

# A COMPARATIVE ANALYSIS OF VALUE ADDITION CAPACITY OF SELECTED COMPANIES OF INDIAN STEEL INDUSTRY

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## Abstract

The main objective of this study is to measure and analyze the Value Addition capacity of selected companies of Indian Steel industry. For that purpose 3 samples are chosen on the basis of their steel manufacturing capacity namely TATA Steel, SAIL (Steel Authority of India Limited) and JSW Steel. Stud period was 5 years starting from 2018-19 to 2022-23. For the purpose of analysis, ANOVA test- parametric test was used. After the data collection, analysis and interpretation, it was found out that TATA Steel is currently most Value Additive company among all samples. TATA Steel is generating more value alone than SAIL and JSW combined in terms of both Gross Value Added (GVA) and Net Value Added (NVA). The main reason behind it is their installed capacity of steel manufacturing plant is highest in India, which gives them an edge to their competitors.

**Keywords:** Gross Value Added (GVA), Net Value Added (NVA), TATA Steel, Steel Authority of India (SAIL), JSW Steel

## 1. INTRODUCTION

Value Added Accounting system is currently in growing condition in India. The main reason of its increasing popularity is its usefulness compared to traditional statement of accounting statement. It provides more relevant and needed information more efficiently than other. One of its parts is Value Added Statement. Value Added Statement is useful to know how much wealth (in terms of Gross Value Added (GVA) and Net Value Added (NVA)) is generated and utilized by company. It gives more insight to many other parties who are interested in financial information of company other than just shareholders.<sup>[1],[2],[7],[8],[9]</sup>

## 2. REVIEW OF LITERATURE

**A. D. Patel (2018)**, this research paper explains fundamentals of Value Added and Value Added Statement. This paper throws lights on how concept of Value Added is came up, history of Value Added Statement and how Value Added Statement is helpful in current situation. Moreover, this paper also talks about various types of Value like Gross Value Added (GVA), Net Value Added (NVA), Economic Value Added (EVA) and Market Value Added (MVA).<sup>[4]</sup>

**A. P. Chirodiya (2022)**, this research article is a comparative study based on Value Added of two giant cement manufacturing companies namely Ultratech Cement Ltd and Ambuja Cement Ltd. Researcher found out the Gross Value Added (GVA) and Net Value Added (NVA) of both companies and analyze it thoroughly. The conclusion of this study was that Ultratech cement was quite performing well than Ambuja cement Ltd. (Chirodiya, 2022) <sup>[3]</sup>

**C. V. Staden, (2000)**, this research paper is all about to find out the usefulness of Value Added Statement. In 1999-2000, it was very famous that Value Added Statement is very useful than traditional statement. To testify this statement research took many samples and done an empirical study on that. It was found out that Value Added Statement actually gives more financial information than traditional system. Hence, it is much useful to its users.<sup>[6]</sup>

**Polisetty & Madhuri (2018)**, this paper is based on the fact that if Value Added Statement can disclose the information that needed to be disclosed or not. For that researchers took a sample of Volkswagen company from automobile industry to study the fact deeper. At the end of the study after the analysis of data, it was found out that Value Added Statement can actually disclose or reveal the necessary data that needed to be known to its various users.<sup>[5]</sup>

### 3. OBJECTIVES OF THE STUDY

- To find out Gross Value Added (GVA) and Net Value Added (NVA) of selected companies
- To analyze and make comparison of Gross Value Added (GVA) and Net Value Added (NVA) of selected companies

### 4. RESEARCH METHODOLOGY

#### 4.1 Sample and Sample Selection

Samples of this study is selected with Non-probability – Judgmental technique. TATA Steel, SAIL (Steel Authority of India) and JSW Steel was selected on the basis of annual steel manufacturing capacity of company.

#### 4.2 Period of the study

The study period is starting from 2018-19 to 2022-23 (5 Years).

#### 4.3 Hypotheses of the study

$H_0$  = There is no significant change in Gross Value Added (GVA) of selected companies of steel industry

$H_0$  = There is no significant change in Net Value Added (NVA) of selected companies of steel industry

#### 4.4 Tool for analysis

For the purpose of data analysis and interpretation, researcher used ANOVA (ANalysis Of VAriance) test. It is parametric test. This test mainly used where there are more than two samples are available and main purpose was to find out if there are any variance between more than two samples.

### 5. DATA ANALYSIS AND INTERPRETATION

**Table No. 1 TATA Steel**

Years	PBT	(+)Cost Employees	Of	(+) Depreciation	(+) Interest	GVA	(-) Depreciation	NVA
2018-19	15,681.02	18,758.87		7,341.83	7,660.10	49,441.82	7,341.83	42,099.99
2019-20	-1,568.41	19,152.23		8,707.67	7,580.72	33,872.21	8,707.67	25,164.54
2020-21	13,516.35	19,908.81		9,233.64	7,606.71	50,265.51	9,233.64	41,031.87
2021-22	49,557.71	23,264.10		9,100.87	5,462.20	87,384.88	9,100.87	78,284.01
2022-23	17,817.00	22,419.32		9,335.20	6,298.70	55,870.22	9,335.20	46,535.02

(Source : www.moneycontrol.com)<sup>[10]</sup>

**Analysis:** Gross Value Added (GVA) is showing mixed trend during the study period. It was recorded 49,441.82 in 2018-19. In very next year a sudden downfall occurred and it went down to 25,156.54. then in 2020-21 and 2021-22, it increased to 41,031.87 and reached to 78,284.01. which was highest during the study period. In very last year of study period, it again went down to 46,305.02.

