CHAPTER FIVE

SUMMARY, CONCLUSIONS AND SUGGESTIONS
SUMMARY AND CONCLUSIONS

For every development effort, from the construction of a small factory to the building of mammoth multipurpose project cement constitutes a basic ingredient. It plays a vital role in the economic life of the economy. In view of its crucial position, it is imperative to have a comprehensive study of the cement industry. In the earlier
chapters the historical background of the industry has been analysed after reviewing the existing literature on the subject. Then the growth and development of cement industry in Andhra pradesh in particular and in India in general have also been analysed. The industry's ability to utilise its installed capacity, to survive and to acquire further financial strength have also been discussed. The profiles of the select cement companies in Ryalaseema Region of Andhra Pradesh, the area chosen for the study and the problems experienced by these select companies are also discussed in an earlier chapter. In the present research work an attempt has been made to study the development of cement industry in the light of these problems, and its present state of functioning. An attempt has also been made to present an insight into the emerging future picture of the cement industry in Andhra Pradesh in general and Rayalaseema in particular.

In this chapter an earnest attempt has been made to summarise the findings of this research work presented in the earlier chapters. A series of policy recommendations and suggestions for further intensification of efforts for a more balanced growth of cement
industry in Rayalaseema of Andhra Pradesh have also been made. The major findings of the study are summed up below.

The present study entitled "the Development of Cement Industry in Andhra Pradesh with particular reference to Rayalaseema is divided into five chapters. The first chapter being introductory, dealt at length with the growth and development of cement industry in India during pre and post-planning periods. Demand and supply position of cement industry and the infrastructural facilities available for the development of the industry in India are also discussed in this chapter.

Cement was produced for the first time in India in 1904 by South India Industries Limited, Madras, which had an installed capacity of 30 tonnes per day (TPD). The production process was based on lime from sea shell. The company became defunct very soon. It is observed, that the growth of this nation building industry was at a very low ebb in the initial stage and got momentum during post-independence era only. During the past forty years i.e., between 1950-51 and 1989-90 the expansion of installed capacity of the
industry had been between 7-8 million tonnes per decade, which is not at all an impressive growth rate for a basic industry in a developing economy like India.

At the beginning of the Sixth Plan, however, the Government of India approved 33 million tonnes of additional capacity and about two thirds of this was expected to materialise during the Sixth Plan period. Happily, targets set in respect of additional capacity generation were realised. With the impetus given by the partial decontrol announced by the Government in 1982, several cement companies took up projects for expansion of capacity and modernisation of the cement plants both of which contributed towards increased production. Even though the production of cement has increased considerably, it has not been able to meet the entire increase in the demand in the country. The short fall became inevitable. The rigid control on prices and distribution of cement for decades resulted in an uneven growth of the cement industry till the Fifth Five Year Plan. The production of cement was totally inadequate to meet the domestic demand for this essential construction material.

However, the introduction of multi-tier retention price formula assuming a post-tax return of 12
per cent on net worth and the scheme of partial decon-
trol introduced in February 1982 attracted new invest-
ments. Consequently, unprecedented progress took
place in the cement industry, in terms of capacity
utilisation and production. The installed capacity
of cement industry which was 24.3 million tonnes in
1979-80 reached a high level of 48.5 million tonnes
in 1989-90 registering an increase of 50.10 per cent
in the year 1989-90 over 1979-80.

The capacity utilisation of the cement industry
covered around 90 per cent till 1968-69. Thereafter,
it was 77 per cent on an average, reaching the lowest
level of 70 per cent in 1980-81 and 1982-83, and it
further declined to 68 per cent in the year 1988-89.

Despite the fact that the cement industry has
grown considerably over the years in respect of insta-
alled capacity and production, it has by and large
failed to accomplish the targets fixed during diffe-
rent Five Year Plans, except during the Sixth Plan
period when the target for installed capacity was
almost fulfilled (99.5%). The achievements in all
the previous plans fell short of the targets. During
the Second Plan, the achievement was 55.6 per cent
of the target.
As regards production targets, the achievement ranged between 61.3 per cent in the Second Plan and 95.8 per cent in the Fifth Plan. The target of production could not be achieved in these years due to constraints like shortage of power and coal. The targets for capacity and production have been fixed at 62 million tonnes and 49 million tonnes respectively for the seventh plan. Thus the industry had to add 20 million tonnes capacity and achieve higher production, more or less of the same magnitude during the plan period.

