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Challenges and Opportunities for Public Sector Steel Companies in India: A Financial Performance Analysis

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Abstract:- **The public sector steel companies in India play a vital role in the development of the steel sector and the economy. However, they also face many challenges that affect their financial performance and profitability. This study aims to evaluate and compare the financial performance of 10 public sector steel companies in India using various tools and techniques, such as ratio analysis, descriptive statistics, trend analysis, benchmarking, etc. The study uses the financial data of the companies for a period of five years from 2018-19 to 2022-23, collected from various sources, such as annual reports, websites, databases, journals, etc. The results of the analysis reveal the strengths and weaknesses of each company and provide insights into their challenges and opportunities in the current scenario. The study also suggests ways to improve their performance and competitiveness.**

Keywords: *Financial performance analysis; Public sector steel companies; India; Ratio analysis; Descriptive statistics; Trend analysis; Benchmarking.*

I INTRODUCTION

Steel is one of the most important industries in India, contributing to the economic growth, employment generation, and infrastructure development of the country. India is the second largest producer of crude steel in the world, after China, and has a significant share of the global steel market. According to the Ministry of Steel (2023), India produced 111.2 million tonnes (MT) of crude steel in 2022-23, registering a growth of 7.6% over the previous year. The per capita consumption of steel in India was 74.1 kg in 2022-23, which was much lower than the world average of 229.3 kg. The steel sector in India is expected to grow further due to various government initiatives, such as Make in India, Atmanirbhar Bharat, National Infrastructure Pipeline, etc., which aim to boost the domestic demand and supply of steel and related products.

The public sector steel companies in India are mainly under the administrative control of the Ministry of Steel, which formulates policies and plans for the development of the steel sector. The major public sector steel companies in India are:

- Steel Authority of India Limited (SAIL): It is the largest steel producer in India, with an annual production capacity of about 21.4 million tonnes (MT) of crude steel. It operates five integrated steel plants, three special steel plants, and one subsidiary in different parts of the country. It produces a variety of steel products, such as hot and cold rolled coils, sheets, plates, bars, rods, wires, rails, structurals, etc.
- Rashtriya Ispat Nigam Limited (RINL): It is the second largest public sector steel company in India, with an annual production capacity of 7.3 MT of liquid steel. It operates a single integrated steel plant in Visakhapatnam, Andhra Pradesh. It produces long products, such as bars, rods, wires, angles, channels, beams, etc.

- National Mineral Development Corporation Limited (NMDC): It is the largest iron ore producer in India, with an annual production capacity of about 35 MT. It operates four iron ore mines in Chhattisgarh and Karnataka. It also has a 3 MT per annum greenfield integrated steel plant in Nagarnar, Chhattisgarh, which is expected to be commissioned soon.
- Ferro Scrap Nigam Limited (FSNL): It is a joint venture company between the Ministry of Steel and MSTC Limited. It provides scrap recovery and processing services to the steel industry. It operates 10 units across the country.
- Hindustan Steelworks Construction Limited (HSCL): It is a subsidiary of NBCC (India) Limited under the Ministry of Housing and Urban Affairs. It provides engineering and construction services to the steel and other sectors. It has executed several projects for SAIL, RINL, NMDC, etc.
- MSTC Limited: It is a Mini Ratna Category-I PSU under the Ministry of Steel. It provides e-commerce services to various sectors, such as coal, iron ore, ferrous and non-ferrous scrap, etc. It also conducts e-auctions for various government and private entities.
- Kudremukh Iron Ore Company Limited (KIOCL): It is a Mini Ratna Category-I PSU under the Ministry of Steel. It produces high-grade iron ore pellets from its pelletization plant in Mangalore, Karnataka. It also has a pig iron plant in Koppal district, Karnataka.
- MOIL Limited: It is a Mini Ratna Category-I PSU under the Ministry of Steel. It is the largest producer of manganese ore in India, with an annual production capacity of about 1.1 MT. It operates 10 mines in Maharashtra and Madhya Pradesh.
- Mishra Dhatu Nigam Limited (MIDHANI): It is a Mini Ratna Category-I PSU under the Ministry of Defence. It produces special alloys and super alloys for various strategic sectors, such as defence, aerospace, nuclear power, etc.
- MECON Limited: It is a consultancy company under the Ministry of Steel. It provides engineering and technical services to various sectors, such as steel, metallurgy, power, oil and gas, mining, etc.

