Chapter - 1

Introduction and Research Design
CHAPTER-1
INTRODUCTION AND RESEARCH DESIGN

1.1 INTRODUCTION

As the world enters into the new era of learning, there is development in every field. This development is faster and especially, it is more faster in the filed of business. Further, this learning makes the people more knowledgeable. As they become more knowledgeable, they become more complex also. Today, every worker wants to 'BE' and to 'BECOME'.

Action is the beginning of everything in business. The core of all the activities in business is the human activity. Getting organisation members to go to work willingly and enthusiastically is a problem. This is because, every individual has some 'needs'. When he is employed in an organisation, he makes his 'needs' converted into 'wants' and expects his 'wants' to be satisfied by his employer. The employer can satisfy the 'wants' of his employees only if the organisation is successful. Hence, to make the organisation successful, the employer expects his employees to behave in a particular way.

That is, just as the employee has certain wants that the organisation is expected to supply, the organisation has certain types of behaviour that it wishes to elicit from the employee⁴.

What an individual can accomplish depends to a greater extent on how much and why one wants to act. The individual’s will to work is different from his capacity to work. One can buy one’s time, his physical efforts but not his enthusiasm or initiative. Major problems in to-day’s organisations are how to get maximum efforts and contribution of individuals. The conflict between individual needs and the achievement of organisational objectives has been of major concern to managers⁵.

Cement industry is labour oriented. Most of them have to do manual work. This labour force is drawn mostly from villages and to some extent from tribal areas. The rural and tribal people need to be educated not only on how they have to do their jobs in the industry but also why they have to do such jobs. Besides, with the acceptance of the principle of scientific management, industrial structure is getting more and more complex. In this set-up, making the people to commit for their jobs and involving them in their jobs demand attention. This is because ‘no organisation can function effectively without a cohesive team of competent, capable and motivated individuals’⁶.

⁴ ibid p 342.
It is a fact that the human resource plays a vital role in the performance of an organisation. Statistics shows that the performance of one organisation is better than that of other, even in the same industry. This is because, individuals differ in personal characteristics and these differences create difference in work performance. In essence, it is a skill in aligning employee and organisational interests so that behaviour results in achievement of employee wants simultaneously with attainment of organisational objectives. The managerial responsibility for eliciting this behaviour is usually termed as ‘MOTIVATION’. This study makes an attempt to answer how to motivate the employees working in the various units of cement industry in Tamilnadu.

1.2 IMPORTANCE OF MOTIVATION

Human tendency is to get more benefits but to work less. Benefits to employees can be increased only if more work is performed. However, as the employees show a resistance to work, there comes the need for inducing them to accept work willingly.

We know that individuals differ not only with respect to their appearances, but also in their sensitivities, intelligence, interests, attitudes, perception and personalities.

The behaviour of any individual does not just happen rather it is caused. How an individual responds to any particular situation depends upon

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8 ibid p 493
what he brings into the situation in terms of abilities, education, skills, desires, interests, habits and understanding.

Webster defines behaviour as ‘mode of conducting one-self’. The interest in human behaviour has been generated right from the day the man started interacting with individuals\(^9\). A man must be possessing the physical, mental and technical capacity to work, but there are no consequences to his employer if he is not physically or physiologically willing to make use of his abilities for the ultimate good of the enterprise. Hence, there comes the need to induce the employee to assume responsibility in favour of his work.

Motivating is to create a need and desire on the part of worker to better his present performance\(^{10}\). Also, motivation means inspiring persons with zeal to do work for the accomplishment of objectives of the organisation. A successful manager knows that the issuance of directions, however well conceived and worded, does not mean anything till they are followed. He makes appropriate use of motivation to enthuse the personnel to work.

Enthusiasm or willingness to work can be created by motivation. Motivation succeeds not only in having an order accepted but also in gaining a determination to see that it is fulfilled efficiently and effectively. Some people are spurred only by intense outer pressures of rewards; others are highly self-motivated. Hence, managers are forced to constantly provide for motivating forces in order to intensify their desire and willingness to apply their greater potentialities for the achievement of common objectives.

\(^9\) ibid p 439
\(^{10}\) ibid p 438
Thus, motivation is an action that stimulates an individual to take a course of action, which will result in attainment of some goal, or satisfaction of certain material or psychological needs of the individual himself.