By the end of Seventh Plan the demand for cement was envisaged at 49 million tonnes, the same as that of domestic production. The array of statistics presented above will indicate that in 1980-90 the Cement Industry of India would operate at 79 per cent capacity utilisation. This has to be viewed against the average capacity utilisation of 72 per cent for the last six years.

The pricing policy of the Government for the cement industry was determined basically upon the recommendations of the Tariff Commission. The Tariff Commission conducted a series of enquiries into the working of the cement industry in India in the years
1953, 1958, 1961, 1974 and 1978 and made a number of recommendations. Broadly, the Tariff Commission had recommended differential ex-works prices based on individual cost of the units. Adopting the basis of capital employed, the commission recommended differential returns for low, medium and high cost units, besides a rehabilitation allowance for older plants in 1958.

In the year 1982, the union government made a policy change, which is widely regarded as a silver lining in the industry's fortunes. The Finance Minister, Government of India announced a scheme of 'levy and free' cement with a dual pricing policy. Accordingly, the levy prices are administered by the Government through the public distribution network, while the free component could be marketed by the companies through their own channels at open market prices.

The technology adopted, demand and supply gap, growth of infrastructural facilities like transport, and communications and the raw materials available in India for the Cement Industry are also discussed. The methodology of research adopted for this research work has also been discussed in this chapter.
The second chapter deals with the growth of cement industry in Andhra Pradesh with special reference to Rayalaseema region. In this chapter various facets of development of cement industry in the area chosen for this research work have been analysed. Analysis of the installed capacity, capacity utilisation, demand and supply gap, the infrastructural facilities available for the development of cement industry in Andhra Pradesh are also presented in this chapter.

In the third chapter profiles of the select cement companies in Rayalaseema are presented. In addition to this, analysis of various aspects such as installed capacity of the select cement companies, capacity utilisation, actual production, the profits earned and losses incurred by the select units are also presented in this chapter.

The total amount of capital for all the select cement companies is Rs.112.24 crores. The total capital of Coromandal Cements constitutes 52.57 per cent (59 crores) of the total capital of all the select cement companies of this research study. The total capital of Cement Corporation of India constitutes 29.89 per cent of the total capital of all the select
cement companies. Panyam Cement's total capital constitutes 7.28 per cent, that of Texmaco Cements 6.38 per cent and S.V.Cements 3.88 per cent of the total amount of capital of all the select companies in Rayalaseema. The working capital of Coromandal Cements forms 41.21 per cent of total working capital of all the select cement companies in Rayalaseema. Coromandal Cements ranks first in terms of the working capital of the select companies in Rayalaseema. The total amount of working capital of all the select cement companies in Rayalaseema is computed at Rs.23.27 crores.

In terms of installed capacity, Coromandal Cements leads the rest of the select cement companies (8.00 lakh tonnes) followed by Panyam Cements and Texmaco Cements (at 5.00 lakh tonnes each), Cement Corporation of India (4.00 lakh tonnes) and S.V.Cements (0.50 lakh tonnes).

In terms of actual production, percentage capacity utilisation, and sales of select cement companies also Coromandal Cements ranks first.

In Chapter four there is a detailed discussion on various problems with which the Cement Industry in Andhra Pradesh in general and in Rayalaseema in particular are confronted with, for example:
1. Infrastructural facilities;
2. Procurement of raw materials;
3. Low profitability;
4. Transportation;
5. Cost of production;
6. Cost of capital;
7. Technology of production;
8. Environmental problems;
9. Profits and losses (Operational results);
10. Employment of work force;
11. Problems of power;
12. Supply of water;
13. Government policies;
14. Research and Development;
15. Storage, packaging and distribution, etc.
16. Incentives;
17. Marketing;
18. Scientific and Technical expertise;
19. Packaging, forwarding and Insurance facilities.
20. Administration.