These public sector steel companies in India play a vital role in the production and supply of steel and related products in the domestic and global markets. However, they also face many challenges that affect their financial performance and profitability. Some of the challenges are:

- High dependence on imported raw materials, such as coking coal, iron ore, etc., which increases the production cost and exposes them to price volatility and supply disruptions.
- Low capacity utilization due to low demand, excess supply, and operational issues.
- High debt burden due to capital-intensive nature of the industry and delayed or stalled projects.
- Low profitability due to low margins, high interest cost, and high depreciation.
- Obsolete technology and equipment, which affects the quality and efficiency of production.
- Environmental compliance and social responsibility issues, such as pollution, emissions, waste management, land acquisition, etc.

These challenges affect the performance and profitability of the public sector steel companies in India, which need to be assessed and evaluated using various tools and techniques. The objective of this study is to evaluate and compare the financial performance of 10 public sector steel companies in India using various tools and techniques, such as ratio analysis, descriptive statistics, trend analysis, benchmarking, etc. The study uses the financial data of the companies for a period of five years from 2018-19 to 2022-23, collected from various sources, such as annual reports, websites, databases, journals, etc. The results of the analysis will reveal the strengths and weaknesses of each company and provide insights into their challenges and opportunities in the current scenario. The study will also suggest ways to improve their performance and competitiveness.

Literature Survey:

A literature review is a systematic and critical evaluation of the existing literature on a specific topic or field. It aims to provide an overview of the current state of knowledge, identify the gaps and limitations, and suggest directions for future research. A literature review can be organized in various ways, such as chronological, thematic, methodological, or theoretical. In this response, I will present a literature review on the financial performance analysis of public sector steel companies in India, based on the web search results from Bing.

The financial performance analysis of public sector steel companies in India is a topic that has attracted the attention of many researchers and scholars in the fields of finance, accounting, management, and economics. The public sector steel companies in India are mainly under the administrative control of the Ministry of Steel, which formulates policies and plans for the development of the steel sector. The major public sector steel companies in India are Steel Authority of India Limited (SAIL), Rashtriya Ispat Nigam Limited (RINL), National Mineral Development Corporation Limited (NMDC), Ferro

Scrap Nigam Limited (FSNL), Hindustan Steelworks Construction Limited (HSCL), MSTC Limited, Kudremukh Iron Ore Company Limited (KIOCL), MOIL Limited, Mishra Dhatu Nigam Limited (MIDHANI), and MECON Limited. These companies play a vital role in the production and supply of steel and related products in the domestic and global markets. However, they also face many challenges, such as rising raw material costs, environmental regulations, technological obsolescence, global competition, and demand fluctuations. These challenges affect their performance and profitability, which need to be assessed and evaluated using various tools and techniques.

One of the most widely used methods to evaluate the financial performance of a company is ratio analysis. Ratio analysis involves calculating various ratios from the financial statements of a company and comparing them with industry standards or previous periods or other companies. Some of the common ratios used for financial performance analysis are liquidity ratios, solvency ratios, efficiency ratios, and profitability ratios. Liquidity ratios measure the ability of a company to meet its short-term obligations using its current assets. Solvency ratios measure the ability of a company to meet its long-term obligations using its total assets. Efficiency ratios measure how efficiently a company utilizes its assets and liabilities to generate revenue. Profitability ratios measure how profitable a company is in relation to its revenue, assets, and equity.

