

Growth Overview of Cement Industry in India and Performance Appraisal

Dr. Juhi Yadav

Abstract –

India is the second largest cement producer in the world after China that makes Cement Industry one of the most important industry in India. For any country the production and consumption of cement defines the country's progress to a certain extent. In India new cement industries are developing now a days. Indian cement industry has a great opportunity as it is still developing. The success of any organization depends very much on the ability of that organization to measure accurately the performance of their Human Resource and human resource is the greatest and remarkable asset of any organization.

Cement manufacturing industries are mainly located near the limestone mines because limestone is the major raw material for cement manufacturing. If cement manufacturing industries are situated near to limestone mines then transport cost will also get decreased. Rajasthan has huge limestone deposits therefore most cement manufacturing players have their plants in Rajasthan, especially the northern region of Rajasthan which constitutes 80% market share with the plants of major cement units such as Ultratech Cement, Binani ,JK Cement ,Shree Cement Limited, Ambuja Cement, Mangalam Cement Etc. With such a large scale of production in these cement industries the quality and quantity of product very much depends on practice of human resources coupled with the sound Performance Appraisal System.

Shree Cement Ltd is one of India's premier cement makers and the largest in Northern India. The company is environment friendly and energy conscious business organization. They have three brands under their portfolio, namely Shree Ultra Jung Rodhak Cement, Bangur Cement and Rockstrong Cement. Their manufacturing units are located at Beawar, and Ras in Rajasthan. They also have grinding units in Khushkhera in Rajasthan. Shree Cement Ltd was incorporated in the year 1979 with its headquarters in Kolkata, India. The company was promoted by Calcutta-based industrialists Sh. P.D Bangur and Sh. B.G Bangur.

Cement production in India increased at a compound annual growth rate (CAGR) of 9.7 per cent in the period from 2006 to 2013, producing 272 MT of the cement during the said period. The production capacity is projected to reach 550 MT by FY 2020-21. The cement industry has been expanding due to the increasing infrastructure activities and demand from the real estate sector. The cement industry will benefit from the announcement made in the Budget 2014-15 for concentrating more on roads, metro rail projects and urban infrastructure.

Background of Cement industry

For all countries the production and consumption of cement defines the country's progress. In manufacturing sector cement industry is one of the major and important industries. This industry produces a commodity which is used by an individual for day-to-day work and also used by the government in various infrastructure projects. Cement industry plays a pivotal role in development of a country and its economic growth. Indigenous markets have skilled manpower and latest technology which are backbone of cement industry. New cement industries are developing now a days all over Indian subcontinent. Indian cement industry has a great opportunity as it is still developing. The success of any organization depends very much on the ability of that organization to measure accurately the performance of their human resource and human resource is the greatest and remarkable asset of any organization. The impact of economic factors like the supply of raw materials, cost of labour, cost of infrastructure and location all determine the economic growth and development of Indian industries but one major factor has always been the profit incentive.

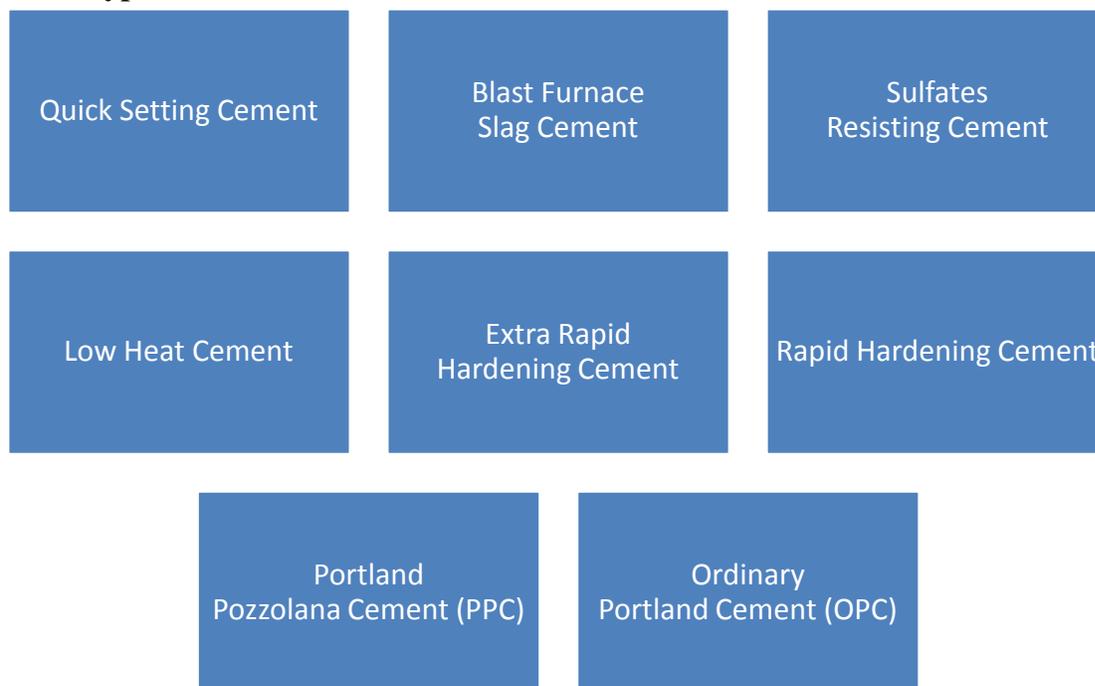
“That every planned effort to raise the level of economic development of a country must accord a high place to cement industry”. (Ramanathan, 1973)¹

1.2 Development of cement

In past, various types of building materials were used for construction of public historical and religious buildings sand, stone and in the special case; marbles were used for this purpose. The house of ordinary citizens was usually made of mud and thin bricks. In few cases lime and pazzolona were used for getting beautiful finishing for the interior surface. There were very good builders and mesons who have created beautiful excellent temples, buildings and bathing ghats thousands of years ago, still they are famous for their work and shape. However, gradually cement and new types of material were developed in Europe. In 1824 an English man Joseph Aspadin, patented an artificial cement made by calcination of an argillaceous limestone known as Portland cement. As concrete made from it resembled a famous Building stone obtained from the ISLE of Portland near England. This was the beginning of Portland cement industry as it is known today. Cement is a powdered material when mixed with water forms a paste that hardens slowly. It is made by sintering a mixture of various raw materials. The main raw material in the mixture is calcium carbonates as limestone and other alumina, silicates as clay or shale. During the Sintering process chemical reaction takes place, which produces nodules termed as clinkers which consists of calcium silicates and aluminates and when the clinker is pulverized with a small amount of gypsum, the resulting powder is called Portland cement.