Chapter five contains a brief summary of the earlier chapters and also discussion of the various conclusions and suggestions arrived at in this research study.
SUGGESTIONS

A number of suggestions have emanated from the respondents i.e., managements of the selected cement companies in the Rayalaseema region in response to the questionnaires administered to them as well as discussions with several experts on the subject with whom the researcher had conducted a number of unstructured interviews in the course of this research study. In addition, the researcher had also gathered a number of invaluable suggestions from several published and unpublished works on the subject which have some relevance for the theme chosen for this research study, and which hold equally good in the present day context of cement industry in Andhra Pradesh with particular reference to Rayalaseema. An earnest attempt has been made to incorporate all these suggestions in this chapter, whenever it is felt, they have some relevance and validity for the theme.

1. Governments Policy

The Governments policy lays much emphasis on modernisation and upgradation of technology in cement industry, so as to enhance production. The Planning Commission in its approach paper for the Seventh Five
Year Plan has observed that "the focus of industrial development in the Seventh Plan will be on upgradation of technology, modernisation, better utilisation of assets and promotion of efficiency". In this context, the Government ought to bear in mind that capacity expansion and modernisation could be affected only if the industry was enabled to secure the promised 12 per cent post-tax return on networth. Hitherto, the cement units have been obliged to absorb completely the escalation in cost in the absence of a suitable hike in cement price and hence there has been considerable reduction in their internal generation of funds.

It is, therefore, of vital importance that the deterioration in the financial health of the industry is arrested and the industry rejuvenated to continue unimpeded the process of accelerated growth to attain the capacity target of 62 million tonnes by the end of the Seventh Plan. This would call for necessarily the adoption of a formula under which there should be an automatic increase in the price of levy cement to offset the escalation in costs.
The target of achieving estimated capacity of 62 million tonnes by the end of the Seventh Plan and 100 million tonnes by the turn of the century may not be a difficult proposition, provided the industry is supplied with adequate inputs and infrastructural facilities and is ensured post-tax return on production to the extent of at least 12-15 per cent annually.

2. Level of Investment

Investment is the key for the development of any industry. Profitability also stands in the way of the industry availing of the soft loan schemes for modernisation of the cement plants from financial institutions, as the units are unable to provide their share of the finance and prove the economic viability of their projects. In fact, the projects are not being cleared by financial institutions because their financial viability is not above suspicion in the context of low retention prices. The cement industry, therefore, wants the Government to advise the financial institutions to clear these projects, on the basis of assurance of higher retention prices ensuring 12 per cent post-tax return.
3. Transportation costs

The finished product e.g., the cement companies in Rayalaseema in particular and Andhra Pradesh in general, has no marketing outlets in North India. It is due to high transportation costs especially for longer distances. Therefore, it is suggested that the government should take necessary steps to reduce the transportation costs and enable the cement industry in Rayalaseema to spread sales network as well as to augment the quantum and value of sales in a larger measure.

4. Shortage of Power

Power shortage has always been the single major cause of loss in cement production. Frequent interruption of power supply and violent fluctuations in the voltage of supplies are common problems experienced by cement industry in Andhra Pradesh. On an average, even a 10 minute power interruption could mean a two hour loss of production. Hence, efforts should be made to provide adequate supply of power to the cement companies.
5. **Availability of Adequate Resources**

If cement production is to be increased, the cement companies should be able to generate adequate resources, to finance their expansion and modernisation schemes. Setting apart some portion of total earnings by cement companies in a found to be maintained by the Government sponsored organisation for carrying out programmes of modernisation, improvement of productivity, expansion of installed capacity and upgradation of technology, etc., are suggested in this context.

6. **Capacity Utilisation**

It is suggested that cement companies should be encouraged to achieve more than 100 per cent capacity utilisation, and for this purpose special dispensations, in levy obligations should be made for production beyond 100 per cent, upto 125 per cent.

7. **Measures to provide Raw Materials**

For making the cement companies in Andhra Pradesh more competitive the following measures are essential: (a) supply of inputs like coal, power, etc., at international prices, (b) consideration of one tonne of export as equivalent to two tonnes of levy obligation, and (c) providing of cash subsidy.
8. Decontrol

Total decontrol is essential, in view of the fact that the producers are in a position to meet the full demand for the cement in the economy and presently the total capacity build up is adequate to take care of the demand in the near future.

