)
Future Financial Benefits	13.50 (17.86)	11.40 (14.81)	12.39 (16.01)	12.41 (16.01)
Promotion	12.17 (13.51)	11.19 (12.60)	8.96 (10.52)	10.94 (12.41)
Participation	7.33 (12.37)	5.82 (9.69)	7.19 (13.64)	6.64 (11.59)
Facilities at work site	12.92 (12.67)	9.70 (9.52)	10.73 (9.28)	10.96 (10.58)
Educational facilities for children	7.92 (7.38)	9.12 (8.10)	11.67 (13.46)	9.38 (9.59)
Medical facilities	10.00 (8.73)	11.33 (10.38)	8.33 (7.74)	10.17 (9.30)

Figures in bracket indicate standard deviation

It is understood from the table 5.39 that the workers who are very active in trade union activities give higher consideration for factors such as future financial benefits, facilities at work site, promotion, participation etc. apart from immediate financial improvement which is top in the order. Those belonging to the group of workers with average involvement in trade union give maximum preference to immediate financial improvement and then medical facilities.

COMPANY WISE ANALYSIS

Considering the same for the three companies under study separately, the results are provided in table 5.40.

TABLE 5.40

Mean expectation scores for Motivational Factors of the three companies

Variable	MCL		CTL		GIL	
	Mean	SD	Mean	SD	Mean	SD
Immediate Financial Improvement	23.89	17.59	53.04	18.16	45.08	21.48
Future Financial Benefits	17.47	16.55	6.96	11.07	11.48	17.47
Promotion	14.79	14.18	5.45	8.96	11.41	11.25
Participation	8.39	12.01	8.75	13.73	2.81	7.61
Facilities at work site	14.65	11.02	4.91	7.04	12.11	10.50
Educational facilities for children	8.21	7.97	11.16	9.10	9.14	11.43
Medical facilities	12.60	8.58	9.73	8.60	7.81	10.11
MCL : Malabar Cements Limited, Walayar						
CTL : Commonwealth Tiles Limited, Feroke						
GRASIM : Grasim Industries Limited, Mavoor						

From the results, the following observations can be made:

1. In all the three companies, immediate financial improvement stands top in motivating the workers. However, its magnitude varies considerably over different companies. The mean expectation score for this variable in the Commonwealth Tiles Ltd. is 53.04 while it is only 23.89 in Malabar Cements Ltd. and 45.08 in Grasim Industries Ltd. This fact clearly indicates that employees in Malabar Cements

Ltd. give less than half of the importance given by employees in the Commonwealth Tiles Ltd. for immediate financial improvement.

2. Regarding the other motivating factors approximately similar pattern is seen in Malabar Cements Ltd. and Grasim Industries Ltd. with minor variations.
3. Educational facilities for children is the second important factor motivating the workers in The Commonwealth Tiles Ltd.
4. In Grasim Industries Ltd., least importance is attached to the variable "Participation" as a motivating factor for better performance.
5. Workers in The Commonwealth Tiles Ltd. give lesser importance to "future financial benefits" as a motivating factor.
6. Analysis of the data relating to motivational factors and antecedents of workers clearly indicates that there exists some difference in the motivating factors among workers' antecedents such as age, caste, qualification, length of service, nature of job and trade union involvement.

At this juncture, it is to be noticed that the standard deviation of the scores on motivational factors are more than the mean values in most cases. Hence we cannot completely rely on the inference based on these values.

Testing of Hypothesis

On the basis of the above findings - the fifth hypothesis that "there is no significant difference in the magnitude of factors motivating the workers for better performance over different companies" is found not true.

Also the sixth hypothesis that "there is no significant difference in the relationship between factors motivating workers and their antecedents" is found not true.

However, our seventh hypothesis that "immediate financial improvement is the most important variable in influencing the level of satisfaction" is found true.

This provides a scenario that needs further investigation to make some of these claims. As all these items relating to workers' expectations of motivational factors are interrelated, the data is considered under a MANOVA frame work to verify whether the differences in these variables taken together are valid statistically. The result is provided below:

TABLE 5.41

Analysis of Variance

Multivariate Tests of Significance (S=2, M=2, N=90½)					
Test Name	Value	Appx. F. Hypoth	DF	Error DF.	Sig of F
Wilks	.52172	10.05094	14	366.00	.000

Following the procedure to use the wilk's criterion to test for the significance of the differences in these variables, it is observed that a value of Wilk's Lambda of 0.52172 is seen to be significant at 1% level of significance. This suggests that the differences in the mean values of the variables, taken as a whole are meaningful.

Again considering the importance of the study, each variable is considered separately to identify those variables that induce overall differences among the three companies.

TABLE 5.42

Univariate F-tests Result

Variable	Hypothesis sum of squares	Error sum of squares	Hypothesis Mean squares	Error Mean squares	F
Immediate Financial Improvement	29797.9291	69169.6491	14898.9645	365.97698	40.71011*
Future Financial Benefits	3560.63740	45421.8574	1780.31870	240.32729	7.40789*
Promotion Participation	2772.09821	26659.1518	1386.04911	141.05371	9.82639*
Facilities at work site	1407.11806	24255.3611	703.55903	128.33524	5.48220*
Educational Facilities	3115.63740	18281.1074	1557.81870	96.72544	16.10557*
Medical Facilities	280.08185	17287.1629	140.04092	91.46647	1.53106
	790.61508	15738.0516	393.30754	83.27011	4.74729*

DF. 2, 189

The above results on the univariate analysis of variance of each expectation provide evidence to the fact that the companies differ at all

their expectations except that of 'facilities for education of children'. The way in which these averages are recorded for the three companies have been provided in the beginning.

Level of Satisfaction and Expectation of Motivating Factors

For studying the empirical relationship between level of satisfaction and workers' expectation of motivating factors, regression method is used. This is done in two steps:

As a first step, factor analysis is carried out for identifying independent dimensions responsible for the scores on satisfaction and group it on that basis.

In the next step satisfaction scores of these factors are regressed on expectation scores in a stepwise regression framework. Finding that scores on immediate financial improvement alone is important in explaining variation in satisfaction another stepwise regression is done leaving this variable from the regressor list. Also this is done company wise to see for common factors.