The need for studying the field of motivation has now been realized by a number of universities and academic institutions. As a result many universities have introduced ‘motivation’ in their syllabi. We have in recent years many books and reports on ‘motivation’. However, scientific research on several aspects of motivation is still in its infancy.

1.3 NEED FOR MOTIVATION IN CEMENT INDUSTRY

A motivated employee will be a higher performer. This is why motivation is emphasized in all business organizations. It must be still more emphasized in the case of organizations which are labour oriented and which employ people with lesser literacy rate.

Cement industry is one of the basic industries which plays a vital role in the economic development of the country. The role of cement industry in agricultural development, housing, irrigation, defense, road laying and other nation building activities is very high. It influences the pace of construction activity both industrial and residential in the country to a great extent. It is regarded as a major nation building industry.

Cement industry is a labour intensive industry. Over two lakh persons are employed in the cement industry. The cement industry requires more manual work both in mines and factory. This work does not require higher

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education and hence a majority of the work force of this industry is less educated. This less educated work force requires a high degree of motivation.

Eminent scholars have discussed the motivational aspects in different industries in a variety of ways. But, cement industry is still a virgin field not touched by many. The cement industry and its labour have got their own peculiarities and novelties. Also, the industry has its own significant problems in its human resources, which must be studied in depth.

There are 14 units in the cement industry in Tamilnadu. Some of the units are owned by the Government of Tamilnadu and the rest by the private. All the units have introduced many motivational measures for their employees. But, if we consider the overall performance of these units, we find that the performance rate of these units differ from one another, in general, and the performance of the Government owned units significantly differ from those of private sector units, in particular. Though the performance of an organisation depends on many factors, it mainly depends on the involvement of its human resources. As the other factors of performance of the cement industry remain the same, naturally, the performance must be influenced by its human resources. This result calls for a comparative study of motivational measures provided in these two sets of units and thus this study assumes importance.

1.4 SIGNIFICANCE OF THE PRESENT STUDY

The present work is to study the motivational aspects of the workers who form the lower strata of the employees of the cement industry in Tamilnadu. Why this set of employees have been considered for the present study can be understood from the following:
Prof. Arunachalam, in his work on ‘MOTIVATION - WHAT, WHY AND HOW?’ has stated that the different levels of employees of an organisation are motivated in different ways. According to him, the top level employees need no external force to motivate them as they themselves are running the affairs of the firm as if they are the owners of the firm; the middle level employees are motivated through getting their grievances redressed at the earliest as they move very closely with the top level people and also through getting satisfaction from what they enjoy in their positions (which they could not enjoy at their own expenses but for their positions in the company) and only the employees at the lower level lack such merits.

However, motivating the people at the lower level is a very difficult task due to various facts. The important ones are (i) they have no free and frequent access to management to get their grievances redressed, (ii) the nature and the conditions of their work provide them physical strain and boredom, (iii) they are poorly educated and hence fail to understand things in the right way; and, (iv) they think more of themselves and do not care much for the problems of the management. These problems force the management of the organizations to take measures to motivate the people at the lower level. On this basis, the researcher has considered the need for motivating the people at the lower level and hence has conducted this study on the motivational aspects of workers who are in the lower level of the organizational hierarchy of the units of the cement industry in Tamilnadu.
1.5 REVIEW OF EARLIER STUDIES

Before carrying out a research, the researcher wants to know from where he/she should begin with. For this purpose, he is interested in studying what research works have been conducted so far in his area of interest and where it has ended. In this regard, the various research works done so far on the motivational aspects of employees were reviewed. Some of the important studies conducted on this aspect are briefed below.

John B. Miner, Bahman Ebrahimi, and Jeffrey M. Wachtel\(^{12}\) in their study have analysed the importance of motivation as a major cause of managerial effectiveness and how deficiencies in motivation is severely lacking in the US relative to many other countries. They conclude that ‘in the US, there is a motivational problem, but there are potential solutions both on the supply side and demand side. When both these solutions are combined and implemented, they will get the jobs done, but the question is whether sufficient motivational talent exists in this country to manage change’.

Donald J. Campbell, Kathleen M. Campbell, and Ho-Beng Chia\(^{13}\) state that merit pay rarely achieves its objectives. This is because of the problems in its implementation. To remain competitive, a firm needs to entice employees to perform at their best. While merit pay plans appear to respect one powerful and intuitively appealing enticement, the reality is much different. A unit-level merit system based on Performance Indicators

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potentially has a great deal to offer. Companies dissatisfied with the traditional merit approach may wish to explore this alternative, (i.e.) the alternative to merit pay is focused on group accomplishment.