9. Reduction in Levy

Reduction in levy quota with simultaneous increase in retention prices is also essential. The government has discharged the first part of its obligations, but should show the wisdom to discharge the second part of its obligations too. It is only fair that the industry is compensated with a reasonable increase in levy price to absorb some of the non-compensated escalation in relation to price and it will be only appropriate that this increase is immediately conceded.

10. Tackling the Major Constraints by the Government

It should be the responsibility of the Government to tackle the major constraints coming in the way of the cement industry in utilising its installed capacity. The Central Government should forthwith categorically instruct the State Electricity Boards not to subject cement industry to power cut beyond
25 per cent at any time. The quality of coal supplied to the cement industry needs considerable improvement.

11. Solving Labour Problem

The Government should also handle the problem of labour unrest, in an amicable manner, using its good offices with the representatives of labour unions and the management of the companies and employ a suitable conciliation machinery, to sort out their problems and persuade them to come to some terms, with the help of which there will be a smooth running of the organisation. It is true that some efforts are already made in this direction. What is required at present is to intensify these conciliatory moves further with all the earnestness at the command of the concerned officials of the Government. The authorities should help the cement industry to amicably settle the problem of labour unrest. Disruption in production ought to be avoided for obvious reasons.

12. Simplified production circuits

Preference should be given to simplified production circuits with minimum automation. This reduces the cost of the project and makes operations simpler so that highly skilled labour will not necessarily
be in great demand. Even unskilled and semiskilled workers duly trained will come up to the expectations of the management of the companies.

13. Design of Cement Plants

Suitable designs of the cement plants favouring strong installations requiring scarce maintenance work, little technical assistance and servicing and minimum import of spare parts should be evolved and adopted by the managements of the cement companies.

14. Adequate care has to be taken to achieve a minimum specific energy consumption within the limitations of small scale of production.

15. As far as practicable the cement plants should be designed in such a way that they take into account the utilisation of local energy resources.

16. Adequate care has to be taken to design typical projects applicable to various cases with slight modifications. This allows reduction in the engineering and assembly costs, shortening of the construction period, and facilitating the know how transfers.

17. Pricing Policy

The pricing policy should have some amount of inbuilt flexibility, for example:
(a) The economically and socially weaker sections should be supplied cement at prices which should be within their reach, (b) this scarce national resource should be distributed to priority sectors as per national plans and public policy, (c) self-reliance is attained by promoting technological capability, import substitution and exports in tune with the resource endowment of the country; (d) Adequate care has also to be taken of the existing units having high cost of production due to inherent reasons like the low level of technology adopted, inferior quality of inputs, and defective location of the plants; (e) adequate care has also to be taken of the new units and expansion phase of the existing ones on account of increased capital cost and teething troubles experienced in the initial stages of the setting up of the cement plants.

18. Import of Modern Technology

There should be more liberal import of modern technology for purposes such as precalcination of cement with a view to increase the output at minimum production cost. By making suitable changes in the various complementary factors, the kilns of lower capacity should be replaced by economically viable kilns such as 600 tonnes per day (tpd) or even 1200 tpd
(tonnes per day sized kilns). This should be coupled with switch over to dry process where wet process is being adopted. The production capacity should be expanded to reap the economies of sale. Government should encourage dry process plants to reduce infrastructural exigencies, as in the dry process there is a saving of 27 per cent of coal consumption as compared to the wet process. The industry has been severely affected by the inadequacy of infrastructural facilities like shortage of coal, power and transport net work, etc. Therefore, no effort should be spared to eliminate the infrastructural constraints which have been responsible for the cement scarcity in the recent past. The policy of partial decontrol accompanied by infrastructural development will facilitate restoration of demand-supply equilibrium within the shortest possible time. This will reduce the quantity of imports and save precious foreign exchange. Thus with the infrastructural improvement, the individual units should deploy best of their efforts to harness their installed capacity to the fullest extent.
19. Location of the Cement Plants

Efforts should be made to locate the cement manufacturing plants over a wide area at different places so that the grinding plants can be set up nearer the consuming centres. The manufacture and use of pozzalana and slag cement should be encouraged. Establishment of mini cement plants should be encouraged. It has many advantages besides economic utilisation of small deposits of limestone. It involves comparatively lesser transport problems and low level of capital investment and shorter gestation period, etc. Size and proximity of potential markets should be given due weightage while deciding upon locational consideration.