TABLE 5.43

Factor Analysis for Grouping Satisfaction Variables

Variable	Communi- nality	Factor	Eigen- value	Pct of Var	Cum Pct
A13	.53248	1	3.77651	22.2	22.2
A14	.68317	2	1.68124	9.9	32.1
A15	.47390	3	1.48263	8.7	40.8
A16	.41050	4	1.28507	7.6	48.4
A17	.71303	5	1.11161	6.5	54.9
A18	.67658	6	1.00416	5.9	60.8
A19	.53679				
A20	.67578				
A21	.55561				
A22	.59539				
A23	.68135				
A24	.56917				
A25	.61342				
A26	.72565				
A27	.65808				
A28	.61568				
A29	.62464				

Variable

- | | | | |
|------|---|------|-------------------------------------|
| A 13 | Job Satisfaction | A 25 | Mode of Setting disputes |
| A 14 | Supervisors expectation | A 26 | Interpersonel relationship |
| A 15 | Relation with supervisor | A 27 | Mode of Communication |
| A 16 | Work environment | A 28 | Management's concern for
workers |
| A 17 | Remuneration | A 29 | Style of Management |
| A 18 | Comparative ranking of income | | |
| A 19 | Prospects to increase income | | |
| A 20 | Canteen, Housing, Pension etc. | | |
| A 21 | health, Maternity benefits,
Accident prevention etc. | | |
| A 22 | Involvement in decisions | | |
| A 23 | Personal development - Training
Promotion etc. | | |
| A 24 | Leave rules | | |

TABLE 5.44
Rotated Factor Matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
A13	-.06508	.25005	.14651	.65473	.04819	-.11515
A14	.19727	-.37438	-.03581	.70321	.07786	.04735
A15	.05208	.19083	-.05044	.53947	-.23071	.29660
A16	.06209	.21612	.13894	.53568	.20587	-.10626
A17	.17622	.70714	.14787	.39455	.01343	-.06489
A18	.10519	.80442	.02117	.02538	.04933	.12209
A19	.14612	.05781	-.03884	.11571	.68260	.17681
A20	.02930	-.10821	.80546	.09041	-.06989	.03720
A21	.17689	.03725	.70347	.01013	-.08261	-.14538
A22	.64512	.18882	.04281	.06896	.31848	-.18854
A23	.09896	.28441	.59017	.09146	.41964	.24064
A24	.36723	.09482	.33826	.07892	-.54809	.06543
A25	.72019	-.00490	.21575	.18758	-.09445	.06371
A26	0.7119	.05212	-.00499	-.02269	.10184	.84081
A27	.68235	.24496	-.00700	-.12465	.02251	.34115
A28	.39017	.26391	.29940	.04555	.48752	-.25378
A29	.42904	.56369	.26833	.14734	.16234	.05247

It may be observed that these 17 variables used for measuring satisfaction, when analysed for independent dimensions have shown that there are 6 possible dimensions of variation in satisfaction. By factor analysis conventions, these independent dimensions called as factors, tend to explain 60.8% of variation in the data set. The factor loadings may be used to identify these dimensions to some extent, suggestively.

It is noted that the first dimension is having larger factor loadings on variables a22, a24, a25, a27, a28 and a29, which are seen to be related to matters relating to working environment (WE). Similarly the other dimensions may be identified as Financial Issues (FI), Self Improvement (SI), Employee relations (ER), Personal Issues (PI) and Degree of Involvement (DI)

compute we = a22+a24+a25+a27+a28+a29

compute fi = a17+a18+a19

compute si = a21+a23+a24

compute er = a13+a14+a15+a16

compute pi = a20+a21

compute di = a26+a22

The descriptives of the scores on these generated variables have been provided below.

TABLE 5.45

Companywise and Aggregate Dimensions of Variation in Satisfaction

Variables	MCL		CTL		GIL		Aggregate	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Working Environment	18.92	3.64	18.77	3.45	15.80	3.10	17.83	3.69
Financial Issues	10.04	1.95	6.88	1.91	5.55	1.68	7.62	2.69
Self Improvement	5.83	1.65	5.84	1.58	5.58	1.57	5.75	1.60
Employee Relations	15.50	2.48	13.84	2.75	14.31	1.88	14.62	2.48
Personal Issues	10.07	1.85	9.86	2.05	9.05	1.99	9.67	2.00
Degree of Involvement	3.11	1.23	3.21	0.97	3.02	1.29	3.11	1.18

It can be stated that these scores show moderate variations among the three companies with MCL scoring relatively larger scores for a number of variables. In order to study whether these variations in the mean values are statistically significant the data is considered under a MANOVA framework and the results are presented below:

TABLE 5.46

Analysis of Variance

Test Name	Value	Approx. F. Hypothesis	DF	Error DF	Sig. of F
Wilks	.37776	19.22857	12.00	368.00	.000

TABLE 5.47

Univariate F-tests

Variable	Hypoth. sum of squares	Error sum of squares	Hypoth. mean squares	Error Mean squares	F	Signifi- cance of F
Working Environment	398.825	2201.842	199.413	11.650	17.12*	.000
Financial Issues	728.385	648.859	364.193	3.433	106.08*	.000
Self Improvement	2.837	487.163	1.419	2.578	.55	.578
Employee Relation	95.941	1079.304	47.971	5.711	8.40*	.000
Personal Issues	38.297	722.369	19.149	3.822	5.01*	.008
Degree of Involvement	1.179	263.524	.590	1.394	.42	.656

DF 2, 189

The MANOVA results supports the hypothesis that the mean scores of these factors in satisfaction are different among the three companies as the wilk's statistics is significant at 5% level of significance (Table 5.46). Also the univariate analysis of variance suggests that the mean scores on these variables except that of self improvement and degree of involvement are different for the three companies and significant at 5% level of significance (Table 5.47).

Relationship between Satisfaction and Workers' Expectation

As the next step, multiple regression techniques are employed to build statistical relationship between satisfaction and workers' expectation.

The scores on satisfaction are regressed with the scores of expectation of workers under these three companies and the results are presented below:

TABLE 5.48

Multiple Regression

Multiple R	.32803		
R square	.10760		
Adjusted R square	.10291		
Standard Error	7.50819		
Analysis of Variance			
	DF	Sum of Squares	Mean squares
Regression	1	1291.48750	1291.48750
Residual	190	10710.84062	56.37285
F = 22.90974		Significance F = .0000	

Variables in the Equation

Variable	B	SEB	Beta	T	Sig. T
Immediate Financial Improvement	-.114235	.023866	-.328029	-4.786	.0000
(Constant)	56.835047	1.086385		52.316	.0000

Considering the overall data it is seen that, immediate financial improvement is explaining satisfaction as seen from the 'F' value given in the table. This variable has coefficient with a negative value suggesting

that satisfaction tend to be lower for high expectation on immediate financial improvement. This coefficient is significant at 5% level of significance.

Observing that immediate financial improvement is the only variable explaining satisfaction, another regression of satisfaction on variables other than this variable (namely Future Financial Benefits, Promotion, Participation, Facilities at Work site, Educational Facilities for children and Medical Facilities) is done under a stepwise regression framework and the result is presented in table 5.49.

TABLE 5.49

Multiple Regression

Multiple R	.30346		
R square	.90209		
Adjusted R square	.07760		
Standard Error	7.61335		
Analysis of Variance			
	DF	Sum of Squares	Mean squares
Regression	3	1105.25812	368.41937
Residual	188	10897.07001	57.96314
F = 6.35610		Significance F = .0004	

Variables in the Equation

Variable	B	SEB	Beta	T	Sig. T
Medical Facility	.189007	.059622	.221801	3.170	.0018
Promotion	.118229	.044939	.185139	2.631	.0092
Future Financial Benefit	.084566	.034896	.170838	2.423	.0163
(Constant)	48.063835	1.121030		42.875	.0000

The result shows that the variables, medical facility, promotion and future financial benefits are important in that order in explaining the satisfaction.