“Cement the wonder material for binding stones and bricks together has contributed to the development of modern Civilization. In a number of ways for which it is known as the builder of modern Civilization”. (Encyclopaedia Britannica, 1953)²

1.3 Different Types of Cement: -



Cement is essential material for all types of manufacturing works and it is largely used in construction. From smallest building to largest structures like dams, irrigation works, bridge, industrial complex etc. In short,

it can be said that cement as well as steel are since equal for that development of construction activities in the country. (Kurt E. Peray)³

1.4 Industrialization: -

Industrialization is the process by which an economy is transformed from a primarily agricultural one to one based on the manufacturing of goods. Industrialization has been instrumental in the economic development of the world. The process has improved productivity and allowed for mass production, which has increased standards of living. Industrialization is a process by which a large system obtains capabilities to do what it could not do before. Japan became a global power in the automobile industry after the Second World War, because Japanese manufacturers learned quickly to do what they could not do before. Their suppliers learned too, while managers and workers within the industry were rapidly learning and improving their skills, the government facilitated the process of building capabilities in industries. Complex systems acquire capabilities they do not have when the interdependent sub-systems within them learn to do what they could not do before. Beyond raw material resources, the only source of competitive advantage a nation has is its ability to learn and improve its competitive capabilities faster than all other nations. With a participative process of determining industrial policy facilitated by the government, Japan developed its steel, chemicals, and automobile industries into world-beaters, even though it did not have any raw material resources. Technologists have designed remarkable machines with which human beings have been able to do what they could not do before — like fly to the Moon. In an engineered system, the designer sits outside the system while designing it. This approach to designing an industrial policy will work, because the policymaker must be a participant within a dynamic system, learning within it through multiple feedback loops. The policymaker providing it a detailed blueprint to function. This was the fundamental in India's approach to its industrial policy until the 1980s. Industry, which was learning, found that the government controlled it without understanding what industrialization was about. The sweeping in of the 'Washington Consensus' ideology of government is not the solution; it is the problem, leave it to the market, swung the pendulum towards the open-chaotic systems archetype. The idea of 'industrial policy' became taboo. When many countries, including the US, began to realize by 2008 that governments must do something to grow industries and jobs in their countries, they had to plan other names for what was required, such as 'innovation policy' and 'entrepreneurship policy'.

The way forward to unregulated markets can become chaotic, as the world realized when the financial crisis happened. Government regulation is necessary. However, India will not want to go back to the 'engineered-controlled' model of industrial policy, which is inappropriate for a dynamic, learning process. India should adopt the third archetype, of 'complex self-adaptive systems', which is the appropriate model for industrial growth. (Madhu Bala, 2003)⁴

Industrialization is regarded as world's first revolution, industrialization has played a very significant role in the process of economic development of all countries in the world. (Sumathy K and Mahesh D, 2006)⁵

1.4.1 Industrial Policy

Industrial policy plays a vital role in economic development. Industrial Policy is the set of standards and measures set by the Government to evaluate the progress of the manufacturing sector. The government takes measures to encourage and improve the competitiveness and capabilities of various firms.

Objectives of Industrial Policy

- To promote growth in productivity.
- To generate more employment opportunities.
- Utilize the available human resources better.
- To step up the progress of the country through different means.
- To match the level of international standards and competitiveness.

All measures to encourage and improve industries, interfered with trade policies to promote industrial expansion. Now, even the US, confronted with the growth of China's industries supported by its government's policies, is feeling the need for an industry-cum-trade strategy to counter China. India cannot avoid, any longer, the necessity for a good policy to grow its industries. Industrial policy is not a document; It is a procedure of learning in action that brings together the elements of the industrial system. The Indian industry is not a clean sheet upon which a policymaker can impose a policy. India has a rich industrial ecosystem with large industries in many sectors and millions of large and small enterprises. Each element within the system will see the system from its own perspective and will lobby for its own interests. It is essential for the policymaker guiding the process, and for the elements too, to anticipate the consequences of fixing any one part of the system on the other parts, to avoid fixes that can fail elsewhere in the system. India has recognized the need for an industrial policy and groundwork has been done, with consultations with many stakeholders, by the government and stated the need for an ongoing, consultative, learning process. The government should take a bold step soon to install this process if it wants to grow industries, create jobs, and take the Indian economy to \$5 trillion and beyond. (the annual report by <https://www.thehindubusinessline.com>)⁶

1.2.2. Industrial Policy in India

The industrial policy introduced by the Indian government are as follows:

Industrial Policy Resolution, 1948& 1956

- It declared the Indian economy as Mixed Economy.
- To promote Small scale and cottage industries.
- The government controlled foreign investments.
- Industrial Policy Resolution, 1956 (IPR 1956).
- This policy laid down the essential framework of Industrial Policy.
- This policy is also known as the Economic Constitution of India
It is classified into three sectors:
 - Schedule A – which includes Public Sector (17 Industries)
 - Schedule B –Mixed Sector (i.e. Public & Private) (12 Industries)
 - Schedule C – only Private Industries
- This has provisions for Public Sector, Small Scale Industry, and Foreign Investment. To meet new challenges, from time to time, it was modified during declarations in 1973, 1977, and 1980.

Industrial Policy Statement, 1977

- This policy focused on Decentralization.
- It gave main concern to small scale Industries.
- It created a new unit called “Tiny Unit”.
- This policy-imposed restrictions on Multinational Companies (MNC).
Industrial Policy Statement, in 1980.

- The Industrial Policy Statement of 1980 shows the need for promoting competition in the domestic market, modernization, selective liberalization, and technological up-gradation.
- Due to this policy, the MRTP Act (Monopolies Restrictive Trade Practices) and FERA Act (Foreign Exchange Regulation Act, 1973) were launched.
- The main purpose was to liberalize the industrial sector to increase industrial productivity and competitiveness of the industrial sector.
- The policy laid the basis for competitive export-based and for encouraging foreign investment in high-technology regions.

