IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

# Challenges And Sustainability Development Of Msmes In India: An Overview Of Cement Industry

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**ABSTRACT**

The aim of this study is to give MSMEs in the cement industry a thorough understanding of the routes to sustainable development. The present study is totally based on explanatory research and data collection from the secondary data i.e. articles, reports, research papers, and websites etc. This study presents the various challenges faced by the MSME companies particularly in cement sector and their sustainability development. The important issues and sustainability tactics that Micro, Small, and Medium-Sized Enterprises (MSMEs) in the Indian cement sector must deal with are examined in this study.

**Keywords: Challenges, Sustainability, MSMEs, Cement industry**

## 1. INTRODUCTION

Micro, Small, and Medium-Sized Enterprises (MSMEs) are essential to India's industrial development and economic expansion. The cement business is notable for its substantial contributions to the infrastructure and construction scene, despite the fact that MSMEs operate in a variety of industries. Nevertheless, despite its significance, the MSME sector of the cement industry has a number of obstacles that prevent it from expanding and remaining sustainable.
This summary examines the various obstacles that MSMEs in the Indian cement sector must overcome, such as those pertaining to manpower, legislation, technology, and finance. It also emphasises how crucial it is to implement sustainable practices in order to guarantee long-term sustainability and environmental stewardship. This paper attempts to give a thorough grasp of the challenges and opportunities that will influence MSMEs in the cement industry in the future by analysing the existing situation and suggesting tactical solutions.

## 2. LITERATURE REVIEW

**Mudgal & Chellasamy, (2024)** examines the industry's contribution to the development of carbon-neutral concrete by 2050 and highlights the significance of working together with end users, financial institutions like as the International Finance Corporation (IFC), and policymakers to accomplish this challenging objective. **Kumar & Sinha, (2023)** suggested that although the pandemic affected the cement industry, its total impact was negligible. **Verma, Ghime, Majumdar, & Ghosh, (2023)** examines the several strategies

for reducing emissions, including the use of alternative materials and processes, energy-saving techniques, process optimisation and changes, and carbon capture and storage. **Kukreja, Soni, & Panda, (2023)** evaluates how AFs affect the cost of production, the environment, cement plant operations, and maintenance in India. It emphasises that using AFs reduces CO2 without causing any environmental problems, is an environmentally friendly method of disposing of waste, and offers cost advantages. **Singhal, (2023)** examines the potential use of MSW in co-processing in the cement industry as well as the challenges associated with this waste management technique. **Kumar & Sinha, (2022)** Examine critically how India's cement sector has grown in terms of output, plant expansion, demand, and consumption. **Baidya & Ghosh, (2022)** found that there was little effect on ambient air quality based on measurements of NOx, SO2, RSPM, and SPM at various locations around the cement plant, as well as minor effects on clinker quality, leach behaviour, and cement properties. **Baidya & Ghosh, (2020)** found that it would demonstrate the sustainability of co-processing waste in Indian cement plants and aid in lowering the carbon footprints of industrial wastes, particularly the trash from the FMCG trade. **Ighalo & Adeniyi, (2020)** explains some of the main concerns with the cement industry's sluggish progress towards environmental sustainability. **Yadav & Tripathi, (2018)** discusses marketing, production, finance, government policies, labour laws, export related challenges faced by the Indian cement industry. **Devi, Lakshmi, & Alakanandana, (2017)** analyses the various effects that cement manufacturing companies have on environmental and health aspects. It looks at how the industry can reduce production waste and comply with environmental protection laws by adopting appropriate technology and computer modelling. It also looks at how computer modelling can be used for particulate matter classification, quantification, and control, as well as how efficient energy use can improve air quality. **Shrivastava, Shrivastava, & Ganguly, (2014)** found that putting money and effort into promoting environmental leadership and green cement organisational identity in global culture could eventually increase their green competitive advantage in the cement manufacturing sector in addition to fostering green organisational identity. **B & Nallanavar, (2014)** Examine how the Indian cement industry has developed from its founding, taking into account increases in installed capacity, output, exports, and value additions. **Ali & Husain, (2014)** discusses the various problems faced by the MSMEs in India along with given the suggestions for improvement and potentials benefits for the MSMEs. **Modi, (2010)** found that severe power outages ranging from 20 to 75 percent in different cement-producing states, a lack of coal, a less availability of rail wagons, and a lack of furnace oil are the primary causes of the production deficit.