Ekramul Hoque M,\textsuperscript{14} has examined the relationship between work motivation and some variables such as employee-oriented supervision, production-oriented supervision, pay inquiry, group cohesiveness, and personal life and family life satisfaction by selecting hundred production workers at random of a textile mill in Bangladesh. He has concluded that (i) both employee-oriented supervision and personal life and family life satisfaction contribute positively and pay inquiry contributes negatively and significantly to motivation of the workers; and (ii) employee-oriented supervision is the highest positive contributor to motivation of the workers.

Phongphat Rakarom\textsuperscript{15} studied the effects of lay-off, job satisfaction, and internal work motivation on the work efforts of employees. After examining four hundred workers of a large automobile company in Thailand, he has concluded that workers with low job satisfaction and low internal work motivation worked less than those with higher job satisfaction and higher internal motivation.


Susan Koenigskecht\textsuperscript{16} considered two sets of employees; one called Baby Boomers, born between 1946 and 1964 and the other called Generation X, born between 1965 and 1977. After studying these two sets of employees, he states that employee motivation and trust are needed to attract and retain highly qualified employees. He lists challenging work, compensation and feeling as factors for employee motivation and leadership, communication and work environment as factors constituting trust.

Sharon R. Peck\textsuperscript{17} investigated the links between organisational strategy, human resource policies, and the employment relationship through a survey of US Executives and HR managers in 170 firms in the Chicago area. He measured the human resources policies as both an overall philosophy and a series of dimensions of retention, staffing, performance and compensation. He concludes that relationship between organisational strategies, human resources and employment relationships are more complex.

Michael Poole and Glenville Jenkins\textsuperscript{18} contacted 3000 employees in Britain through a questionnaire to examine the extent to which managers in Britain consider that their firms have adopted human resource policies aimed at improving competitive advantage. They have concluded that sustained competitive advantage is intimately linked with the human resources management polices but there are also many obstacles.

\textsuperscript{17} Exploring the link between Organisational Strategy and the Employment Relationship: The Role of Human Resources Policies. Journal of Management Studies, 31.5, September 1994, pp. 715-735
Kim Hoque\textsuperscript{19} studied 660 hotels in U.K., hotels of which had 65 or more bed rooms to examine the relationship between HR management and performance in the UK hotel industry. The study has revealed that hotels pursuing an HRM approach coupled with a quality focus within their business strategy perform best and HRM is more likely to contribute to competitive success when it is introduced as an integrated and coherent package or bundle of practices.

V. Manickavasagam.Dr.\textsuperscript{20} has compared morale and productivity in a large public sector lignite company in India. He has attempted to analyse morale and some related factors of job performance such as productivity, labour cost, labour turnover, absenteeism, accidents, etc. He has also established whether the relationship between morale and other job factors is positive or negative.

Thirumalai.G.S.,\textsuperscript{21} after studying 550 workers of a loco shed of the Indian Railway, states that night work, though physiologically, psychology and socially upsets workers, the night shift premium acts both as compensation and incentive which results in the worker getting lured into jeopardising his own physical well being and his family life.


\textsuperscript{20} Morale and Job Performance, Manpower Journal, Vol.XXXV, No.4, January – March 2000, pp. 27 to 34.

Bob Nelson\textsuperscript{22} in his study has observed that the employee-of-the-month and the big holiday bonus have little lasting effect on positively motivating employees. Instead, managers should consider using the power of ‘Five 1’s’ to focus their time and energy on daily interactions with employees. [The Five 1’s are: Interesting work, Information, Involvement, Independence and Increasing visibility].

Sue Glasscock and Kimberly Gram\textsuperscript{23} have observed that the benefits from frequent and sincere appreciation can be seen on the bottom line on every measurable corporate attribute including productivity, sales, product and service quality and customer satisfaction.

Pearson C.A.L.\textsuperscript{24} in his study has observed that participative team members met their supervisors weekly to discuss work-related problems. The non-participative group continued to perform their tasks with the traditional work practices. The participating team experienced a higher perception of involvement in decision-making and was more satisfied in their job.