New Industrial Policy, 1991

- The New Industrial Policy, 1991 had the main objective of providing facilities to market services and to increase efficiency.
- Larger tasks were provided by - LPG

L – Liberalization (Reduction of government control)

P – Privatization (Increasing the role & scope of the private sector)

G – Globalisation (Integration of the Indian economy with the world economy)

Because of LPG, old domestic firms have to participate with New Domestic firms, MNC's and imported items

- The government allowed Domestic firms to import improved technology. The Foreign Direct Investment ceiling was boosted from 40% to 51% in selected sectors.
- The maximum FDI limit is 100% in selected sectors, like infrastructure sectors. Foreign Investment promotion board was recognized. It is a single-window FDI clearance agency. The technology transfer agreement was permitted under the automatic course.
- Phased Manufacturing Programme was a situation on foreign firms to decrease imported inputs and use domestic inputs, it was eliminated in 1991.
- Under the necessary convertibility part, while giving loans to firms, part of the loan will/can be changed to equity of the company if the banks want the loan in a particular time. This was also close downed.
- Industrial licensing was eliminated except for 18 industries.
- Monopolies and Restrictive Trade Practices Act – Under his MRTP commission was approved. MRTP Act was introduced to test monopolies. The MRTP Act was relaxed in 1991.
- On the proposal of the SVS Raghavan committee, Competition Act 2000 was approved. Its objectives were to support competition by creating a good industrial environment.

Review of the Public sector under this New Industrial Policy, 1991:

- Public sector investments (Disinvestment of Public sector)
- De-reservations – Industries reserved completely for the public sector were reduced

The Export & Import Policy 2015-20, incorporated in the FTP for cement is free. The 12th five-year plan shows a great growth prospective for the cement Industry in India., the Indian cement industry will have to improve capacity of production to compete against the multinationals which are entering the Indian market. Success for a company will also include adapting new Business strategies, to compete against the global players. The growth of this sector can be determined by analyzing industry trends and governmental data. We will look at the business strategies specifically in terms of consolidation, globalization, targeted customer

strategies, R&D corporate governance, innovation and branding. In emerging economies, particularly in Asia, demand will increase more significantly. Therefore, expansion will be there in growing economies and this is an important feature of global strategy. There are three key of macro-level modernizes that corporations. Most large global as well as domestic players have multi-product businesses in the building materials part and a key focus. All major cement companies in India are producing world class cement so among other factors, supply chain management is one of the vital factors for the success of any cement company. This supply chain management for delivery of material from plant to the consumer contributes a significant factor of total cost. Increase in Investment in Cement industries is required to ensure a constant supply of cement to meet national development programme, to create employment system in the country as well as to boost GDP, to develop infrastructure, to know how to prevent the outflow of hard currency money and to enjoy lower cost advantage through a better system of control production in one's country. (Low Pheng and TAN ONGBEE, 1993)⁷

1.3. Future Outlook Of Cement Industry:-

The Cement Industry plays a vital role in infrastructure development all over the world and no other material seems to substitute it in the near future. Some new areas for cement demand are concrete roads, channel lining and rural infrastructure (housing). There is an overall demand of 65% of cement from Construction Sector. The Government of India has been laying an emphasis on infrastructure development, with 100 smart cities, modernisation of 500 cities, affordable housing for all by 2022, cement concreting of national highways, provision of sanitation facilities, etc all in the pipeline for development over the course of the next years. These all direct to future growth of Indian Cement Industry. The country is independent in terms of cement production. In 2025 production capacity will reach at the level of 550 MT. It is a continuous process and progress in infrastructure to fulfill the declared of a self as accelerating process of economic development. (v.k.r.v, roa)⁸

1.4.: Global prospects: -

The rapid infrastructure development is a major factor of increase in global cement demand and consumption in emerging economies. Asia contributes to 66% of the global demand. There is a direct relation in cement consumption and economic growth. At the opposite end of the spectrum, the relatively healthy growth in many economies, in recent years has helped spur cement consumption. Cement consumption has a higher degree of correlation with the gross national product per capita. Cement is produced in 156 countries.

Factors affecting economic growth:-

Chart :1.1

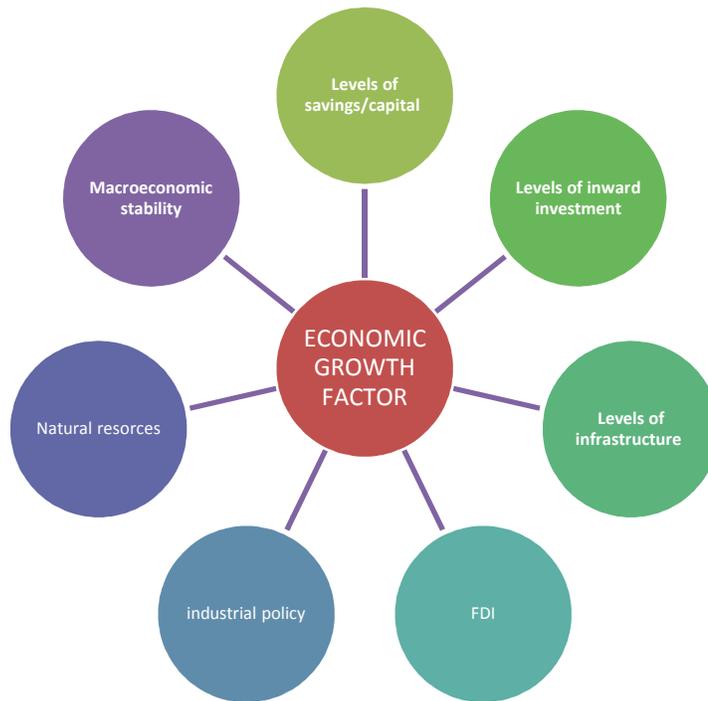
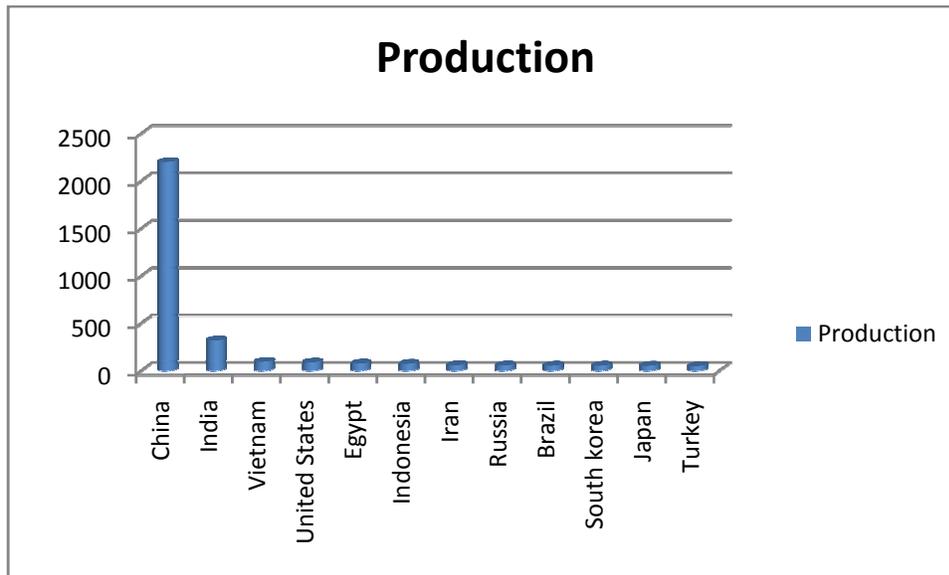