## 3. OBJECTIVES OF THE STUDY

- To assess the growth of India's cement industry.
- To examine the several obstacles that the cement industry's MSMEs confront.
- To present the sustainability development of MSMEs cement industry

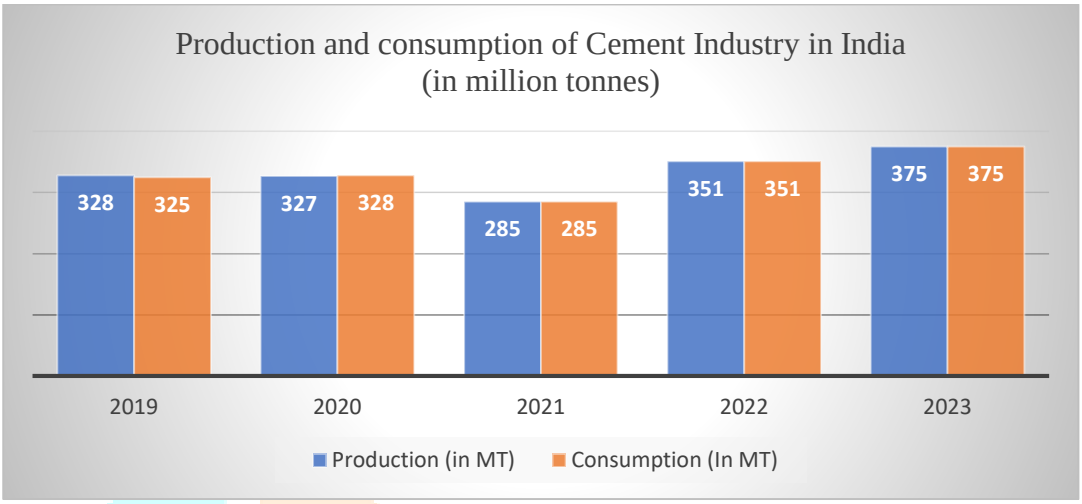
## 4. RESEARCH METHODOLOGY

This study is based on explanatory research and data collection from the secondary data is gathered from existing literature, industry reports, government publications, and other credible sources. A purposive sampling technique is used to select a representative sample of MSMEs in the cement industry. The analysis provides a understanding of the challenges and sustainability development of MSMEs Cement industry.

## 5. GROWTH OF CEMENT INDUSTRY

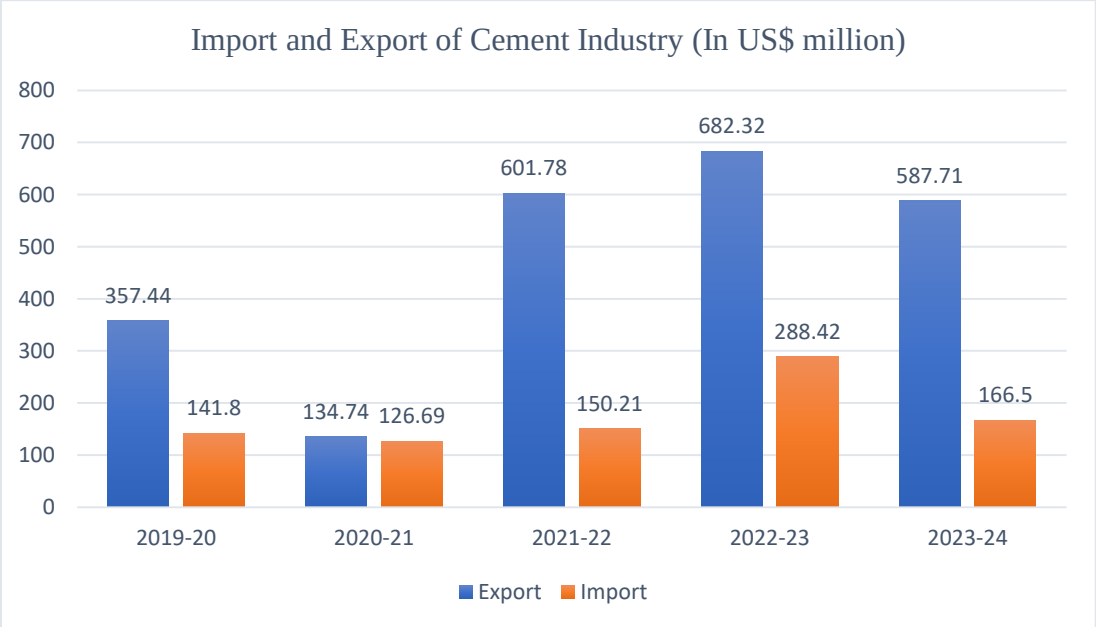
The cement sector saw a modest growth of 2-3% in Q1 FY25, primarily due to a slowdown in construction during the Lok Sabha elections. However, ICRA projects a 7-8% growth for FY 2024-25, driven by strong demand in infrastructure and housing (IBEF, 2024).