On other hand, Net Value Added (NVA) of TATA Steel also recorded mixed trend during the study period. It started from 42,099.99 in 2018-19. In next year, it recorded a steep downfall and ended to 25,164.54. in the very next year, it jumped to 41,031.87 and went up to 78,284.01 in 2021-22. After that it again witnessed downfall and went down to 46,535.02.

**Table No. 2 SAIL (Steel Authority of India Limited)**

Years	PBT	(+)Cost Employees	Of	(+) Depreciation	(+) Interest	GVA	(-) Depreciation	NVA
2018-19	3,326.37	8,849.10		3,385.34	3,154.92	18,715.73	3,385.34	15,330.39
2019-20	3,107.26	8,797.32		3,755.73	3,486.76	19,147.07	3,755.73	15,391.34
2020-21	6,737.91	10,461.05		4,102.78	2,817.15	24,118.89	4,102.78	20,016.11
2021-22	15,873.75	12,861.99		4,275.02	1,697.89	34,708.65	4,275.02	30,433.63
2022-23	2,246.77	12,071.53		4,963.54	2,037.47	21,319.31	4,963.54	16,355.77

(Source : [www.moneycontrol.com](http://www.moneycontrol.com))<sup>[10]</sup>

**Analysis :** Gross Value Added (GVA) of SAIL was lowest in 2018-19 at 18,715.73 then in next year it got pumped and increased to 19,147.07 in 2019-20. In 2020-21, it again increased to 24,118.89 then again went up to 34,708.65. But in 2022-23, it lowered a bit and ended up to 21,319.31. so overall it was showing increasing trend until the very last year when it got low.

On other side, Net Value Added (NVA) of SAIL also showing similar trend. In first 4 years, it was increasing then in last year it was dumped. It started from 15,330.39 in 2018-19 and continuously increasing to 15,391.34 then 20,016.11 then 30,433.63 in 2019-20, 2020-21 and 2021-22 respectively. But in 2022-23, it got hit and ended up to 16,355.77.

**Table No. 3 JSW Steel**

Years	PBT	(+)Cost Employees	Of	(+) Depreciation	(+) Interest	GVA	(-) Depreciation	NVA
2018-19	11,198.00	2,489.00		4,041.00	3,917.00	21,645.00	4,041.00	17,604.00
2019-20	3,103.00	2,839.00		4,246.00	4,265.00	14,453.00	4,246.00	10,207.00
2020-21	12,014.00	2,506.00		4,679.00	3,957.00	23,156.00	4,679.00	18,477.00
2021-22	28,828.00	3,493.00		6,001.00	4,968.00	43,290.00	6,001.00	37,289.00
2022-23	5,792.00	3,915.00		7,474.00	6,902.00	24,083.00	7,474.00	16,609.00

(Source : [www.moneycontrol.com](http://www.moneycontrol.com))<sup>[10]</sup>

**Analysis:** JSW Ltd.'s Gross Value Added (GVA) was showing mixed trend during the study period. It was 21,645 in 2018-19. In 2019-20 it got decreased to 14,453 but in very next year it got increased to 23,156. Again in 2021-22, it got huge increase and went up to 43,290 but next year in 2022-23, it again lowered to 24,083.

On counterpart Net Value Added (NVA) of JSW was also showing the mixed trend during the study period. It was 17,604 in 2018-19 then it decreased in 2019-20 and reached to 10,207. But in 2020-21, it increased to 18,477 and next year it was on its peak at 37,289 in 2021-22. Then in very last year of study period in 2022-23, it decreased to 16,609.

## 6. APPLICATION OF ANOVA TEST

**Table no. 4 Gross Value Added (GVA)**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3.19E+09	2	1.6E+09	8.774585	0.004486	3.885294
Within Groups	2.18E+09	12	1.82E+08			
Total	5.37E+09	14				

**Table no. 5 Net Value Added (NVA)**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2.4E+09	2	1.2E+09	6.892022	0.010162	3.885294
Within Groups	2.09E+09	12	1.74E+08			
Total	4.5E+09	14				

## 7. RESULT OF THE STUDY

**Table no. 6 Result of Study**

No.	Ratio	Calculated Value (F)	Table Value (F crit)	Result
1	Gross Value Added (GVA)	8.774	3.885	H <sub>0</sub> is REJECTED
2	Net Value Added (NVA)	6.892	3.885	H <sub>0</sub> is REJECTED

**Analysis :** It is very much clear from the table that calculated value for all samples for **Gross Value Added (GVA)** is 8.774, which is clearly more than table value of the same 3.885. **hence, null hypothesis failed to be accepted.** Which means there is a major difference in Gross Value Added of all selected companies during the study period.

The calculated value of **Net Value Added (NVA)** for all companies is 6.892 which is again more than table value 3.885. which means **null hypothesis failed to be accepted** and that states that there is a major difference between companies in Net Value Added (NVA) during study period.

## 8. FINDINGS

- In generation of Gross Value Added (GVA) TATA steel was way better than any other sample of the study. The main reason behind it is the humongous amount of Profit Before Taxation.
- In Net Value Added (NVA), TATA steel again out performs all other competition. The amount of NVA generated by TATA Steel alone is more than the NVA generated by SAIL Ltd and JSW steel combined.
- One of the prime reasons because of which TATA Steel defeated all competition is their installed steel manufacturing capacity. Which is currently highest in India.

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