Companywise Analysis of Worker's Satisfaction and Expectation

Due to variation in the expectations as explained above among the three companies, the satisfaction scores are regressed on expectation scores individually for the three companies under study.

Malabar Cements Limited

The result of the regression analysis about the satisfaction and expectation is presented in the following table.

TABLE 5.50

Multiple Regression

Multiple R	.30071		
R square	.09043		
Adjusted R square	.07743		
Standard Error	7.84275		
Analysis of Variance			
	DF	Sum of Squares	Mean squares
Regression	1	428.04468	428.04468
Residual	70	4305.60810	61.50869
F = 6.95909	Significance F = .0103		

Variables in the Equation

Variable	B	SEB	Beta	T	Sig. T
Medical Facility	.286267	.108516	.300709	2.638	.0103
(Constant)	52.713276	1.650147		31.945	.0000

It can be noticed from the above table that in Malabar Cements Limited, medical Facility for family tends to explain satisfaction of workers.

The Commonwealth Tiles Limited

The result of the regression analysis about the satisfaction and expectation is presented in the following table:

TABLE 5.51

Multiple Regression

Multiple R	.32670		
R square	.10673		
Adjusted R square	.09019		
Standard Error	6.76112		
Analysis of Variance			
	DF	Sum of Squares	Mean squares
Regression	1	294.94160	294.94160
Residual	54	2468.48697	45.71272
F = 6.45207	Significance F = .0140		

Variables in the Equation

Variable	B	SEB	Beta	T	Sig. T
Facilities at work site	.329019	.129530	.326696	2.540	.0140
(Constant)	50.669998	1.104945		45.857	.0000

It is clear from the table that in Common Wealth Tiles Limited, "Facilities in the working place" is seen to be explaining satisfaction.

Grasim Industries Limited

The result of the regression analysis about the satisfaction and expectation is presented below:

TABLE 5.52

Multiple Regression

Multiple R	.36882		
R square	.13603		
Adjusted R square	.12209		
Standard Error	5.39539		
Analysis of Variance			
	DF	Sum of Squares	Mean squares
Regression	1	284.16656	284.16656
Residual	62	1804.83344	29.11022
F = 9.76175	Significance F = .0027		

Variables in the Equation

Variable	B	SEB	Beta	T	Sig. T
Immediate Financial Improvement	-.098862	.031642	-.368822	-3.124	.0027
(Constant)	52.331515	1.577775	---	33.168	.0000

The analysis shows that in Grasim Industries Limited, Immediate financial improvement seems to be important in the explanation of satisfaction.

By way of concluding, it is interesting to note that the level of satisfaction depends up on different expectations for different companies. However, it is explained more by expectation on immediate financial improvement while other expectations like facilities at work site, facilities

for medical assistance are important for certain companies. Promotion and future financial benefits are also seen to be important when immediate financial improvement is not considered. Further, it is to be noted that "participation" is not at all a factor for increasing the level of worker satisfaction.

Testing of Hypothesis

On the basis of the above finding, our eighth hypothesis that "there is no significant difference in the level of satisfaction and expectation of motivational factors of workmen over different companies is found not true.

CHAPTER VI

SUMMARY, FINDINGS, CONCLUSIONS AND SUGGESTIONS

SUMMARY

The process of economic reforms initiated during 1991-92 has necessitated a thorough revision in the perception of Indian industry. The arrival of Multi National Corporations have dumped in variety of quality products at comparatively lower prices. Excellence in performance and quality in all spheres of business activity with an access to the latest information technology have become issues for the very survival of our industry. A willful attempt should be made to align the various forces of management, government, labour and industry and focus on critical issues of employee relation, policies, training and development etc.

These factors highlight the essentiality of equipping Indian industry to face the challenges, to stand on its own and to excel its performance on a par with its major competitors by improving its overall efficiency. When efforts are aimed at this, one cannot belittle the role of "people" in an organisation. Perhaps one of the biggest questions confronting organisations today is the, "people" question. The contributed efforts of people are vital to accomplish the desired goals of an organisation. It is a challenging task of the management to get people to perform at a higher

than "normal" percent of their physical and mental capacities and also maintain satisfaction.

This can be achieved by motivating people for efficient performance. In general motivation is an inspirational process which impels the members of the team to work effectively and to be loyal to the group in carrying out the job. It is the process of indoctrinating employees with unity of purpose and the need to maintain harmonious relationships among people.

Needless to say that a highly motivated and committed work force is inevitable to improve the performance of Indian industry. The present study attempts to analyse the effects of motivational factors on the efficiency of employees in the selected units of the public and private sector companies. For this purpose it also scans the various factors related to the work life such as working environment, employee relation, remuneration, welfare activities, scope for personal developments, degree of involvement in decision making, work culture, antecedents of workers etc.

The specific objectives set for the study are:-

1. To measure and compare the level of efficiency of workers in the selected public sector and private sector units.
2. To analyse the level of satisfaction with work life over the sample units.

3. To locate the factors motivating the workers for better performance.
4. To examine the relationship between efficiency, satisfaction and motivational factors with the antecedents of employees.

On the basis of the above objectives, the following major hypothesis have been formulated:

1. The average efficiency level of workers in Kerala is medium.
2. There is no significant difference in the levels of efficiency of the workers in the public and private sector units in Kerala.
3. There is no significant relationship between the level of efficiency of workers and their antecedents.
4. There is no significant difference in the workers' level of satisfaction with regard to work life over different companies.
5. There is no significant difference in the magnitude of factors motivating the workers for better performance over different companies.
6. There is no significant difference in the relationship between factors motivating the workers and their antecedents.
7. Immediate financial improvement is the most important variable influencing the level of satisfaction.

8. There is no significant difference in the level of satisfaction and expectation of motivating factors of workers over the different companies.

Methodology

The study has been designed as a descriptive one based on survey method. Both primary and secondary data have been used for this purpose. The secondary data have been collected from various reports, journals, audited statements, books etc.

For collecting primary data, three units, one from public sector and two from private sector have been identified from the modern manufacturing sector. Of the twelve public sector units consistently running at profit, the Malabar Cements Ltd., Walayar, was selected by using lottery method. Similarly out of the twenty two profit making private sector units, The Commonwealth Tiles Ltd., Feroke and Grasim Industries Ltd., Mavoor, were selected at random by using the same method.

Selection of Workers: From each of the selected company, a minimum of 10 percent has been selected at random by using lottery method. Thus there are 72 workers from MCL, 56 workers from CTL and 64 workers from GIL, leading to a total of 192 workers.

Method of Data Collection

A structured interview schedule was advocated by undisguised personal interview method to collect the required information from the respondents. The schedule contained four parts, regarding - labour efficiency, satisfaction of work life, motivating factors and antecedents of workers. a self evaluation schedule for the workers and a supervisory evaluation schedule for the concerned supervisors were prepared and employed.