Chart:-1.2. Major countries in worldwide cement production (in million tons)



Source:<https://www.globalcement.com/>

Graph:-1.1



China 2200mt, India 320mt, Vietnam 95mt, United States 89mt, Egypt 76mt, Indonesia 74mt, Iran 60mt, Russia 57mt, Brazil 55mt, South Korea 55mt, Japan 54mt, Turkey 51mt

China contributing almost 70% of the total volume. Besides Asia's contribution of 67%, western Europe has about 8% output, middle east and North America nearly 6% each, Africa, rest of America and common wealth of independent states around 4% each and eastern Europe around 2%. As per the report of ITC (Geneva) the US was the largest trader of cement followed by Germany, Belgium and Netherlands. In spite of being major trader of cement India has a large potential for exports in the Middle East and South East Asia. Its strengths are adequate lime stone and coal reserves and adequate capacity to produce world class quality with newest technology though on cost part it is not as competitive as China. Companies stance on this is that the higher direct and indirect taxes and the freight part in transporting it to port leads to higher cost. Besides this the facilities at port are not good enough to handle the material properly. This creates a vast difference as worldwide 70% of the cement movement takes place through sea route compared to 1% in India.

1.5. Indian Cement industry:-

India secures second position in cement production. Cement manufacturing sector is important for GDP and Employment. Besides this it is a significant source in the revenue generation for both center and state government excise and sales tax departments. (Burange, I.g. and Shurti, 2009)⁹

Historical aspect:-

The reason for more domestic manufacturing is due to higher import rates on cement imported from England. India has large prospects like capital, more raw material, labour, and support of the government. All of these factors make cement industry in India a leading industry.

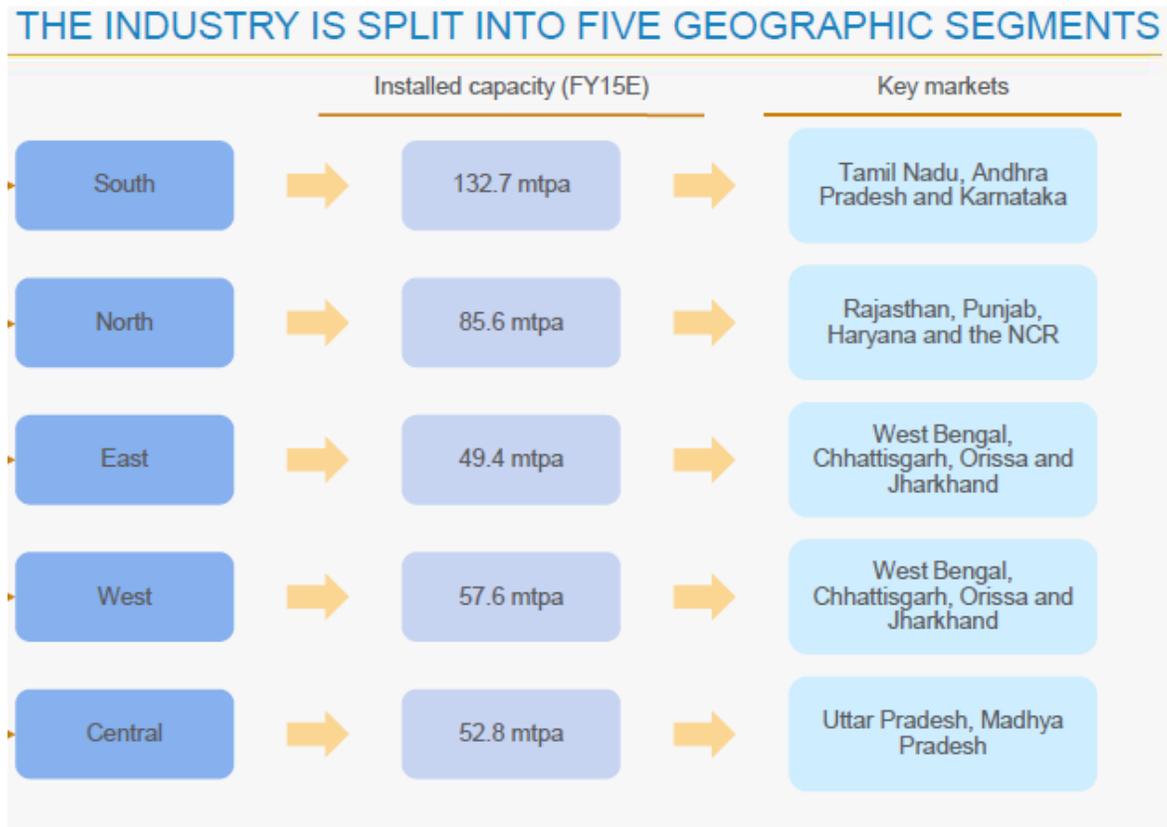
- The first association of the cement manufacturers was formed in India as "Cement Manufacturers Association" in year of 1925.
- "Cement Association of India" formed in 1927.
- With the arrival of quota system in India "Cement Marketing Company of India" was set up in 1930.

- A new cement industry came in 1914 by the name **Indian Cement Company Limited** with thousand tonnes capacity per annum at Porbandar in Gujarat.