Table 1: Production and consumption of Cement industry in India




Source: Cement Industry Report November 2024, India Brand Equity Foundation

Table 2: Import Export of Cement industry




Source: Cement Industry Report November 2024, India Brand Equity Foundation

In India 375 million tonnes of cement were produced overall in FY23, compared to 351 million tonnes in FY22. India's cement production was 375.19 MT in 2023-24, while its cement consumption was 351 million tonnes in the year of 2022-23. According to DGCIS, India imported Rs. 1386 crore worth of Portland cement, aluminous cement, slag cement, super sulphate cement, and similar hydraulic cement in FY24, while exporting same products totalled Rs. 4894 crore (US$ 587.71 million) and India's imports totalled US$288.42 million in FY23, while its exports of panel cement, clinkers, and asbestos cement products was US$682.32 million (IBEF, 2024). In addition to the US, the UAE, Bangladesh, and Sri Lanka, India also sold cement to Nepal.

The MSME cement industry in India shows substantial promise for growth, driven by various factors:

**i. Current Landscape**

The MSME sector makes up a sizable chunk of India's industrial base and makes a substantial contribution to the expansion of the cement industry. The following are important growth drivers:

**ii. Growth Drivers**

a) **Infrastructure Development:** Cement consumption is rising as a result of the Indian government's emphasis on infrastructure projects like the Pradhan Mantri Awas Yojana (PMAY) and the National Infrastructure Pipeline (NIP). Significant opportunities are created by the construction of homes, rural roads, highways, and urban infrastructure projects.

b) **Urbanization:** The need for cement is rising as a result of smart city development and rapid urbanisation. This demand is greatly influenced by large-scale projects like the Mumbai-Ahmedabad Bullet Train Corridor and other metro rail projects.

c) **Government Support:** MSME growth is supported by programs and policies such as the RAMP plan and the PMMY (Pradhan Mantri Mudra Yojana). Financial incentives and higher credit limits encourage MSMEs to modernise and grow their businesses.

d) **Investments in Capacity Expansion:** Cement companies in India are increasing their manufacturing capacity by millions of tonnes. A competitive and diversified market is ensured by this expansion, which involves investments from both major players and the MSME sector.

**iii. Challenges and Opportunities**

Despite the rapid growth, MSMEs face significant challenges such as raw material procurement, energy costs, and regulatory compliance. However, with innovation and support, they can overcome these hurdles.

**iv. Future Prospects**

The cement sector in India, which includes MSMEs, is expected to expand at a compound annual growth rate (CAGR) of 7-8%. Housing construction and continued infrastructural improvements are anticipated to be the main drivers of this expansion. The India Residential Real Estate Market size is estimated at Rs.18.89 lakh crore (US$ 227.26 billion) in 2024 and is expected to reach Rs. 57.34 lakh crore (US$ 687.27 billion) by 2029 (IBEF, 2024).

The industry has enormous potential, and a combination of private investment, government assistance, and technology developments is creating the conditions for long-term growth.