Helburn I.B. and John C. Shearer\textsuperscript{25} discussed with a large number of executives of steel industry of China relating to the personnel aspects. They have stressed in their report the increasing use of financial incentives and the ‘Iron Rice Bowl’ approach to discipline. They have also brought out the

significance of the employee participation in management through worker’s councils and trade unions.

Lisa Cheraskin and Michael A. Campion who conducted a study on job rotation in Eli Lilly and Company, which is a Pharmaceutical company having 27,700 employees throughout the world, have said that employees at all levels like very much moving to new jobs in their careers and in particular mid-career managers see the most benefit.

Patric M. Wright, Gary C. Mc Mohan, Blaine Mc Cormic and Scott W. Sherman studied the impact of HR involvement in strategic management in 86 US petro-chemical refineries. The study revealed a more positive relationship between HR involvement and HR effectiveness when the refinery emphasised a product innovation strategy and a positive expectation of the line managers to involve the HR managers in the strategic management of the business.

Robert Drago and Mark Wooden have analysed the causes of absence from work of the employees of different countries and have found that the absence level was low if job satisfaction was high. They have also discovered the characteristics associated with lower rates of absence to be male gender, short-tenure, part-time status, and high wages and the

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26 Job Rotation, Personnel Journal, November 1996, pp.31-38


characteristics associated with higher rates of absence to be shift work, sick leave entitlements, and low unemployment rate.

Shaban, Hisham Hassan\textsuperscript{29} considered 14 luxury hotels to examine the perspectives of the American and Egyptian human executives toward their HR management policies and practices. He states that there are many similarities in managerial perceptions and attitudes and there is a clear trend toward convergence on some critical HRM policies and practices.

Hannon, John M.\textsuperscript{30} has examined the effect of human resource management reputation on corporate performance. He has concluded that neither the favourable nor the unfavourable HR reputation has affected stock prices in the expected direction. He wonders why investors do not value high of the stocks of ‘best’ named firms.

Yang, Zhuang\textsuperscript{31} made a study of Japanese owned firms in the US. The study identifies key contingency factors that face Japanese firms operating in the US and analyses how these contingency factors contribute to or constrain the use and development of Japanese style HRM policies in US. The results also bring out that in the US, Japanese manufacturing firms adopt more team-oriented polices than the service firms.


Raghuram, Sumita\textsuperscript{32} made a survey of 176 units in US to examine the linkages between business strategy and staffing and training practices. Three categories of staffing and training practices, namely, (i) 'building Vs buying' skills, (ii) emphasis on fundamental skills, (iii) 'broad Vs narrow' skills, were examined. The study has established the existence of the linkage positively and also reveals that businesses employing prospect strategy take their staff for R&D and marketing functions externally.

Payne, Jennifer Marie\textsuperscript{33} studied the communication skills in the HR managers who are members of the society for HRM in the State of Alabama through a questionnaire. This study has identified the communication styles to communicator image, gender, education and work experience and provide a foundation for determining the ideal or optional communication skills and competencies of human resource professionals.

Han, Tzu-shian\textsuperscript{34} considered two questions: (i) what are the determinants of employee participation programme? and (ii) does employee participation affect firm performance? The data for the study were collected from composted data, which were combined in, to a panel dataset of 177 firms. The study reveals that participating systems that integrate employee participation and complementary human resource management practices enhance productivity.


Brown, Michelle Deborah\textsuperscript{35} conducted a study in the large scale Australian organisations by considering 14 independent variables. The study examined each organisation separately in predicting three aspects of performance pay: (i) the presence or absence of a performance pay scheme, (ii) the unit of performance assessed (individual or group), (iii) the proportion of employees covered by the scheme. The study concludes that separate study must be conducted for each organisation to establish a suitable performance pay scheme.

Hempel, Paul Steven\textsuperscript{36} studied the aspect of health insurance costs incurred by organisations and has arrived at the following conclusions: (i) health benefits cost-sharing does not appear to have any compensating wage adjustment, (ii) work related cultural values have benefits and examples of benefits that are influenced by culture are social pension, job and income protections and health care, (iii) even with mandated health insurance for part-time employees, the use of part-time employees can save money, particularly when product demand is highly variable.

Sivasubramaniam, Nagaraj\textsuperscript{37} made a survey of 263 senior HR executives considering six factors, viz, staffing, training, compensation, appraisal, job design and corporate involvement, to study the relationship between HR strategy and corporate strategy and found that there existed a significant associative relationship between the two.