Cement demand in emerging economics is much higher than it is in development countries where the demand has reached a plateau. Demand for cement will be affected by the spending on infrastructure. (Gupta, 1978)¹⁰

At the time of independence there were 18 cement plants producing about 1.5 million tones of cement, by march 1986 the Indian cement industry hadan installed capacity of 42.35 million tones and a production of around 32.05. (Chakravarthy)¹¹

Chart:-1.3



Cement factories in India are mainly concerted in Madhya Pradesh, Andhra Pradesh, Rajasthan, Gujarat, Tamilnadu and Karnataka as limestone is accessible in large quantity in these states, limestone is the raw material for cement industry. Around 1.5 tons of cement grade limestone is required to produce one ton of cement, the limestone reserve of the above mentioned States account for 73% of the reserve in India. The Government of India promote infrastructure development like buildings and roads for economic growth. It is making plans for infrastructure growth by 1 trillion in 12th five-year planning. Only the three states Andhra Pradesh, Rajasthan, and Tamil Nadu cover 77% market share of cement industry. The major industries in the Indian Economy are Iron & Steel, Textiles, Jute, Sugar, Cement, Paper, Petrochemical, Automobile, Information Technology (IT), and Banking & Insurance. There are four types of industries. These are primary, secondary, tertiary and quaternary.

The cement industry is one of the few industries that has become free from dependence on imported technology and enterprises which itself is considered an achievement in India. :(Commerce, 1971)¹²

Market Size

Cement production achieved 329 million tons (MT) in 2020 and is projected to reach 381 MT by 2022. However, the consumption stood at 327 MT in 2020 and will reach 379 MT by 2022. The cement production capacity is predictable to touch 550 MT by 2020. As India has a high quantity of limestone in the country, the cement industry assures vast potential for growth. According to CLSA (institutional brokerage and investment group), the Indian cement sector is witnessing improved demand. Key players reported by the company are ACC, Dalmia and Ultratech Cement. In the second quarter of 2021, Indian cement companies reported a sharp rebound in earnings and demand for the industry, increase was driven by rural recovery. With the rural markets normalizing, the demand outlook remained strong. For 2021, CLSA expects a 14% increase in EBITDA in the cement market for its coverage stocks.

Investments

In November 2020, Ramco Cements Ltd. acquired an additional stake worth Rs 2.48 crore (US\$ 335.34 thousand) in Lynks Logistics. In November 2020, Dalmia Cement has signed a contract with Paytm for digitalizing its payment processes. Paytm will help customers purchase Dalmia Cement products from more than 30,000 dealers and distributors across 22 Indian states and union territories using Paytm Wallet, Unified Payments Interface (UPI) and other cashless modes of payment.

Selection of even a single cement plant it is an involved exercise by itself according new plant depend on factors such as nearness of limestone deposit approximately two supply points of coil and gypsum etc. (NCAER 1948)¹³ In October 2020, Dalmia Bharat Group declared to invest ~Rs 2,000 crore (US\$ 270.44 million) for new cement plant in Kalaburgi, Karnataka, JK cement has think to put Rs. 1,700 crores plant with production capacity to 15 mt in 2020. In November 2020, Shiva Cement Ltd, a subsidiary of JSW Cement Ltd, has announced plans to invest over Rs. 1,500 crores (US\$ 203.21 million) in a new 1.36 million tons per annum clinker unit project in Odisha.

Government Initiatives

Some of the initiatives taken by the Government of India are as below:-

The Union Budget has allocated Rs. 139 billion (US\$ 1.93 billion) for Urban Rejuvenation Mission: AMRUT and Smart Cities Mission. Indian government declared schemes, housing for all citizens, and Smart Cities Mission both are increase cement demand in the country. The Government of India extended an additional outlay of Rs. 18,000 crores (US\$ 2.43 billion) for the PM Awaas Yojana - Urban over the already allocated Rs. 8,000 crores (US\$ 1.08 billion); this is expected to be used for the development of ~30 lakh houses (ground support for 12 lakh houses and completion of 18 lakh houses) and will likely create an additional 78 lakh jobs and boost production and sale in the steel and cement sectors. In Budget 2020-21 of Rs. 27,500 cr. has been given for Pradhan Mantri Awas Yojana. All Government schemes are directly promoting investment, production and export in cement industry.

Table:-1.1. **Indian cement industry production and consumption**(in mt)

Year	CONSUMPTION	PRODUCTION
2012	230.00	230.49
2013	243.00	248.23

2014	249.00	255.83
2015	257.00	270.04
2016	269.00	283.46
2017	272.00	279.81
2018	296.00	297.56
2019	319.00	190.86

Source:-<http://www.ibef.org/industry/cement-India.aspx>

Graph:-1.4.

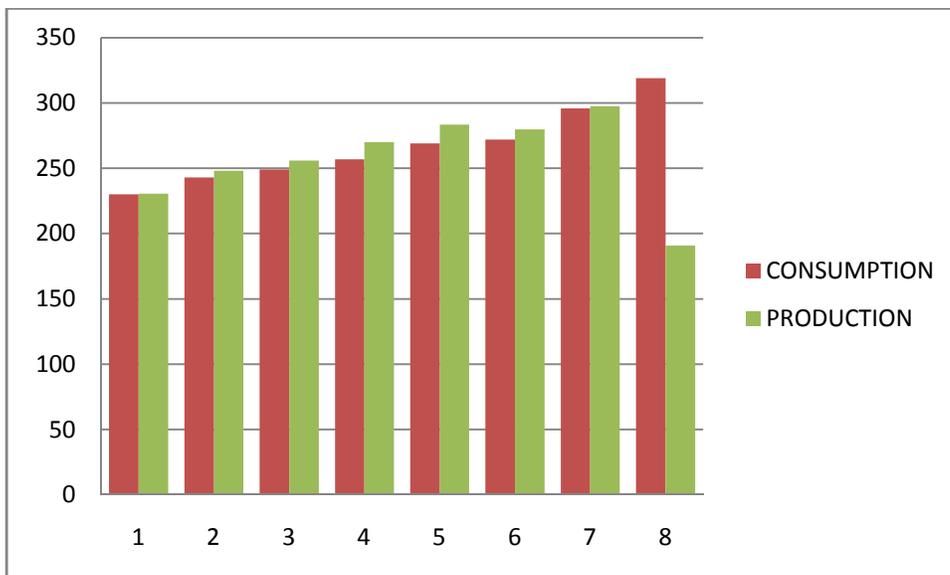


Table depicts consumption and production in 2012 (230mt), 2013 (243mt), 2014 (249mt), 2015 (257mt), 2016 (269mt), 2017 (272mt), 2018 (296mt), 2019 (319mt). The graph shows that increase in consumption and production. However, decrease in the bargaining power of industry leaders is due to presence of small & mid-sized cement players across regions arising. A good profit margins attracted a large number of foreign players. In Indian foreign investors increased their investment after liberalization. Government highest focused is on developing infrastructure and housing and raising per capita income. Cement demand is also closely connected to the economic growth, mainly it being the housing and infrastructure sector. Long term cement demand growth rate is expected at 1.2 times the GDP growth rate.