20. The net worth of cement should be arrived at on the basis of attainable degree of capacity utilisation. The utilisation ratio should not be unrealistically assumed, and the attainable capacity utilisation should be revised periodically, thus bringing into the fold of price fixation mechanism an element of flexibility.

21. On the basis of experience of the operation of the regulatory policy and in order to prevent
sickness among the cement companies and to remove genuine difficulties and encourage certain types of expansion and diversification, without however, affecting the basic objectives of the policy regarding location of the industry, a few suggestions are given below. All these suggestions deserve serious attention of the concerned authorities at the time of issuing new licences.

(a) Entrepreneurs from Northern and Eastern regions should be encouraged to set up cement plants in Andhra Pradesh.

(b) Big business houses like ACC should be discouraged from further expansion of their manufacturing operations.

(c) Industrial houses with dry process and split location facilities should be encouraged.

(d) Establishment of new cement factories in the public sector should also be encouraged. They should be advised to adopt dry process technology.

(e) Industrialists intending to produce PBFS and PP cement should be encouraged substantially.
22. Institutional agencies like Industrial Finance Corporation of India and Industrial Development Bank of INdia and other Commercial Banks and financial concerns should be encouraged to provide credit facilities at concessional rates to old units for modernisation purposes and to the new units to undergo sufficient expansion.

23. The sick units should also be given more sops to help them to recover from their crisis. Dealership of cement should be eased to create more demand for the cement industry.

24. Energy Consumption

Efforts should also be made to reduce energy consumption to the minimum and reduce costs of manufacturing cement. There is every need for developing a long-term perspective plan for energy management to effectively tackle the problem of energy shortage.

25. Appropriate Technology

Appropriate technology involving the use of inferior grade of coal of high ash content and of lower calorific values should be adopted. The NCB developed one line coal quality modulation system. This
will help in providing the most appropriate solution to this problem.

26. Installation of Pollution Control Equipment

Installation of pollution control equipment, particularly electrostatic precipitations is another suggestion that should attract the attention of the management of the cement companies.

27. Installation of modern instruments and process control including X-Ray analysers etc., should be encouraged.

28. To enhance production capacity, modern material handling equipment, and mechanisation of loading operation should be encouraged.

Finally, cement industry should go in for extensive modernisation at all levels including replacement of existing plant, machinery, equipment and upgradation of quality of product, and process technologies. Besides, efforts should also be made to minimise the consumption of scarce coal and power to cut down the cost of labour; to step up the level of productivity of labour and above all to protect the environment from the pollutants unleashed in the manufacturing
process of cement at any cost. The fear of excess supply and consequent recession and demand glut may be averted if demand for more cement is generated. Suitable ways and means have to be evolved to generate additional demand for cement. It is only then that there will be a match between demand and supply of cement and the potential recession can be averted.

Unless the Government adopts a more pragmatic attitude in providing fiscal reliefs and also adequate infrastructural support by ensuring proper quality and adequate quantity of coal, reliable power, and required number of railway wagons for movement of raw materials, fuel and finished product and the financial institutions come forward extending greater and liberal assistance for setting up new plants, and modernisation of the existing ones, it would not be possible for the cement industry to invest further to achieve the targeted capacity. What is feared now is that after a certain period of time, the production will stagnate and the increase in demand shortage is likely to occur once again. Such a situation is not only harmful, but the target of 100 million tonnes by 2000 A.D will remain a wishful thinking.
An earnest Implementation of the various suggestions discussed above, with all the dogged determination, tenacity of purpose, dynamism, pragmatism, tact, innovative skills and imagination, at the command of the various officials and non-officials, connected with the problem of development of cement industry in Rayalaseema in Andhra Pradesh in particular, and in India in general, will certainly pave the way for accelerating the process of development of cement industry not only in Rayalaseema of Andhra Pradesh but also in India in general. Let us be optimistic and hope for a bright future for the development of cement industry in Rayalaseema Region of Andhra Pradesh.