## 6. CHALLENGES FACED BY THE MSME CEMENT INDUSTRY

Over the years, the cement sector in India has experienced enormous growth. However, there are a number of important issues that must be resolved:

i. **Limited Access to Raw Materials:** Because they have less negotiating leverage and lesser economies of scale, SMEs frequently find it difficult to get raw materials at reasonable costs. Additionally, they struggle to keep a consistent supply of vital materials like coal and limestone. or MSME's required raw material skilled work force and other inputs, which are not available in the market (Ali & Husain, 2014).

ii. **High Energy Costs:** One major expense associated with the production of cement is energy usage. MSMEs frequently pay more for energy than larger businesses because they have less access to effective technology and advantageous energy agreements.

iii. **Supply Chain and Logistics Problems:** Inefficiencies are caused by inadequate infrastructure and high logistics expenses as a result of distant plant locations. Insufficient investment in automation and technology makes these supply chain issues much worse. Lack of government supply-supporting programs (Yadav & Tripathi, 2018).

iv. **Regulatory Obstacles:** MSME operations are frequently hindered by frequent changes in government regulations, difficulties with tax compliance, and the intricacies involved in getting licenses and permits.

v. **Lack of Skilled Labour:** MSMEs frequently use untrained or informal labour, which hinders their ability to adapt to new technology and increase productivity. Lower output and inefficient processes are the results of this. The skill developmental schemes conducted by the government are not sufficient (Ali & Husain, 2014).

vi. **Financial Restraints:** MSMEs are forced to rely on unofficial sources due to limited access to credit and financial resources through official banking channels. This restricts their capacity to make investments in expansion and modernisation. Diversion of working capital funds for acquisition of fixed assets (Yadav & Tripathi, 2018).

vii. **Environmental Regulations**: Adhering to environmental standards can be difficult, especially for smaller businesses who don't have the funds to invest in waste management and greener technology.

## 7. SUSTAINABILITY DEVELOPMENT

Over the previous three decades, the cement sector has greatly reduced its emissions; but, in recent years, this progress has halted. In 2021, the industry announced an ambitious plan for getting to net zero carbon by 2050 (International Finance Corporation, 2021). For the MSME cement sector to overcome its obstacles and maintain long-term viability, sustainability is essential. The following are some important actions that can be taken:

i. **Renewable Energy and Energy Efficiency**
Using waste-derived fuel (such as biomass or municipal solid waste) and alternative raw materials (like fly ash and slag) can substitute traditional coal and limestone, reducing environmental impact and resource dependency.

**ii.** **Raw Materials and Alternative Fuels**
Traditional coal and limestone can be replaced by waste-derived fuel (such as biomass or municipal solid waste) and alternative raw materials (such as fly ash and slag), which will lessen the impact on the environment and the need for resources.

**iii.** **Capturing and storing Carbon (CCS)**
By capturing and storing $CO_2$ emissions from cement factories underground, CCS technologies can help drastically cut greenhouse gas emissions.

**iv.** **Recovery of Waste Heat**
By putting waste heat recovery systems in place, waste heat produced during the manufacturing of cement can be transformed into useful energy, increasing overall energy efficiency.

**v.** **Substitution of Clinker**
Clinker is the main ingredient in cement, uses a lot of carbon. The industry can lower $CO_2$ emissions by using more cementitious materials, like calcined clay and limestone, in place of clinker.

**vi.** **Certification and Labelling for Sustainability**
By showcasing a dedication to sustainable practices, obtaining sustainability certifications such as GreenPro or LEED can improve market competitiveness. Additionally, this may draw in eco-aware customers.

**vii.** **Smart Manufacturing and Digitalization**
Energy efficiency, waste reduction, and production process optimisation can all be achieved by implementing digital tools and smart manufacturing procedures. Predictive maintenance and more intelligent plant operations can result from technologies like IoT, AI, and machine learning.

**viii.** **Government Assistance and Rewards**
Promoting advantageous government regulations and incentives can give MSMEs the assistance they need to make investments in environmentally friendly practices and technologies. Grants, tax breaks, and subsidies help lessen the financial strain of making the switch to more environmentally friendly operations.

By incorporating these strategies, the MSME cement sector may improve its competitiveness and market resilience in addition to addressing its sustainability issues.

## 8. CONCLUSION

India's cement industry's MSME sector has enormous potential to support the country's infrastructure and economic growth. However, a number of obstacles, such as budgetary limitations, complicated regulations, technology restrictions, and personnel concerns, frequently impede this potential. All parties involved—government agencies, trade associations, financial institutions, and the businesses themselves—must work together to help MSMEs in the cement sector become sustainable. The MSME sector can lead the way to a resilient and prosperous future and advance India's growth story by cooperating and adopting sustainable practices.

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