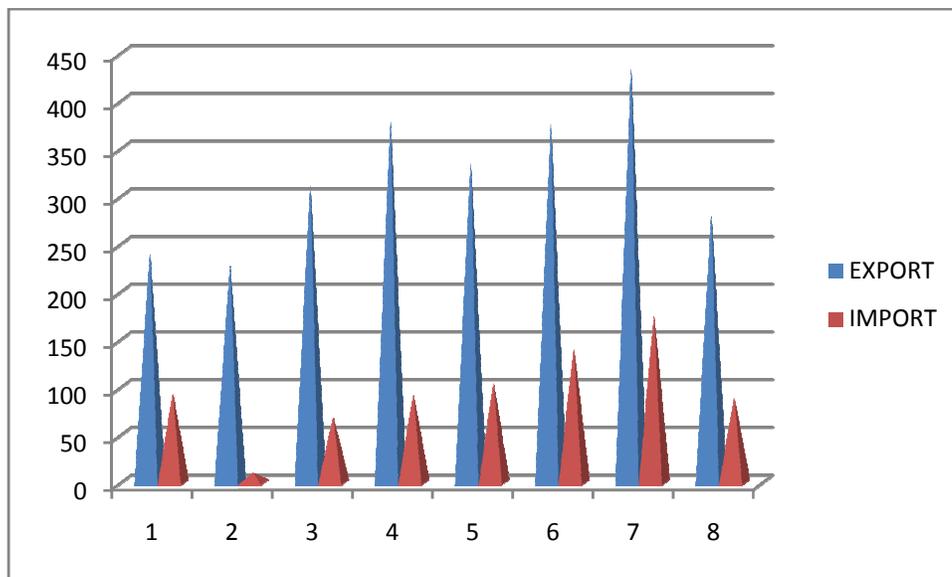
The Government of India has taken various measures to boost infrastructure in the country, which will help boost demand for the cement sector. In addition to its smart cities' initiative, it has declared the National Infrastructure Pipeline which has introduced projects worth US\$ 1.5 trillion for the next five years. It also has plans to set up a Credit Guarantee Enhancement Corporation.

1.2.Export and Import:---(US\$MILLION)

YEAR	EXPORT	IMPORT
2012	240.06	92.52
2013	228.13	10.32
2014	312.26	68.34
2015	378.33	91.93
2016	335.62	104.19
2017	374.87	139.81
2018	433.87	174.36
2019	280.10	88.56

Source:-<http://www.ibef.org/industry/cement-India.asp>

Graph:-1.5.



Export of cement in 2012 (240.06mt), 2013 (228.13mt), 2014 (312.26mt), 2015 (378.33mt), 2016 (335.62mt), 2017 (374.87mt), 2018 (433.87mt), 2019 (280.1mt). Imports in 2012 (92.52mt), 2013 (10.32mt), 2014 (68.34mt), 2015 (91.93mt), 2016 (104.19mt), 2017 (139.81mt), 2018 (174.36mt), 2019 (88.56mt).

About Mineral:-

Mineral is the composition of chemicals which occurs in free form in the nature. Limestone ore is the raw material for cement industry. The Mining industry in India is a major economic activity which contributes significantly to the economy of India. The GDP contribution of the mining industry varies from 2.2% to 2.5% only but going by the GDP of the total industrial sector it contributes around 10% to 11%. By creating high-paying jobs and providing the raw materials essential to every sector of our economy, minerals mining helps stimulate economic growth. The minerals mining industry supports more than 1.1 million jobs. They constitute

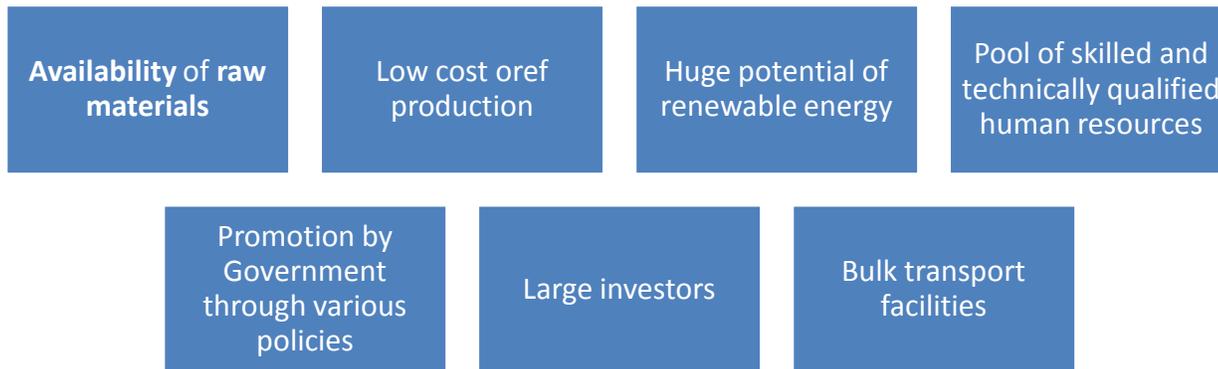
the vital raw materials for many basic industries and are a major resource for development. Mineral resources are amongst the most important natural resources that dictate the industrial and economic development of a country because they provide raw materials to the primary, secondary and tertiary sectors of the economy.



1.5. Cement Industry in Rajasthan: -

Rajasthan is second largest cement producer state in India after Andhra Pradesh. Cement industry is major contributor towards revenue to government of Rajasthan. Rajasthan capacity of cement production is among the highest in India. The number of mines of limestone in Rajasthan are much more than that in other states. It has 45.62 million tonnes per annum capacity to produce cement which shows high production of cement. In Rajasthan cement industry helps in economic growth. Rajasthan will be the main region of cement production in India within a couple of years. Ultratech is going to start its third plant in Rajasthan after some time. Wonder will start its second plant within a span of few months. All these big cement companies are set to start their plant which will certainly increase the production capacity of Rajasthan in India. Top players of cement in Rajasthan Ultratech Cement, ACC Cement, Shree Cement, J.K Cement, Binani Cement, Wonder Cement, Birla Cement, Bangaur Cement and Ambuja cement. Rajasthan has vast limestone deposits therefore most cement manufacturing players have their plants in Rajasthan. The northern region of Rajasthan which constitutes 80% market share with the plants of main cement units such as Ultratech Cement, Binani, JK Cement, Shree Cement Limited, Ambuja Cement, Mangalam Cement Etc. Rajasthan has vast reserves of cement-grade and Steel-Melting Shop (SMS) grade limestone. In Rajasthan there is a big market of limestone, silver, gold, copper, marble, and lignite. Rajasthan has 24 major cement plants which includes Shree Cement, J.K Cement, Binani Cement, Wonder Cement, Birla Cement, Bangaur Cement and Ambuja cement etc.