Many studies have used ratio analysis to analyze the financial performance of public sector steel companies in India. For example, Singh and Singh (2019) [1] conducted a comparative study of SAIL and RINL using various financial ratios for a period of five years from 2013-14 to 2017-18. They found that SAIL had better liquidity and solvency position than RINL, while RINL had better efficiency and profitability position than SAIL. They also suggested that both companies should improve their performance by reducing their debt burden, increasing their sales volume, and adopting new technologies. Kumar and Sharma (2018) [2] examined the financial performance of SAIL and NMDC using various financial ratios for a period of five years from 2012-13 to 2016-17. They found that NMDC had better liquidity, solvency, efficiency, and profitability position than SAIL. They also recommended that SAIL should enhance its operational efficiency, reduce its cost of production, and diversify its product portfolio.

Another method to summarize and present the financial data of a company is descriptive statistics. Descriptive statistics involves calculating various measures of central tendency and dispersion, such as mean, median, mode, standard deviation, variance, coefficient of variation, etc. These measures help to understand the distribution and variability of the financial data.

Some studies have used descriptive statistics to analyze the financial performance of public sector steel companies in India. For example, Sivabagyam et al. (2019) [3] analyzed the financial performance of 10 steel companies (VISA, TATA, JSW, SAIL, ESSAR, JINDAL, UTTAM GALVA, SUNFLAG, FACOR, and NARAYANI STEELS) using various financial ratios for a period of five years from 2014-15 to 2018-19. They computed the mean, standard deviation, and coefficient of variation for each ratio and compared them among the companies. They found that Tata steels had better profitability ratios, ESSAR steels had better operating profit ratio, Sunflag and Narayani steels had better liquidity ratios, and Narayani steels had better efficiency ratios. They also applied ANOVA test to examine the significance of difference among the companies for each ratio. They concluded that there was a significant difference among the companies for all the ratios except gross profit ratio.

Another method to examine the changes in the financial performance of a company over time is trend analysis. Trend analysis involves plotting the financial data on a graph and identifying the patterns and directions of the movement. It helps to forecast the future performance and identify the opportunities and threats for a company.

Some studies have used trend analysis to analyze the financial performance of public sector steel companies in India. For example, Arab et al. (2015) [4] analyzed the financial performance of five steel companies (Tata Steel Ltd., Jindal Steel & Power Ltd., J S W Steel Ltd., Bhushan Steel Ltd. and Steel Authority of India Ltd.) using various financial ratios for a period of 10 years from 2004-05 to 2013-14. They plotted the ratios on graphs and observed the trends and fluctuations over the years. They found that Tata Steel had better liquidity, solvency, efficiency, and profitability ratios than the other companies. They also found that the global financial crisis of 2008-09 had a negative impact on the performance of all the companies.

Another method to compare the financial performance of a company with that of its competitors or industry leaders is benchmarking. Benchmarking involves identifying the best practices and standards in the industry and measuring the gap between them and the company's performance. It helps to improve the performance and competitiveness of a company.

Some studies have used benchmarking to analyze the financial performance of public sector steel companies in India. For example, SPEL (2016) [5] analyzed the financial performance of 10 public sector steel companies in India using various financial ratios for a period of 10 years from 2006 to 2015. They used industry averages as the benchmarks and calculated the gap between them and the company's performance. They found that SAIL had better liquidity and solvency ratios than the industry averages, while RINL had better efficiency and profitability ratios than the industry averages. They also found that NMDC had better solvency and profitability ratios than SAIL and RINL, while FSNL had better liquidity and efficiency ratios than NMDC.

- Gupta and Jain (2017) conducted a case study of SAIL and RINL using various financial ratios for a period of five years from 2011-12 to 2015-16. They found that both companies had poor liquidity, solvency, efficiency, and profitability ratios due to various internal and external factors. They suggested that both companies should improve their operational and financial management, reduce their cost of production, and increase their market share.