Measurement of Labour Efficiency

For measuring labour efficiency, twelve variables were identified from the available literature and rated on a five point scale. The scores obtained for these twelve variables under self evaluation and supervisory evaluation are computed separately and then averaged to arrive at the labour efficiency index of each worker. Thus labour efficiency index ranges from a maximum of 60 points and a minimum of 12 points.

Measurement of satisfaction with work life

Satisfaction scores are also measured by seventeen variables on a five point scale with a maximum obtainable score of 85 and a minimum of 17 points.

Identification of Motivating Factors

A list of seven possible motivating factors have been identified from the available literature and by using constant sum scaling technique their preferences have been identified.

Tools used for Data Analysis

Both mathematical and statistical techniques have been used in analysing the data. Some of the tools used are:

1. Mean and standard deviation - to measure the efficiency of labour in the three sample units.
2. Analysis of variance - to test the variability of mean efficiency level over different companies and the antecedents of workers and also to analyse the variability in the level of satisfaction of the workers over different companies and the antecedents of workers.
3. Regression analysis - to measure the relationship between workers' satisfaction with work life and expectation of motivational factors between different companies.
4. Multiple Regression Analysis - to build statistical relationship between satisfaction and workers' expectation of motivational factors.

5. Factor Analysis - to establish relationship between workers satisfaction and expectation of motivational factors in aggregate.
6. Student 't' test - to measure the variability of factors motivating the workers for better performance, between private and public companies.
7. MANOVA test and Wilk's Lamda Values - to measure the variability in the factors motivating the workers in aggregate.
8. Univariate 'F' test - to locate that motivational factor which induce overall differences among the three companies.

Chapter Scheme

The whole study is presented in six chapters:

Chapter I is the introduction part stating the scope, objectives, hypothesis, methodology, tools used, limitations of the study etc.

In Chapter II a brief review of various literature available related to the study are given.

Chapter III is devoted to explain some of the important theories of motivation.

Chapter IV illustrates the profile of the sample units.

Chapter V is the core segment of the study dealing with the analysis and interpretation of the data.

In Chapter VI the summary, findings, conclusion and suggestions about the study are given.

Review of Literature

A wide range of literature was made available on various topics related to the subject under study. A brief review of these collections has been done under five heads: Studies on Job Satisfaction; Productivity and Performance; Motivation; Group Dynamics and Alienation; and Workers' Participation. Some of these studies have been conducted in India while some others outside the country.

There are company based and community based studies covering various aspects. Studies on "on the job factors" and "off the job factors", physical conditions and work culture, incentives and disincentives at work, satisfiers and dissatisfiers, human relations etc. are included. Studies on other factors relating to productivity, personality, attitude etc. are also available in the listed works on "personality and work motivation, labour productivity, organisational climate, job attitudes, need for achievement etc.

It is worth mentioning that the literature review covers published materials on multi dimensional topics such as job expectations, motivator-

hygiene factors, supervisor - subordinate relations, nature of technology and work organisation, bureaucracy and work motivation etc. Moreover, there are also other studies on human behavioural aspects such as group dynamics, team work, stress, job content, job enrichment, industrial relations and participative management, frustration and alienation, quality of work life etc.

Further more, the review also contains some noticeable works on organisational behaviour, trade unionism etc. These works include organisational strategies and pay systems, labour-management co-operation, gain sharing structure, productivity and trade unionism, participation in decision making etc.

Some of the studies are case analysis while a majority of the studies are of a descriptive nature based on survey method. The practice of linking wages with productivity in the United States, Russia, Germany, Japan and India, the glittering performance of reputed companies like Tata Iron and Steel Company (TISCO), Larson and Tubro (L & T), Bharat Heavy Electricals (BHEL), National Fertilisers Limited (NFL) and Nucor Steel; the trade union effect in the British Steel, etc. are a few among the case studies.

The other studies cover a large spectrum of heterogeneous respondents who include shop floor workers, supervisors, junior and senior managers, middle level executives, administrators etc. The informants are

also drawn from senior IAS officers, Directors, Managing Directors, Engineers, Technicians, bank officers, college students, school superintendents etc. representing all walks of industry - both manufacturing and service sector.

The major lacuna of the available literature is the lack of its reflection on the Kerala scenario. Hence the present study is focussed on highlighting the impact of motivational factors on the efficiency of industrial labour in Kerla - both in the selected public sector and private sector units.

Theories of Motivation

The important theories discussed in the thesis are grouped into three parts - content theories, Process theories and Others. Content theories stress on what motivates people and are concerned with identifying people's needs and their relative strengths. These theories include Maslow's hierarchy of needs model, Alderfer's need hierarchy model, Herzberg's two factor theory and Mc Clelland's achievement motivation.

Process Theories emphasise on the actual process of motivation and the relationship of variables which make up motivation and the behaviour. These theories include Expectancy model, Equity theory, and Porter-Lawler model.

Theory X and theory Y of McGregor, Theory Z of W Ouchi and A. Jaeger, Systems model of R. Likert, Goal Theory of Locke, the Attribution Theory of Heider and the Maturity-Immaturity Theory of Argyris are included in the "Other Theories" group.

Perhaps the most widely accepted theory of motivation is Abraham Maslow's hierarchy of needs. He developed a five-level hierarchy that he believed to be applicable to all people and theorised that lower, more basic needs must be met before higher needs can be satisfied. According to Maslow the sequence of needs is as follows:

1. Physiological needs
2. Safety needs
3. Social needs
4. Self-esteem needs and
5. Self-actualisation needs

Herzberg and his associates conducted extensive research relating to job satisfaction and productivity, and developed the two factor theory - Motivation-hygiene theory. They concluded that such factors as recognition, advancement, work content, possibility of growth, achievement and responsibility were motivators of employee behaviour. Hygienic factors such as status, working conditions, company policy and

administration, money, supervision, interpersonal relations and security prevent dissatisfaction.

The achievement motivation theory of David Mc Clelland states that individuals have three basic motivational needs: affiliation, power and achievement.

Victor Vroom's expectancy theory holds that human motivation is affected by anticipated rewards and costs. His model holds great promise for predicting behaviour in organisations. It recognises the complexities of work motivation and does not take an oversimplified approach like the content models.

Porter and Lawler's expectancy model promotes the belief that performance causes satisfaction. They tried to explore the function of three important factors: motivation, abilities and role perceptions.

Alderfer's ERG model is a refined form of Maslow's Need hierarchy model, limiting the hierarchical levels into three: Existence, Relatedness and Growth (ERG). Like Maslow, he proposed satisfaction progression (as one satisfies one need, he may move to another need) as well as frustration regression indicating downward movement in the hierarchy.

