

# Financial Performance Analysis of Major Oil & Gas Companies in India: A Comparative Study (2020–2025)

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**Abstract:** Economic growth and energy security of India is also reliant on the oil and gas industry. The Indian Oil Corporation Limited (IOCL), Bharat Petroleum Corporation Limited (BPCL), Hindustan Petroleum Corporation Limited (HPCL), Oil and Natural Gas Corporation (ONGC), and Reliance industries Limited (RIL), are the key Indian oil and gas companies that are considered in our research regarding the financial performance between 2020 and 2025. The performance measures employed in the study are profitability, liquidity, and solvency and efficiency. It involves statistical techniques like ratio analysis, ANOVA and regression ( $R^2 = 0.5724$ ) and it is based on five large companies. The sources of secondary data were financial databases and annual reports. The results suggest that Reliance industries is doing better than other companies because of diversification and operational efficiency and ONGC is well solvent. The profitability of businesses in the public sector is influenced by regulations. The article concludes that the operational efficiency is characterized by high impact on the financial performance.

**Keywords:** Financial Performance, Oil & Gas Industry, Ratio Analysis, Regression Analysis, ANOVA, COVID-19 Impact, India.

## 1. Introduction

Oil and gas industry is an important factor in the economic development of India and energy security. Financial performance analysis is significant in the operational sustainability and efficiency because it is capital intensive.

The COVID-19 pandemic posed enormous upheavals throughout the years 2020 to 2025 and occasioned price and demand variation. Nevertheless, the industry has been performing well following 2021. To identify the key success factors, this research paper analyzes the financial performance of major oil companies.

## 2. Literature Review

According to previous studies, financial ratios are important in evaluating the performance of companies. Research has indicated that any variation in the prices of crude oil has a severe impact on the profitability of any company, particularly those that deal with the upstream industry. It is also noted in studies that diversification enhances financial stability, which is the case of Reliance Industries.

Nonetheless, there is a lack of research on comparative analysis of the pandemic and post-pandemic periods. This is where the gap is answered in this study.

## 3. Material Properties

The proposed research will be a descriptive and analytical research design where the data on annual report of sampled companies' period 2020-2025 will be data of secondary data.

Financial performance is evaluated using:

- Profitability ratios ( Net Profit Margin, ROA, ROE)
- Liquidity (Current Ratio, Quick Ratio)
- Solvency Ratios (Debt/Equity, Interest coverage)
- Efficiency ratios (Asset Turnover)

There is the use of statistical tools like mean, ANOVA, correlation, and regression analysis.

**Hypothesis:**

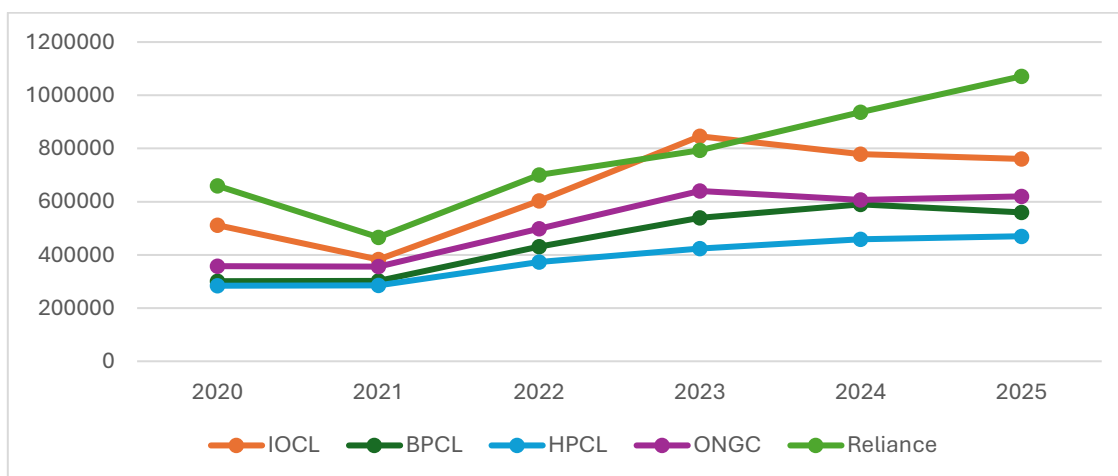
- H0: Financial performance of the companies is no significant difference.
- H1: There is a significant difference in the financial performance of the companies.

**4. Analysis and Interpretation of Data**

**Table 1: Revenue of Selected Oil & Gas Companies (₹ Crore) (2020–2025)**

Year	IOCL	BPCL	HPCL	ONGC	Reliance Industries
2020	511814	301000	284000	358000	659205
2021	382608	301864	285858	355784	466306
2022	602488	430679	372642	498332	699962
2023	845707	539238	424005	640099	792756
2024	779129	589782	458307	606358	936094
2025	760913	560000	470000	620000	1071174

Source: The compilation by the author, on the basis of annual reports (2020-25).



**Figure 1: Revenue Trend**

References: The compilation of the author is made on the basis of the annual reports (2020-2025).