Adhikari, Dev Raj\textsuperscript{38} studied major factories in Nepal on the evaluation of job designs and their related issues. In his study, he found that there was difference in attitude between the supervisors and non-supervisors on items such as job difficulty and variety, worker requirements, job description, age, number of dependants and motivation.

\textbf{Minor research works:}

Though an in-depth study of the cement industry of Tamilnadu has not been attempted, a few minor research works such as (i) cost reduction, (ii) quality control, (iii) human relations, (iv) employer-employee relations, (v) training and development, etc. have been conducted in the individual units of the cement industry.

The above review reveals that not much work has been done exclusively on the motivational aspects of a particular industry and even if there was any such work, it is not on the side of comparison between public and private sector units of the industry. Under this circumstance, the researcher was induced to fill in the research gap of comparing motivational measures of public and private sector companies of the cement industry in Tamilnadu. Further, this study with the systematic coverage of all the cement units in Tamilnadu through a large sample of 587 workers is an attempt to make an in-depth study.

1.6 OBJECTIVES OF THE STUDY

The main objective of the study is to examine the impact of motivational measures in the cement industry in Tamilnadu. More specifically, the following are the objectives of the study.

1. To list the various motivational measures available to the employees of the public and private sector units of the cement industry in Tamilnadu.

2. To compare the level of satisfaction of workers on the motivational measures between the public and private sector units of the cement industry in Tamilnadu.

3. To study the impact of motivation on the performance level of the workers between public and private sector units of the cement industry in Tamilnadu.

4. To find out which of the motivational factors motivate the workers much and which do not.

5. To suggest measures to improve motivation of the workers of all the units of the cement industry in Tamilnadu.

1.7 HYPOTHESIS

The major hypothesis of the study has been set as under:

There is no significant difference between the workers of the public and private sector units of the cement industry in TN on the influence (with regards to the influence) of the overall motivational measures.
More hypotheses have been framed and tested. The results of the same are given in appropriate place in Chapter 5.

1.8 SCOPE OF THE STUDY

As the Indian cement industry is a large one comprising of more than 124 large plants and 300 mini plants\(^{39}\), the scope of the study is limited to the units situated in Tamilnadu alone due to want of time.

There are both large scale and mini cement plants in Tamilnadu. As most of the mini cement plants in India, in general and in Tamilnadu, in particular, are not functioning, this study is confined to large-scale units only.

Also, we know that there are different levels of employees in each organization. As motivation occupies a very important place at the lower level of the organizational hierarchy (as explained in the ‘significance of the study’ of this chapter), especially who are doing more manual work, the scope of the study is limited only to the workers who occupy the lower levels in the organizational hierarchy.

Thus, it is beyond the scope of this study of considering the motivational aspects of employees at the lower levels who are doing white-collar jobs, and all the employees at the middle and top levels of the organizational hierarchy.

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\(^{39}\) Basic Data, Indian Cement Industry, Cement Manufacturer’s Association, New Delhi, 2002, p.2.
1.9 UNIVERSITY OF THE STUDY

There are 14 large cement units in Tamilnadu at the end of March 2004 (CMA, 2004, p xxiii) and they are listed below in Table 1.1.