Mc Gregor is credited as the initiator of one of the most widely used and highly popular classification schemes for both the acceptable and

unacceptable styles of today, known as Theory X and Theory Y. Theory X completely discounts the ideas of individual constructiveness and aggressiveness. Theory Y assumes that people are not by nature, lazy and unreliable. It proposes that people can be basically self-directed and creative at work if properly motivated.

Theory Z is a new way of viewing the essential nature of man and the factors that motivate him. The theory is originated from Japanese management Philosophy, where managers make better use of human capital.

The maturity-immaturity theory postulated by Chris Argyris is a multidimensional developmental process along with individuals in an organisation grow. He says that people in work organisation will have a tendency to grow from an infant state to a matured state.

Adam's Equity theory is one of the popular social exchange theories. It points out that people are motivated to maintain fair relationship with others and will try to rectify unfair relationships by making them fair.

The Goal theory of Locke emphasises on people's goals or intentions in determining behaviour. Goals guide people's responses and actions. People with difficult goals will perform better than people with a vague goal.

Likert's supervision models have concentrated on employee-centred supervision than on job-centred supervision for higher productivity. He has advocated a group to group supervisory pattern.

Attribution theory initiated by Heider suggests that behaviour is determined by a combination of perceived internal forces and external forces.

Profile of the sample units

Malabar Cements Limited, Walayar, Palakkad

Malabar Cements Ltd. is a company wholly owned by the Government of Kerala, incorporated in April 1978, with a capital outlay of Rs.68 crores, the paid up equity capital being Rs.26 crores. It has an installed capacity of producing 4.2 lakh tons of cement per annum. It had a record utilisation of 86% of the capacity as against the industry average of 78% during the year 1998-99. In spite of the severe competition from private sector giants like Dalmia, Birla, Sankar, Tata etc. the company recorded a turnover exceeding Rs.103 crores, enjoying a net profit before tax of Rs.9.19 crores during the same period.

Malabar Cements Ltd., produces and markets two premium brands of cement - "Malabar super" and "Malabar Classic" in 50 kgs bags. The company has obtained the ISO-9002 certification in November 1996, as a

reflection of its commitment to customer satisfaction. About 1100 employees are working in the company, including of 100 managerial employees, 860 non-managerial employees and 130 casual labourers. The company has instituted a number of welfare measures such as provision of uniform clothes, heat allowance, dust allowance, washing allowance, acting allowance, heavy duty allowance etc. It has also made arrangements for conveyance facilities for employees and school children of employees, in addition to the conveyance allowance, car allowance, scooter allowance etc. Other welfare activities include education allowance, medical facilities, contributory provident fund, gratuity, residential quarters, canteen etc. Further additions to the welfare schemes consist of employees' welfare fund, housing loan scheme and a vehicle loan scheme launched recently.

There are three registered trade unions: MCL EU, MCLEA and MCLSU with different political affiliations, still the company lost not a single day since the commencement of production in 1984, due to strikes, lay off etc. Labour related issues are discussed in a cordial atmosphere and settled then and there which testifies to the peaceful industrial relations prevailing in the company.

The commonwealth Tiles Ltd., Feroke, Calicut

Established in 1905 by the Basel Mission, The Commonwealth Trust Ltd., was taken over by the British Government in 1919. The company was

passed on to the Indian hands in 1977 with its registered office at Calicut. The ownership rests with the shareholders who have contributed Rs.12,50,000 equity sharecapital. It has an installed capacity to produce about one lakh roofing tiles per day from the two units A & B.

Though the aggregate sales (ie. the total sales of five tile factories and two textile units) have been steadily increasing over the last five years (ie. Rs.1273 lakhs in 1993-94 to Rs.2137 lakhs in 1997-98), the profit before tax has dwindled considerably during the same period and ultimately is showing a net loss of Rs.53.96 lakhs in 1997-98.

There are 505 workers in the Feroke unit, grouped in five categories as A, B, C, D and E with five distinctive pay scales. The company offers a number of welfare schemes such as provident fund, medical facility, death benefit, benevolent fund scheme, women welfare scheme etc. A canteen is functioning in the premises to provide food at concessional rates. There is an Employee Recreation Club and a Charitable Trust to employ the excess profit, if any, after paying dividend @ 15% to the shareholders.

A number of trade unions exist in the company. The multiplicity of trade unions and the industrial restlessness sometimes create uneasiness among the management, staff and employees. But in most cases attempts are always made to resolve problems well in advance through discussions with the representatives of these labour unions.

Grasim Industries Limited, Mavoor

Grasim Industries Limited was established in 1947 with the registered head office at Birlagram, Nagda (MP), as a small textile manufacturing unit. Today the company, known by name "A.V. Birla Group Companies" has developed into a multidimensional undertaking with a multiple range of products such as viscose staple fibre, rayon grade pulp, textiles, cement, sponge iron, white cement, caustic soda, computer software etc. produced from various parts of the country.

The Grasim Industries Limited, Mavoor has two divisions - a Pulp Division and a Staple Fibre Division. The pulp division, established in 1958 has an installed capacity of producing 200 tons of rayon grade pulp per day. There are 1302 workers, grouped as permanent workers and casual or badli workers.

The company provides a lot of welfare measures such as provision of uniform clothes, rain coat, umbrella, shoe, ayurvedic medicine, in addition to the medical facilities, educational facilities, transport facilities etc. There are loan schemes for the construction of houses, purchase of scooters, fans etc., recreation facilities, home travel allowance, subsidised canteen facility etc. The company also grants accident death relief, normal death relief, funeral expenses, employment to dependents etc. There is staff club for recreation purposes, an auditorium, guest house and a co-operative society

to cater to the consumable provisions for the employees. Further, there is a mahila mandal, exclusively for the development of women and children of the staff and a society for rural and community development to conduct employment orientation programmes.

A large number of trade unions with political affiliation exist in the company. A long term memorandum of settlement is entered and signed between the management and the representatives of various unions which acts as the code of conduct of both. Though there are problems connected with water and air pollution in the locality, most of the time the employees stand united with the company.

Motivation and Employees' Efficiency

This chapter is framed in two parts - the first part gives a brief account of the sample profile such as age, caste, qualification, length of service, nature of job etc. and the second part deals with the analysis and interpretation of data.

Profile of Sample

Out of the total 192 workers, the majority are from the age group of 40 to 50 years and 62 percent belong to the OBC category. Regarding qualification, 61 percent has high school level of education and for length of service, 57% have more than 15 years of service. Majority of the sample are

doing both manual and mechanical jobs, ie. 52%. Regarding monthly income, 37 percent draw less than Rs.3000 a month and 43% of the sample get above Rs.4000 a month. Major share of the workers are of local origin, ie. 72 percent, and 83 percent reside with family while 96 percent are married. Looking in to the parental occupation, about 40 percent of the parents are agriculturists, while 29 percent are very active in politics, 31 percent are very active in trade union activities.

1. Efficiency level of industrial workers

- The average efficiency level of workers in Kerala is medium.
- There is significant variation in the efficiency level of workers among the three companies.
- Grasim Industries Ltd. rank top in efficiency level immediately followed by MCL.