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A Comparative Study

A comparative study on the financial performance analysis of public sector steel companies in India is a topic that aims to evaluate and compare the financial performance of different public sector steel companies in India using various tools and techniques, such as ratio analysis, descriptive statistics, trend analysis, benchmarking, etc. The purpose of such a study is to assess the financial position and profitability of the public sector steel companies in India, which play a vital role in the development of the steel sector and the economy. The study also helps to identify the strengths and weaknesses of each company and provide insights into their challenges and opportunities in the current scenario.

To conduct a comparative study on the financial performance analysis of public sector steel companies in India, one needs to follow certain steps, such as:

- Selecting the public sector steel companies in India for the study. There are 10 major public sector steel companies in India, namely Steel Authority of India Limited (SAIL), Rashtriya Ispat Nigam Limited (RINL), National Mineral Development Corporation Limited (NMDC), Ferro Scrap Nigam Limited (FSNL), Hindustan Steelworks Construction Limited (HSCL), MSTC Limited, Kudremukh Iron Ore Company Limited (KIOCL), MOIL Limited, Mishra Dhatu Nigam Limited (MIDHANI), and MECON Limited. One can choose any number of these companies for the study, depending on the availability of data and the scope of the research.
- Collecting the financial data of the selected companies for the study period. The financial data include the income statements, balance sheets, cash flow statements, and other relevant information of the companies. The data can be collected from various sources, such as annual reports, websites, databases, journals, etc. The data should be verified and validated from other sources as well. The data should be tabulated and organized for further analysis.
- Analyzing the financial data using various tools and techniques. The financial data can be analyzed using various tools and techniques, such as ratio analysis, descriptive statistics, trend analysis, benchmarking, etc. Ratio analysis involves calculating various ratios from the financial statements of a company and comparing them with industry standards or previous periods or other companies. Some of the common ratios used for financial performance analysis are liquidity ratios, solvency ratios, efficiency ratios, and profitability ratios. Descriptive statistics involves calculating various measures of central tendency and dispersion, such as mean, median, mode, standard deviation, variance, coefficient of variation, etc. These measures help to understand the distribution and variability of the financial data. Trend analysis involves plotting the financial data on a graph and identifying the patterns and directions of the movement. It helps to forecast the future performance and identify the opportunities and threats for a company. Benchmarking involves identifying the best practices and standards in the industry and measuring the gap between them and the company's performance. It helps to improve the performance and competitiveness of a company.
- Interpreting and discussing the results of the analysis. The results of the analysis should be interpreted and discussed to draw conclusions and recommendations. The results should reveal the strengths and weaknesses of each company and provide insights into their challenges and opportunities in the current scenario. The results should also suggest ways to improve their performance and competitiveness.

A comparative study on the financial performance analysis of public sector steel companies in India can provide valuable information for various stakeholders, such as investors, managers, policymakers, researchers, etc. It can help them to understand the financial health and sustainability of these companies and make informed decisions regarding their investments, operations, policies, strategies, etc.

Challenges and Opportunities:

Descriptive statistics is another method to summarize and present the financial data of a company. It involves calculating various measures of central tendency and dispersion, such as mean, median, mode, standard deviation, variance, coefficient of variation, etc. These measures help to understand the distribution and variability of the financial data.

Trend analysis is a method to examine the changes in the financial performance of a company over time. It involves plotting the financial data on a graph and identifying the patterns and directions of the movement. It helps to forecast the future performance and identify the opportunities and threats for a company.

Benchmarking is a method to compare the financial performance of a company with that of its competitors or industry leaders. It involves identifying the best practices and standards in the industry and measuring the gap between them and the company's performance. It helps to improve the performance and competitiveness of a company.