**TABLE 1.1**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the unit</th>
<th>Location</th>
<th>Name of the company owning the unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ACC</td>
<td>Madukkarai</td>
<td>The Associated Cement Companies Ltd.</td>
</tr>
<tr>
<td>2.</td>
<td>Chettinad Cement</td>
<td>Karikali</td>
<td>Chettinad Cement Corporation Ltd.</td>
</tr>
<tr>
<td>3.</td>
<td>Chettinad Cement</td>
<td>Puliyr (Karur)</td>
<td>Chettinad Cement Corporation Ltd.</td>
</tr>
<tr>
<td>4.</td>
<td>Dalmia</td>
<td>Dalmia puram</td>
<td>Dalmia Cements (B) Ltd.</td>
</tr>
<tr>
<td>5.</td>
<td>Grasim South</td>
<td>Reddipalyam</td>
<td>Birla Cements Ltd.</td>
</tr>
<tr>
<td>6.</td>
<td>India Cement</td>
<td>Dalavai (Trichy)</td>
<td>India Cements Ltd.</td>
</tr>
<tr>
<td>7.</td>
<td>India Cement</td>
<td>Sankaridur</td>
<td>India Cements Ltd.</td>
</tr>
<tr>
<td>8.</td>
<td>India Cement</td>
<td>Sankar nagar</td>
<td>India Cements Ltd.</td>
</tr>
<tr>
<td>9.</td>
<td>India Cement</td>
<td>Thalayuth</td>
<td>India Cements Ltd.</td>
</tr>
<tr>
<td>10.</td>
<td>L&amp;T ARCW (G)</td>
<td>Arakonam</td>
<td>Larsen and Tubro Ltd.</td>
</tr>
<tr>
<td>11.</td>
<td>Madras Cement</td>
<td>Alathiyur</td>
<td>Madras Cements Ltd.</td>
</tr>
<tr>
<td>12.</td>
<td>Madras Cement</td>
<td>R.S.Raja Nagar (Tulukapatti)</td>
<td>Madras Cements Ltd.</td>
</tr>
<tr>
<td>13.</td>
<td>Tamilnadu Cement</td>
<td>Alangulam</td>
<td>Tamilnadu Cements Corporation Ltd.</td>
</tr>
<tr>
<td>14.</td>
<td>Tamilnadu Cement</td>
<td>Ariyalur</td>
<td>Tamilnadu Cements Corporation Ltd.</td>
</tr>
</tbody>
</table>

As the scope of this study is limited to the workers working at the lower level (in mines and factory alone) of the organizational hierarchy, all the workers working in the mines and factories of these units constitute the universe/population of this study.

1.10.1 SAMPLE OF THE STUDY

Our aim is to study the population. But, as the population of this study is very large, it is a difficult task to study the whole population. At this point what Nan Lin says seems to be appropriate. He defines sample as ‘a subset of cases from the population chosen to represent it. By using the characteristics of the subset, we can infer the characteristics of the population’\(^{40}\).

Further, Goode and Hatt point out:

“A sample not only needs to be representative, it needs also to be adequate. A sample is adequate when it is of sufficient size to allow confidence in the stability of its characteristics.”\(^{41}\)

Having the opinions of these experts in mind about sample, the sample for the present study was selected as explained below.

1.10.2 SAMPLING TECHNIQUE

In selecting the sample units from public and private sector, justified sampling technique was used. In selecting the sample units on the basis of the ownership of units, stratified sampling technique is to be used. In


\(^{41}\) Kumar S. Social Survey of Research Methods and Techniques, New Heights. New Delhi, 1982-83. P 207
selecting the sample elements (i.e.) respondents, random sampling technique is used. Thus, the study has used justified sampling followed by stratified sampling, which is again followed by random sampling technique.

1.10.3 Sampling Procedure

As explained earlier, the sample must represent the whole population. Hence, the selection of the sample must be adjusted in accordance with the object of the enquiry so that no significant item is ignored. Hence, in selecting the sample for the study a three-step procedure was followed.

The first step is determining the number of units to be selected from each sector—public and private.

The second step is to determine which of the unit must be taken for the study and on what basis.

The third step is to select the actual respondents of the study.

1.10.4 Selection of Sample Units

There are 14 large cement units in Tamilnadu. These units are heterogeneous in nature and are run by different managements. From these units, the sample units must be selected on a meaningful basis.

"The basic assumption behind judgment sampling is that with the exercise of judgment and appropriate strategy, one can hand pick the cases to be included in the sample and thus develop samples that are satisfactory to one's research needs"\textsuperscript{42}. Further, under this method (Judgment sampling) the

researcher uses his expertise in selecting units that are representative of the target population or that are most relevant to the issue under study\textsuperscript{43}. Hence judgment sampling is thought to be the appropriate sampling technique to select the sample units.

Of the 14 units of the cement industry in Tamilnadu, 2 units are in the public sector and 12 units are in the private sector. There must be meaningful and adequate representation for both public and private sector in the sample. Hence, as there are only two units in the public sector, it will be justified if both the units find their place in the sample.

The selection of sample units from the private sector was made as explained below. In the private sector four companies own one unit each, two companies own two units each and one company owns four units. One company, namely, Larsen & Tubro Ltd., which owns a unit, is engaged in grinding operations alone (only a part in the cement manufacturing process) and hence it may be justified if it is eliminated from inclusion in the sample. And, from the remaining six companies, if one unit from each company is selected for inclusion in the sample, it will also be justified. Thus, there are eight units in the sample – two from the public sector and six from the private sector. The list of the sample units is given in the following table (Table 1.2)

1.10.5 SAMPLE SIZE OF THE STUDY

The total number of workers in the sample units is 2942, as at the end of March 2004. It was decided to take 20% of the population to be the sample size of the study.