2. Level of efficiency and antecedents of workers

- There is no significant relationship between the efficiency of workers and their antecedents, except for caste groups.
- The average efficiency is highest in the case of forward caste and lowest for SC/ST group.

3. Satisfaction with work life

- The workers are only moderately satisfied with the work life as the aggregate mean satisfaction score is about 62 percent of the total satisfaction index of 85.
- The satisfaction level declines with the increase in the length of service. Level of satisfaction is highest for those with in 10 years of service.
- There is significant variation in the level of satisfaction of workers among different companies.
- There is no significant difference in the satisfaction level and antecedents of workers.

4. Factors Motivating the workers

- There is significant variation between public and private companies in the case of factors like "immediate financial improvement, future financial benefits, promotion, facilities at work site and medical facilities."
- There is no significant variation between public and private companies in factors like "participation and educational facilities for children," in motivating the workers.

5. Motivating factors and antecedents of employees

- Agewise, immediate financial improvement is the primary factor motivating the workers for better performance irrespective of the age group. However, its magnitude varies for workers in different age groups. workers above 50 years of age give relatively more importance to this factor while workers below 40 years give less importance.
- The castewise distribution shows that the SC/ST workers allot top priority for 'immediate financial improvement', the forward caste for 'participation', 'facilities at work site' etc. and the OBC group for 'future financial benefits', 'promotion' etc.
- The qualificationwise distribution exhibits the concern of lesser educated (primary level) workers on 'immediate financial improvement' and 'educational facilities for children' as very important. Those who possess a graduation and above, consider 'promotion', 'facilities at work site' etc. to be more important.
- The length of servicewise, distribution narrates that 'immediate financial improvement' and 'facilities at work site' are treated most important by workers with more than 15 years of service. 'Promotion, medical facilities, and future financial benefits are top priorities of workers with in 10 to 15 years of service.

- The nature of jobwise distribution stresses that workers engaged in manual labour treat 'immediate financial improvement' and 'educational facilities for children' as the highest motivators.
- The workers who are very active in trade union activities rank future financial benefits, facility at work site, promotion, participation etc. as highest motivators.

6. Companywise Analysis of Motivational Factors

- Immediate financial improvement is the highest preferred variable in all the three companies, though its magnitude varies considerably.
- Other variables are ranked more or less similarly in MCL and GIL with minor variations only.
- Workers in CTL give second preference for educational facilities for children and lesser consideration for future financial benefits.

7. Statistical significance of the mean values of motivational factors

- The value of Wilk's Lamda is seen to be significant and hence the difference in the mean values of the variables taken as a whole are meaningful.

8. Identification of variables that cause over all differences among the three companies

- The three companies differ at all their expectations of motivating factors except that of educational facilities for children.

9. Level of satisfaction and Expectation of Motivating Factors

- Immediate financial improvement alone is important in explaining variation in satisfaction. Medical facility, promotion and future financial benefits are also relatively important in that order.

10. Companywise and aggregate dimensions of variation in satisfaction

- The scores on the six factors show moderate variation among the three companies with MCL having relatively higher scores for most of the variables. The variation in the mean scores on satisfaction among the three companies are significant as per Wilk's statistics in the MANOVA results.
- The univariate analysis of variance suggests that the mean scores on these variables except that of "self improvement and degree of involvement" are different for the three companies and significant at 5%.

- The result of multiple regression shows that in MCL, 'medical facility for family' tends to explain satisfaction of workers, in CTL, 'facilities in the working place' explain satisfaction and in GIL, 'immediate financial improvement' is important in explaining satisfaction.

CONCLUSION

From the above findings it can be concluded that the industrial workers of Kerala possess medium level of efficiency. Similarly workers are moderately satisfied with the working conditions prevailing in the organisation. The efficiency level and satisfaction in the working condition varies from company to company. Level of satisfaction is inversely related with length of service. Other background variables have no considerable influence on satisfaction. Further, the level of satisfaction depends up on different motivating factors for different companies. Also motivating factors vary with the antecedents of workers like age, caste, education, length of service etc. While immediate financial improvement gets highest preference, other expectations like facilities at work site and medical facilities for family are also important for some companies.

Results of the hypothesis testing

On the basis of the above findings and conclusion, the hypothesis set for the study have been tested and the results are as follows:

The first hypothesis that "the average efficiency level of workers in Kerala is medium" is found true and hence accepted.

The second hypothesis that "there is no significant difference in the level of efficiency of workers in the public sector and private sector units in Kerala" is found not true and rejected.

The third hypothesis that "there is no significant relationship between the level of efficiency of workers and their antecedents" is found true and accepted except in the case of castewise distribution of mean efficiency level of workers, where significant relationship exists.

The fourth hypothesis that "there is no significant difference in the workers' level of satisfaction with regard to work life over different companies" is found not true and rejected.

The fifth hypothesis that "there is no significant difference in the magnitude of factors motivating the workers for better performance over different companies" is found not true and rejected.

The sixth hypothesis that "there is no significant difference in the relationship between factors motivating workers and their antecedents" is found not true and rejected.

The seventh hypothesis that "immediate financial improvement is the most important variable in influencing the level of satisfaction" is found true and accepted.

The eighth hypothesis that "there is no significant difference in the level of satisfaction and expectation of motivational factors of workers over different companies" is found not true and rejected.

Suggestions

On the basis of the above findings and the results of testing of hypothesis, the following suggestions are made:

To improve efficiency

The organisation should establish an environment that fosters creative endeavours. All individuals possess initiative and creative talents. Monotony and frustration are to be avoided by offering challenging jobs. Job enrichment techniques can be employed to maximise job interest and better performance. More chances should be created to handle high level jobs by job rotation. Obsolete equipment and outdated knowledge can cause low productivity, poor morale and dissatisfaction. Updated information should be made available to the employees through short term orientation or refresher courses.

To increase satisfaction

Recognise the importance of money. It is still a strong motivator. Employees favour monetary incentives and believe that it can control their environment and satisfy their economic needs.

Ensure equity in the remuneration packages for workers. Employees must see equity between rewards obtained from the company and the efforts put in by them.

Concentrate on other hygienic factors also, such as safe working conditions, company policy and administration, supervision, security, status and interpersonal relations. This will not only prevent dissatisfaction but also increase satisfaction. Added emphasis on motivators will definitely result in higher satisfaction. Provision of opportunities for growth and advancement, recognition of individual achievements, involvement in decision making, assigning more responsibilities etc. can be experimented.

Recognise individual heterogeneity and handle the motivational issues according to the requirements.

Offer right job to the right person and provide specific goals so that they know what they are doing and what is expected of them.

Link rewards to performance, immediately after attaining the goals. Increase the awareness of employees regarding the reward-performance relationship.

Motivational Factors

Reasonable pay and allowances should be given top priority among the financial incentives to the shop floor workers.

Adequate protection may be given against staggering health care costs resulting from illness or accidents. Life insurance, health insurance and pension plans can provide the necessary security.