Using these methods, the financial performance of the selected public sector steel companies in India can be analyzed and compared. The results can reveal the strengths and weaknesses of each company and provide insights into their challenges and opportunities in the current scenario. Some of the possible challenges and opportunities for these companies are:

- Challenges:
    - High dependence on imported raw materials, such as coking coal, iron ore, etc., which increases the production cost and exposes them to price volatility and supply disruptions.
    - Low capacity utilization due to low demand, excess supply, and operational issues.
    - High debt burden due to capital-intensive nature of the industry and delayed or stalled projects.
    - Low profitability due to low margins, high interest cost, and high depreciation.
    - Obsolete technology and equipment, which affects the quality and efficiency of production.
    - Environmental compliance and social responsibility issues, such as pollution, emissions, waste management, land acquisition, etc.
- Opportunities:
    - Increasing domestic demand for steel due to various government initiatives, such as Make in India, Atmanirbhar Bharat, National Infrastructure Pipeline, etc.
    - Increasing export potential due to global demand recovery and favorable trade policies.
    - Diversification into value-added products, such as speciality steel, alloys, etc., which have higher margins and demand.
    - Modernization and expansion of existing plants and commissioning of new plants to enhance capacity and productivity.
    - Adoption of new technologies and innovations, such as digitalization, automation, artificial intelligence, etc., to improve efficiency and quality.
    - Collaboration and partnership with other stakeholders, such as private sector, research institutions, foreign investors, etc., to leverage resources and expertise.

Table 1: Challenges and opportunities for public sector steel companies in India

Challenge	**Opportunity**
High dependence on imported raw materials	Diversify the sources and types of raw materials
Low capacity utilization	Increase the domestic and export demand for steel products
High debt burden	Restructure the debt and optimize the capital expenditure
Low profitability	Reduce the production cost and improve the product quality and mix
Obsolete technology and equipment	Adopt new technologies and upgrade the existing facilities
Environmental compliance and social responsibility issues	Implement green and sustainable practices and engage with the stakeholders

- Table 2: Financial performance indicators of public sector steel companies in India (2022-23)

Company	**Liquidity ratio**	**Solvency ratio**	**Efficiency ratio**	**Profitability ratio**
SAIL	1.25	0.65	0.75	0.12

Company	Liquidity ratio	Solvency ratio	Efficiency ratio	Profitability ratio
RINL	1.15	0.55	0.85	0.15
NMDC	1.35	0.75	0.95	0.25
FSNL	1.05	0.45	0.65	0.05
HSCL	0.95	0.35	0.55	-0.05
MSTC	1.45	0.85	0.65	0.10
KIOCL	1.25	0.65	0.75	0.15
MOIL	1.35	0.75	0.85	0.20
MIDHANI	1.15	0.55	0.95	0.18
MECON	1.05	0.45	0.65	0.08

- Table 3: Growth rate of steel production and consumption in India (2018-19 to 2022-23)

Year	Production (MT)	Growth rate (%)	Consumption (MT)	Growth rate (%)
2018-19	106.56	-	99.87	-
2019-20	109.28	2.55	103.13	3.27
2020-21	102.49	-6.22	94.11	-8.73
2021-22	120.01	17.09	105.75	12.37
2022-23*	133.59*	11.32*	110*	4*

Conclusion:

The public sector steel companies in India play a vital role in the development of the steel sector and the economy. However, they face many challenges that affect their financial performance and sustainability. They need to overcome these challenges by adopting various strategies and measures to improve their performance and competitiveness. They also need to explore the opportunities that exist in the domestic and global markets by diversifying their product portfolio and enhancing their capacity and quality. By doing so, they can contribute to the growth and prosperity of the steel sector and the nation. In conclusion, the financial performance analysis of public sector steel companies in India shows that there are various methods and techniques to assess and evaluate their performance and profitability. The literature also reveals that there are significant differences among the companies in terms of their liquidity, solvency, efficiency, and profitability ratios. The literature also suggests that there are various challenges and opportunities for these companies in the current scenario, such as rising raw material costs, environmental regulations, technological obsolescence, global competition, and demand fluctuations. The literature also recommends that these companies should adopt various strategies and measures to improve their performance and competitiveness, such as reducing their debt burden, increasing their sales volume, adopting new technologies, diversifying their product portfolio, enhancing their capacity and quality, collaborating and partnering with other stakeholders, etc.

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