1.4.Reasons for higher number of Cement Industries in Rajasthan: -



Rajasthan has total capacity of 7000 million tonnes of cement production and that is why the biggest cement producer of world Lafarge Cement has entered in Rajasthan in India. The top ten players of cement have their one or two plants in Rajasthan. Transportation is well set up as all big cement players are into this area. There is abundance of high-grade limestone in Rajasthan, labour is easily available. Chittorgarh is main hub of cement in Rajasthan. Proper channels and dealers are available in Rajasthan as everyone is well-known about cement process and plants here, dealers are also working in this field from years. Various policies and incentives are given to cement companies from government to promote mining and cement production in Rajasthan.

1.6. SHREE CEMENT LTD.: -

Shree Cement Ltd (SCL) was built-in in the year 1979. The company was supported by Calcutta-based industrialists Shri P D Bangur and Shri B G Bangur. Indian Cement Ltd is the leading manufacturing sector in India. Shree cement is a growing company it is known for its innovation, improvement and collaboration. SCL is a quality conscious, energy conscious and environmentally friendly business organization. SCL is a major supplier of cement in northern region of India. SCL is identified for its sustainability practices among top three companies in cement industries. SCL has technologies which optimizes the utilization of clinker with the help of innovative projects. SCL is a leader in cement industry it provides top quality cement and its strengths are customers and dealers satisfaction, high retention rate and innovative technologies. SCL is the largest cement producer in Rajasthan (Beawar) and is the largest single location manufacturer in Northern India. During the year 1994-95, the company undertook new activities in the field of leasing and hiring. The company made a tie up with Christian Pfeiffer & Company, Germany, for installing a horizontal impact crusher to pre-crush clinker.

Production Performance: -

Shree Cement is very much concentrated about its brand image, quality of work, customer loyalty etc. All these make Shree Cement a brand in India with a turnover of 5590.25 crores. Revenue from cement is 4544.31 crores. Overall, it is a company which has its various plants located nearby high-grade limestone mines and it has satisfied all its dealers as well as customers.

Cement Production Capacity: - 17.5 million tonnes per annum.

Revenue from Cement: - 4544.31 Crores.

Brand Name: -Shree Ultra Bangur Rock strong.

Plants located in Rajasthan

Beawar, Ras, Khushkhera Jobner Suratgarh, the two clinker units namely, unit V and VI are situated at Bangur city and two grinding units at Khushkhera in Alwar, Rajasthan. Company has total capacity of 6.83 MTPA for

ordinary Portland cement (OPC). During the year 2008-09, the company finished their 1 MTPA Clinker Unit (unit-VII) at Bangur city. In September 2008, they raised the thermal power generation capacity by commissioning 18 MW turbine generator (TG-VI) at Bangur city. The company expanded its capacity of Clinker Grinding Unit at Suratgarh in Rajasthan and Roorkee in Utrakhand. Also, the company has set up new 100 MW capacity (50MWx2) power plants at Bangur city. The first 50 MW power plant was commissioned in 2010 while second 50 MW power plant was commissioned in 2011.

1.7 Financial performance:

Shree Cement Financial Statements

Y/e 31 Mar(In .Cr)	Mar'2020	18-Mar	17-Mar	16-Mar
Revenue	12,868	9,833	8,594	5,514
YoY growth (%)	30.9	14.4	55.9	-15
Raw materials	-990	-770	-627	-453
As % of sales	7.7	7.83	7.3	8.21
Employee costs	-854	-588	-537	-370
As % of sales	6.64	5.98	6.25	6.71
Other costs	-7,265	-6,002	-4,917	-3,284
As % of sales	56.5	61	57.2	59.6
Operating profit	3,759	2,473	2,513	1,407
OPM	29.2	25.1	29.2	25.5
Depreciation	-1,808	-899	-1,215	-828
Interest expense	-291	-135	-129	-76
Other income	274	389	362	673
Profit before tax	1,934	1,827	1,531	1,176
Taxes	-390	-443	-192	-33
Tax rate	-20	-24	-13	-2.8
Minorities and other	-14	--	--	--
Adj. profit	1,530	1,384	1,339	1,143
Exceptional items	--	--	--	--
Net profit	1,530	1,384	1,339	1,143
YoY growth (%)	10.6	3.37	17.1	168

NPM	11.9	14.1	15.6	20.7
-----	------	------	------	------

Source <https://www.shreecement.com>

Labour performance: -

The total strength of Shree Cement employees is 4698 which means there is a diverse workforce in the industry. Retention level of Shree Cement is 94%. This retention rate means it is highly concerned about its employees and that makes it among the leading top cement manufacturers. Average age of employees in Shree cement is 35.6 years. Shree cement management team plays an important role in retention of employee and employee welfare. (Shree cement annual report)¹⁴

1.8. Performance Appraisal: -

With such a large scale of production in these cement industries the quality and quantity of product very much depends on the performance of human resources. A country may create abundant physical resources but it cannot make economic and social development unless it possesses people who are enthusiastic and have developed necessary skills. (Venkataraman, 1995)¹⁵

Performance appraisal is a key tool, in the most of UN organisations human resource performance appraisal is too important to be left to an annual event and should be an ongoing process. (Grez.J Bamber)¹⁶

For any organization its human resources are the greatest and noteworthy assets of organization. The cement industry is undergoing vast changes in the last few years. The fast-changing circumstances in the present business, global situation demands more powerful and strengthen strategic HR tools. So, it is significant to have a proper and transparent performance appraisal system (PAS). In an organization PA which should aim at helping employees to understand, what is expected of them, know how they are performing, providing help and guidance whenever required and link rewards with the performance. PAS is a very important HR activity if proper consideration is given to the employees through recognition of their talents, development of their capabilities and effective utilization of their potential. The PAS is a vital tool to measure the performance standard set by any organization for its employees. The correctness and fairness of this system need to be judged in relation to its use for placement, promotion and transfer, career growth and development. This system has to be reviewed frequently and revised system may be implemented. PAS is the backbone of the HR policies and practices (HRM) in an organization. PAS has the ability to determine the employee's satisfaction and motivation level which could be a powerful vehicle to transform employee's potential into performance. The effectiveness of PAS is thus strongly related to the effectiveness of an organization.