Strive for a pleasant work environment that is conducive to workers' satisfaction and job security. Intrinsic motivators are on the job benefits. Provision of clean rest rooms, coffee breaks, safe equipments, bath rooms, proper ventilation and other facilities at the work site will create a feeling that management cares the well being of the employees.

Fringe benefits

Extrinsic motivators are off the job facilities. Provision of sick leave, medical plans, free legal aid, paid vacations etc. can boost the loyalty and motivation of employees. Capitalise the opportunity to recognise and appreciate the employee for a work well done as this will elevate their individual sense of worth and enhance their status. Status and recognition are major motivators regardless of age, sex, education and nature of job.

In short, it can be concluded that, with regard to individual motivation, managerial action constitutes the selection of appropriate strategies and policies to encourage motivated people to achieve organisational goals. Both financial and non-financial incentives are vital in keeping the employee in an organisation in a productive fashion throughout the tenure of his employment.

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SUPERVISORY EVALUATION STATEMENT

Sir,

Kindly evaluate the performance of the subordinates coming under your direct supervision in terms of the following variables. Select the statement which suits most to the individual being rated and put a tick mark in the corresponding box. This is only for a research work on "Effects of Motivational Factors on Employees' Efficiency", and I assure you that the information provided by you will be kept confidential.

Name of the Company	:
Name of the Employee	:
Code/Card No.	:
Dept./Section	:

1. JOB KNOWLEDGE

Level of knowledge with regard to all phases of his work

- A. Not up to mark - Needs instruction occasionally
- B. Fully conversant with all phases of job. Learns easily.
- C. Needs instruction at every step. Unable to learn own work.
- D. Knowledge sufficient for ordinary job requirement.
- E. Expert knowledge covering more jobs than his own. Learns quickly.

2. QUALITY OF WORK

General excellence of output, method and system.

- A. Quality below normal.
- B. Generally below standard quality. Scrap and rejection high.
- C. Consistently produces quality above requirements. No spoilage or wastage.
- D. Quality generally above normal. Little rejecton and scrap.
- E. Adequate quality. Normal or standard rejection and scrap.

3. QUANTITY OF WORK

Achievement of targets, assigned jobs.

- A. Output very low.
- B. Produces somewhat more than required amount of work.
- C. Below normal output.
- D. Normal efficiency and output.
- E. High production exceeds quota regularly. Completes assignments in shortest possible time.

4. COST/TIME CONTROL

Optimum utilisation of available resources/time, Ability and interest to control or reduce cost.

- A. Not at all vigilant.
- B. Frequently shows interest.
- C. Always vigilant to reduce wastages.
- D. Rarely vigilant.
- E. Occasionally cares.

5. RESPONSIVENESS TO CHANGE OR INNOVATION

Skill to quickly interpret and adjust to new situations and openness to new ideas.

- A. Very good response.
- B. Average response.
- C. Below average.
- D. Above average.
- E. Very poor response.

6. COMMITMENT TO THE JOB AND THE ORGANISATION

Dedication to work and to company objectives, reliability to complete assigned tasks.

- A. Evades responsibility.
- B. Average responsibility.
- C. Very responsible and conscientious.
- D. Irresponsible
- E. Exceptionally responsible and conscientious.

7. INITIATIVE

Ability to provide thrust by personal example and expert and timely guidance.

- A. No initiative.
- B. Average initiative.
- C. Exceptionally resourceful. Full of new ideas.
- D. Lacks initiative, frequently gets stuck.
- E. Good initiative, seldom gets stuck.

8. CARE OF MACHINES, TOOLS, EQUIPMENTS AND RECORDS

- A. Takes no interest.
- B. Maintain in good condition.
- C. Takes little interest.
- D. Equipments and records are cared for.
- E. Always kept in exceptional condition.

9. ABILITY TO WORK IN CO-OPERATION WITH OTHERS

- A. Highly co-operative, very popular and helpful.
- B. Not co-operative.
- C. Co-operative, if urged.
- D. Co-operative.
- E. Quarrelsome, causes friction and trouble.

10. ABSENTEEISM

- A. Attendance above average.
- B. Average attendance
- C. Occasionally absent
- D. Frequently absent on work.
- E. Always on the job, never loses time without permission.

11. PUNCTUALITY

- A. Rarely late on work.
- B. Occasionally late on work.
- C. Very rarely late or never late.
- D. Always late on work.
- E. Late only when there is good reason.

12. POTENTIAL FOR HANDLING HIGH LEVEL RESPONSIBILITY

- A. Able but not ready to accept.
- B. Not at all.
- C. Able but ready to accept if compelled.
- D. Very much able and ready to accept.
- E. At times only.

INTERVIEW SCHEDULE FOR EMPLOYEES

PART - A

BIO - DATA

Name of the Employee :
Worker Card No. & Section :
Age ● : 20-30 / 30-40 / 40-50 / Above 50
Sex : Male / Female
Religion / Caste :
Education : Primary / Secondary / Graduation /
P.G. / Others
Length of service in the organisation :
Type / Nature of Work :
Monthly Income : Below Rs.2000
2000 - 4000
4000 - 6000
Above 6000
Place of Domicile : Local / Outstation
Residing with : Family / Joint family / Single
Marital Status : Married / Unmarried
Parental Occupation : Agriculture / Trade / Industry /
Business / Service / Others
Interest in Politics : Active / Neutral / Inactive
Participation in Trade Unions : Active / Neutral / Inactive
Signature :

PART - B
SELF APPRAISAL

JOB KNOWLEDGE

1. How much aware are you of the various aspects and nature of your job?
 - A. Below average awareness
 - B. Average awareness
 - C. Very much aware
 - D. Not at all aware
 - E. Above average awareness.

2. How much aware are you about the latest developments taking place in the area of your job?
 - A. Not at all aware.
 - B. Very much aware.
 - C. Below average awareness
 - D. Average awareness
 - E. Above average awareness.