On this basis, the sample size would be 587 workers. To give equal representation to the sample units, it was decided to select 20% of the workers from each sample unit. The following table (Table 1.3) shows the number of sample elements selected from each unit to constitute the whole

### TABLE 1.2
LIST OF SAMPLE UNITS

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the unit</th>
<th>Location</th>
<th>Sector</th>
<th>Name of the Owning Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tamilnadu Cements</td>
<td>Alangulam</td>
<td>Public</td>
<td>Tamilnadu Cements Corporation Ltd.</td>
</tr>
<tr>
<td>2.</td>
<td>Tamilnadu Cements</td>
<td>Ariyalur</td>
<td>Public</td>
<td>Tamilnadu Cements Corporation Ltd.</td>
</tr>
<tr>
<td>3.</td>
<td>ACC</td>
<td>Madukkarai</td>
<td>Private</td>
<td>The Associated Cement Companies Ltd.</td>
</tr>
<tr>
<td>4.</td>
<td>Chettinad Cement</td>
<td>Puliyur</td>
<td>Private</td>
<td>Chettinad Cements Corporation Ltd.</td>
</tr>
<tr>
<td>5.</td>
<td>Dalmia Cements</td>
<td>Dalmiapuram</td>
<td>Private</td>
<td>Dalmia Cements (B) Ltd.</td>
</tr>
<tr>
<td>6.</td>
<td>Grasim South</td>
<td>Reddipalayam</td>
<td>Private</td>
<td>Birla Cements Ltd.</td>
</tr>
<tr>
<td>7.</td>
<td>India Cements</td>
<td>Sankaridurg</td>
<td>Private</td>
<td>India Cements Ltd.</td>
</tr>
<tr>
<td>8.</td>
<td>Madras Cements</td>
<td>R.S.Raja Nagar</td>
<td>Private</td>
<td>Madras Cements Ltd.</td>
</tr>
</tbody>
</table>

Profile of the Sample units is given in Appendix 1.1
sample of the study. (To keep confidentially, the names of the sample units are given alphabetical letters).

**TABLE 1.3**

**DATA ON SAMPLE ELEMENTS**

<table>
<thead>
<tr>
<th>UNIT</th>
<th>POPULATION</th>
<th>NUMBER OF SAMPLE ELEMENTS AT 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>442</td>
<td>88</td>
</tr>
<tr>
<td>B</td>
<td>376</td>
<td>75</td>
</tr>
<tr>
<td>C</td>
<td>479</td>
<td>96</td>
</tr>
<tr>
<td>D</td>
<td>240</td>
<td>48</td>
</tr>
<tr>
<td>E</td>
<td>367</td>
<td>73</td>
</tr>
<tr>
<td>F</td>
<td>324</td>
<td>65</td>
</tr>
<tr>
<td>G</td>
<td>147</td>
<td>29</td>
</tr>
<tr>
<td>H</td>
<td>567</td>
<td>113</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2942</td>
<td>587</td>
</tr>
</tbody>
</table>

The sample elements were selected at random from each unit as per the requirements.

### 1.11.1 METHODOLOGY

For any study, some data and information are required. The necessary data and information pertaining to the present study have been collected from the primary and secondary sources. The methodology adopted in collecting data is explained below.
1.11.2 PRIMARY DATA

Primary data for the study was collected in the following manner,

(i) It was decided to use a questionnaire to collect the opinions of the employees about the various motivational measures available to them. As most of the workers are less educated, an interview schedule was used to collect information from them. (The details of the design, testing and finalisation of the interview schedule are given in the appropriate place).

(ii) Personal discussions were held with the management people to elicit their opinions about the behaviour and performance of the workers.

(iii) Personal observations were made in the mines and factory and wherever necessary, discussions were also held with the workers relating to the motivational measures in their organizations and the extent of their satisfaction.

1.11.3 SECONDARY DATA

The secondary data have been collected from both published and unpublished sources. They include the following:

(i) Books on geology, metallurgy, chemistry and economic minerals were referred to get an over-view of the limestone mineral and cement production.