Performance Appraisal can be done with following objectives:

To maintain records in order to establish compensation packages, wage structure, salaries raise etc. To recognize the strengths and weaknesses of employees to place right men on right job. To maintain and evaluate the potential present in a person for further growth and development.

1. To provide a feedback to employees about their performance and related category.
2. It provides as a basis for influencing working practice of the employees.
3. To review and maintain the promotional and other training programs. It is said that performance appraisal is an investment for the company which can be acceptable by following advantages:

Promotion: Performance Appraisal helps the supervisors to find out the promotion programs for capable employees. In this regard, inefficient workers can be dismissed or devalued in case.

Compensation: Performance Appraisal helps to find compensation packages for employees. Merit rating is possible by performance appraisal. Performance Appraisal gives significance to a performance. Compensation packages include bonus, high salary rates, extra benefits, allowances and perquisites depending on performance appraisal. The criteria should be merit rather than seniority.

Role of performance Appraisal: -

1. **Employees Development:** The systematic process of performance appraisal helps the supervisors to form training policies and programs. It helps to analyze strengths and weaknesses of employees so that new jobs can be designed for efficient employees. It also helps in framing future development programs.
2. **Selection Validation:** Performance Appraisal helps the supervisors to understand the validity and importance of the selection procedure. The supervisors come to know the validity and thereby the strengths and weaknesses of selection procedure. Future changes in selection methods can be made in this regard.
3. **Communication:** For an organization, valuable communication between employees and employers is very important. Through performance appraisal, communication can be useful in the following ways:
 - Through performance appraisal, the employers can understand and agree to skills of subordinates.
 - The subordinates can also understand and create a conviction and confidence in superiors.
 - It also helps in maintaining pleasant labour management relationship.
 - It develops the spirit of work and increases the morale of employees.

All the above factors ensure effective communication.

4. **Motivation:** Performance appraisal serves as a tool for motivation. Through evaluating performance of employees, a person's efficiency can be determined if the targets are achieved. This very well motivates a person for better job and helps him to develop his performance in the future.

Generally speaking, we know that PA's primary task is to contribute to a company's success by finding, maintaining and developing human capital. On one hand, this is achieved through the making of efficient programs and on the other, ensuring that they fulfill with established rules and procedures in this area. HR is a key support to the success of manufacturing industries, because to ensure your business can overcome the challenges threatening the industry, you need to make sure you have a skilled labour force. PA can also help to make sure that employees are motivated and create value and performance-based reward systems. Human resources is the department that manages all aspects related to its personnel, including recruiting employees, training and career development, supervision compensation packages, managing benefits plans, and other duties that serve to maximize a company's productivity. HR management helps bridge the gap between employee's performance and the organisation's strategic objectives. Human resource operations contribute extensively to the success of an organisation. Hence, human resource management has emerged as a popular course of study.

Area of the study

- To descriptive and analytical study of employees in Shree cement ltd.
- To analysis and understand the performance appraisal system of employees in cement industry with special reference to **Shree Cement Limited**.

Objective of the study

- To measure performance appraisal system of employees in cement industry.
- To identify actual performance and performance standards used to measure performance of the employees.
- To analyze and understand company's performance appraisal system and its implementation methods in Shree Cement Limited.
- To analyze the effect of performance appraisal of employees in moral motivation, communication etc.

- This study will help in achieving cement industry goals as well as it will help to understand impact of appraisal on performance of employees in the cement industries.
- It will provide ranks based on performance and accordingly the training needs of employees to facilitate fair and equitable compensation based on performance which will encourage the employees not to move from one industry to another industry.
- To create effectiveness in an organization by increasing motivation among employees and by raising the moral of the employees through various performance appraisal methods.

Research gaps

- Performance Appraisal in Cement Industry is very important as compared to other manufacturing industries because generally the cement factories are located in remote areas where welfare facilities for employees provided by industries as well as government are quite poor resulting in poor quality of work life of the employees which corresponds to the high moving rate of the employees in the Cement industry.
- To analyze in-depth performance appraisal of employees in Shree Cement Limited a micro level study may be undertaken of cement industry in Rajasthan.
- There are studies conducted by several researchers to identify the factors of performance appraisal system in many industries but the literature review shows that studies have not been done extensively and exclusively for cement industry.
- By reviewing many published papers and articles of foreign and Indian authors, the gap was found for the study. There are studies conducted in the field of manufacturing, finance, education, airline, IT etc. but it was found that no study was conducted specifically for cement companies in India.
- The present study will be focused on Performance Appraisal System of Employees in Rajasthan including a special case study of Shree Cement Limited in Rajasthan.

Future scope: -

- Further research can be done on Talent Management in cement industry.
- Studies can also be undertaken on motivation, development and welfare measures in cement industry.
- Future research can be done in Indian or global context of performance management system for cement companies.
- Future research can be done in Rajasthan with the context of factors of human resource management systems in cement companies, to have broader view.

References

1. Ramanathan (1973), ch.2, pp.55-105.
2. Encyclopaedia Britannica (1953), Cement vol.5, p.104 London.
3. Kurt E. Peray Cement Manufacturer's Handbook Book
4. Madhu Bala (2003), Cement Industry in India policy, structure & performance Shipra publications (2003)
5. Sumathy K and Mahesh D. (2006), Indian Journal of marketing vol. xxxv4 no.7 New Delhi
6. <https://www.thehindubusinessline.com>
7. Low Sui Pheng and TAN ONG Bee (1993), Singapore ISBN 9971-69-171-X (Paper)
8. Dr. V.K.R. Rao, Infrastructure & Economic Development Commerce.
9. Burange, L.G. and Shauti Yamini vol. LL, Nr, PP, 209-242

10. Gupta N.S. and Amarjit Singh, Lite and Life publication (1978). P.227.
11. Chakravarthy, S.M. Indian Cement Industry Wadhara publication, 232, General Insurance Building Mumbai; P;3
12. Commerce, 1971. July, vol.23, P.57
13. NCAER(1948) CH VI, PP.110-116
14. Shree Cement annual report (2020). (<http://shreecement.com>)
15. Venkataraman, R. "Human Resource Development, vol 29, No.4, March 1-15, 1995, P;41
16. Greg J. Bpmb. Beacom Books, New Delhi P;43