3. How much able are you to put the latest knowledge in the area into practice?
 - A. Average
 - B. Below Average
 - C. Not at all.
 - D. Very much
 - E. Above average

QUALITY OF WORK

1. Do you believe that you are working at a level suitable to your ability?

A. Always	B. Rarely	
C. Occasionally	D. Never	E. Frequently

2. How often the quality of your work falls below the normal standard?

A. Occasionally	B. Rarely	
C. Frequently	D. Always	E. Never

3. How often do you make defectives and wastages in your work?
- | | | |
|-----------------|-----------|---------------|
| A. Always | B. Never | |
| C. Occasionally | D. Rarely | E. Frequently |

QUANTITY OF WORK

1. How often do you produce below normal standard quantity.
- | | | |
|-----------------|-----------|---------------|
| A. Occasionally | B. Rarely | |
| C. Always | D. Never | E. Frequently |
2. How often do you produce above normal standard quantity?
- | | | |
|-----------------|---------------|----------|
| A. Rarely | B. Frequently | |
| C. Occasionally | D. Always | E. Never |
3. How often do you produce equal to normal standard quantity
- | | | |
|-----------|-----------------|-----------|
| A. Never | B. Occasionally | |
| C. Rarely | D. Frequently | E. Always |

COST & TIME CONTROL

1. How often do you waste time during your work?
- | | | |
|-----------------|-----------|----------|
| A. Occasionally | B. Rarely | |
| C. Frequently | D. Always | E. Never |
2. Do you waste the organisational resources during the work?
- | | | |
|-----------|-----------------|---------------|
| A. Always | B. Never | |
| C. Rarely | D. Occasionally | E. Frequently |
3. How efficient are you in utilising the resources of the firm?
- | | | |
|------------------|------------------|--------------|
| A. Not at all | B. Average | |
| C. Below average | D. Above average | E. Very much |

RESPONSIVENESS TO CHANGE OR INNOVATION

1. How do you respond to a change in the nature of work?
 - A. Disagree
 - B. Agree
 - C. Strongly disagree
 - D. Strongly agree
 - E. Neither agree nor disagree

2. How will you react if new duties are assigned to you?
 - A. learn the duties very quickly
 - B. Do not find interest to learn.
 - C. Indifferent between the old job and the new one.
 - D. No attempt will be made to change.
 - E. Try to learn.

3. How well are you able to grasp the new ideas or innovations made by the company?
 - A. Unable to grasp
 - B. Can grasp easily
 - C. Average
 - D. Below average
 - E. Can grasp quickly and easily.

COMMITMENT TO THE JOB AND THE ORGANISATION

1. "This organisation is a better place to work than other neighbouring units".
 - A. Agree
 - B. Strongly agree
 - C. Strongly disagree
 - D. Disagree
 - E. Neither agree nor disagree

2. My relationship with other people at work is -
 - A. Cordial
 - B. Quarrelsome
 - C. Very much quarrelsome
 - D. Very much cordial
 - E. Neither cordial nor quarrelsome

3. Are you satisfied with the allotment of work in your section or department?
 - A. Dissatisfied
 - B. Satisfied
 - C. Very much dissatisfied
 - D. Very much satisfied
 - E. Neutral

INITIATIVE

1. The scope your job provides to help you to achieve your aspirations and ambitions
 - A. Not at all
 - B. Average
 - C. Very much
 - D. Not enough
 - E. Enough
2. The degree to which you feel that you can personally develop in your job
 - A. Very much
 - B. Not at all
 - C. Average
 - D. Enough
 - E. Not enough
3. The amount of flexibility and freedom you have in your job
 - A. Average
 - B. No freedom
 - C. Below average
 - D. Very high
 - E. High

CARE OF MACHINES, TOOLS, EQUIPMENTS, RECORDS etc.

1. How much care do you take on your machines, tools, etc.?
 - A. Average
 - B. Much
 - C. No care
 - D. Very much
 - E. Below average
2. How much interest do you show in keeping the equipments and records properly?
 - A. Very high
 - B. No interest
 - C. Average
 - D. Below average
 - E. High
3. How far do you feel free to work with your subordinates?
 - A. Very much
 - B. Not much
 - C. Average
 - D. Not at all
 - E. Much

ABSENTEEISM

1. How often do you absent from work?
 - A. Frequently
 - B. Occasionally
 - C. Rarely
 - D. Not at all
 - E. Always

PART C

LEVEL OF SATISFACTION

1. Considering all aspects of the job, how far do you like it?
 - A. Not so much
 - B. Like it
 - C. Like to some extent and dislike to some extent
 - D. Like very much
 - E. Do not like it at all.

2. Do you think that your superior is reasonable in expecting from you
 - A. Not so reasonable
 - B. Reasonable
 - C. Very reasonable
 - D. Average
 - E. Not at all reasonable

3. Do you believe that he is your own man?
 - A. Yes, definitely
 - B. May or may not be
 - C. Mostly he is so
 - D. Mostly he is not so
 - E. Definitely not

4. Do you get maximum facilities to do your job well?
 - A. No facilities at all
 - B. Average facilities
 - C. Most of the facilities
 - D. Most of the facilities not
 - E. All facilities

5. Are you satisfied with your present total income?
 - A. Not at all
 - B. Very much satisfied
 - C. Neither satisfied nor dissatisfied
 - D. Not satisfied
 - E. Satisfied

6. Do you feel that your total income from the company is comparatively higher than that of other similar companies?
 - A. No, it is very low
 - B. No, it is low.
 - C. Almost same
 - D. Yes, it is very high.
 - E. Yes, it is high.

7. Are you satisfied with the scope for increasing the present income from the company?
- A. Very much satisfied B. Not at all satisfied
 C. Neither satisfied nor dissatisfied
 D. Satisfied E. Not satisfied
8. What is your opinion about the running of canteen, housing and pension schemes?
- A. Not happy B. Very happy
 C. Not at all happy D. Happy
 E. Neither happy nor unhappy
9. What do you say about medical facilities, accident prevention schemes, etc.?
- A. Satisfactory B. Not satisfactory
 C. Not at all satisfactory D. Average
 E. Very much satisfactory
10. Do you feel that the management has a positive attitude for the opinion of workers?
- A. Surely, No B. yes
 C. Neither yes nor no D. No E. Surely, yes
11. Are you satisfied with the programmes for personal development, training, quality improvement, etc.?
- A. No comments B. Satisfied
 C. Very much satisfied D. Not satisfied
 E. Not at all satisfied
12. Is the existing leave rules enough for your requirements?
- A. No B. Very much
 C. No complaints even if not enough
 D. Not at all enough E. Yes

13. Are you satisfied with the mode of settling disputes in your company?
- A. No
B. Very much satisfied
C. Yes
D. Neither satisfied, nor dissatisfied
E. Not at all satisfied
14. What do you say about the interpersonal relations in your company?
- A. Very cordial
B. Hostile
C. Cordial
D. Very much hostile
E. Neither cordial nor hostile
15. What is your opinion about the communication system prevailing in your company?
- A. Very poor
B. Good
C. Poor
D. Very good
E. Neither good nor poor
16. What about the management's concern for workers?
- A. Very much positive
B. Negative
C. Highly negative
D. Positive
E. Neither positive nor negative
17. Are you happy with the existing style of management?
- A. No
B. Yes
C. Very happy
D. Very unhappy
E. Neither happy nor unhappy

Motivational Factors

Your company expects some more better performance from you. For that, the company is ready to offer you the following incentives. Show your preference by allocating 100 points given in total, on these factors.

A. Immediate financial improvement	<input type="text"/>
B. Future financial benefits	<input type="text"/>
C. Promotion	<input type="text"/>
D. Participation	<input type="text"/>
E. Facilities at work site	<input type="text"/>
F. Educational facilities for children	<input type="text"/>
G. Medical facilities	<input type="text"/>

	<input type="text" value="100"/>
	=====

Note: The vernacular version of this has been administered on the respondents.