(ii) Books on mining, production techniques, process management, etc. were referred to understand and list the various activities performed in mines and factory in the cement industry.
(iii) Books, journals, seminar and conference papers, reports of the Cement Manufacturers' Association and website relating to cement industry were used to assess the state of affairs of the cement industry of India and Tamilnadu.

1.11.4 QUESTIONNAIRE/INTERVIEW-SCHEDULE

As explained earlier, it was decided to study the minds of the workers on the motivational aspects of their organizations through a questionnaire. But, most of the workers are doing manual work and also are less educated. Hence, the questionnaire was converted into an 'Interview Schedule'. The interview schedule was tested with 20 respondents from public sector units and 20 respondents from private sector units of the cement industry.

On the basis of the reactions of these respondents, the interview schedule was improved in content and format. After finalisation, the improved tool was used to collect data from the respondents of the various units of the cement industry in Tamilnadu. A Specimen copy of 'Interview Schedule' is given in Appendix 1.2.

1.11.5 DATA COLLECTION TOOLS

Interview schedule, interview guide, personal discussions and field observation were used as tools for collection of primary data.

Books, journals, reports, yearbooks, seminar papers, and newspapers were used as tools for collection of secondary data.
1.12 STATISTICAL TOOLS

After collecting the data, analysis was made by using statistical tools such as averages, percentage, t-test, ANOVA, Chi-square, and Discriminant Function Analysis through SPSS package.

1.13 PERIOD OF ENQUIRY

To collect data from respondents of the sample units, the field enquiry was conducted during the period December 2003 to June 2004. The data relating to production, capacity utilization, profitability, sales and EPS, are confined to the period from 1995 to 2004. However, in respect of the historical analysis of the cement industry of India in general and that of Tamilnadu in particular, this period has been extended backwards to the extent possible based on the availability of data.

1.14 LIMITATIONS OF THE STUDY

Though the study has been carried out on scientific principals, it is not free from limitations. As it is essential to present a clear picture about the scope of the study, a few of the limitations of the study are listed below:

1. Though there are both large scale and small scale (mini plants) cement units in Tamilnadu, the mini cement plants have not been considered in this study, as these units are not functioning properly.

2. While motivation is a common phenomenon for all the employees working in organizations, this study covers only workers working in the mines and factory. That is, it has considered only the ‘blue collared’ and not the ‘white collared’ jobs.
3. The period of study is restricted to ten years (1995-2004) only due to the availability of relevant data. Whether this period would reflect the real position of the cement industry, which is functioning for the past one century, is a big question.

4. Lack of maintenance of records by the units of study on motivational measures has forced to make estimation assessment of the impact of motivation on the employees.

5. There was no sufficient thinking on the side of the employees for motivational aspects other than monetary items. The employees show lesser interest on other motivational measures and hence many questions were not at all answered.

6. Reluctance on the part of the respondents due to their disinterest or fear of disciplinary action by their management in answering questions has resulted in many questions unanswered in the interview schedule.

7. The respondents were also biased in giving their opinion.

8. Motivation includes many aspects. But, in the present study only the aspects such as personnel administration practices, health, safety, welfare, leave facilities, wage structure, working conditions and industrial relations practice have been considered.

9. As the researcher is a non-technical professional, the technical aspects of the industry have not been considered in depth.

10. The availability of time at the disposal of the researcher has also acted as a limitation in making an in-depth and an exhaustive study.
1.15. STRUCTURE OF THE REPORT

This report contains six chapters and some annexures as detailed below:

The first chapter gives an introduction to the study and explains the design of the research.

The second chapter gives an idea about the cement industry of India in general and that of Tamilnadu in particular. It also explains what cement is, what types of cement are produced, and how it is manufactured.

The third chapter gives an overview of the aspect of motivation.

The fourth chapter explains the various motivational measures provided to the employees of the various units of cement industry in Tamilnadu.

The fifth chapter presents the data collected during the study and an analysis of the same.

The sixth chapter lists the various findings of the study, the suggestions made to still more motivate the employees of the cement industry and a conclusion thereof.

The last part of the report provides the Bibliography and some Annexures.
1.16. CONCLUSION

This chapter is a gateway to the research work on motivational aspects of employees. It provides the path along which the research work has been carried out. It also explains how each step in the research work has been passed through. This report is a guide to the top management of the organization to help them to take policy decisions on employee motivation.