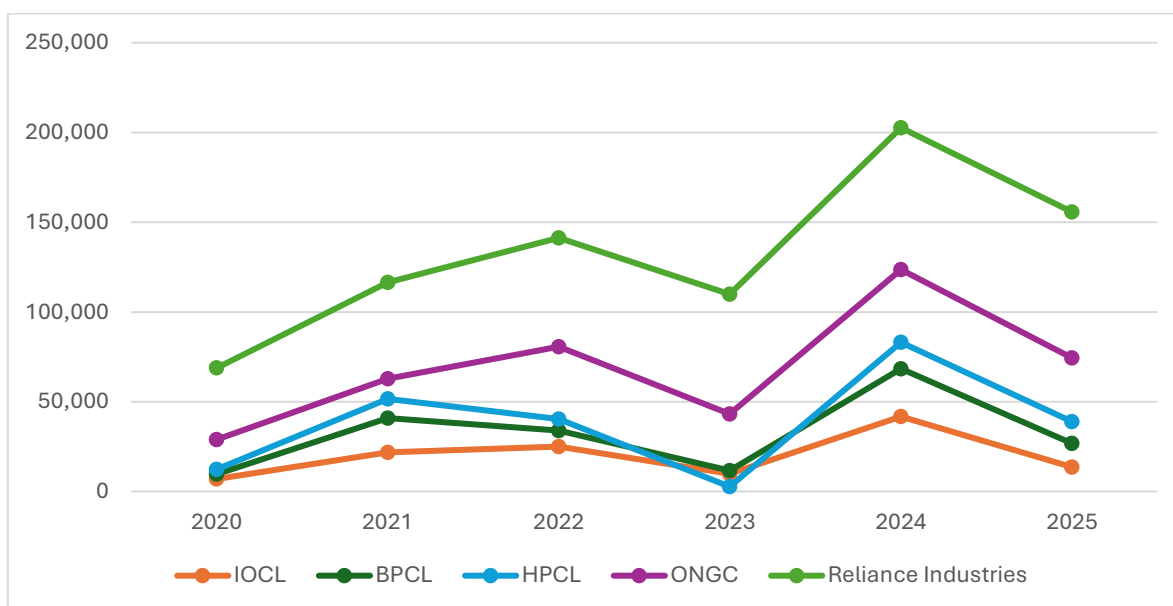
**Interpretation:**

The decline of revenue in 2021 during the pandemic is preceded by a strong recovery. Diversification results in steady growth of Reliance.

**Table 2: Net Profit (₹ Crore) (2020–2025)**

Year	IOCL	BPCL	HPCL	ONGC	Reliance Industries
2020	6967	2683	2637	16639	39880
2021	21836	19042	10664	11246	53739
2022	25102	8788	6382	40306	60705
2023	9792	1870	-8974	40526	66702
2024	41730	26673	14694	40526	79020
2025	13598	13275	12000	35610	81309

Source: Author’s compilation



**Figure 2: Net Profit Trend**

Source: The compilation of annual reports (2020-2025) prepared by the author.

**Interpretation:**

Despite the fact that HPCL is supposed to experience a loss in 2023 which implies that it will be under financial stress, Reliance is however expected to still be in a stable profitability base.

**Table 3: Profit Margin (%)**

$$Profit\ Margin = \frac{Profit}{Revenues} \times 100$$

Company	Average Margin (%)
IOCL	3.5
BPCL	2.5
HPCL	1.0
ONGC	12.0
Reliance	10.0

Source: Author’s calculation

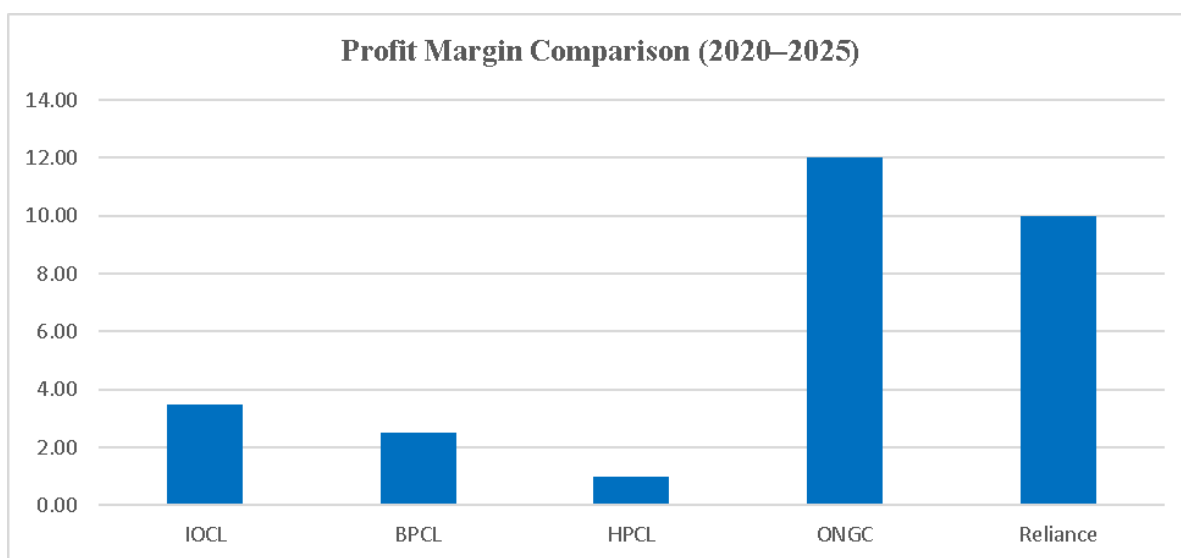


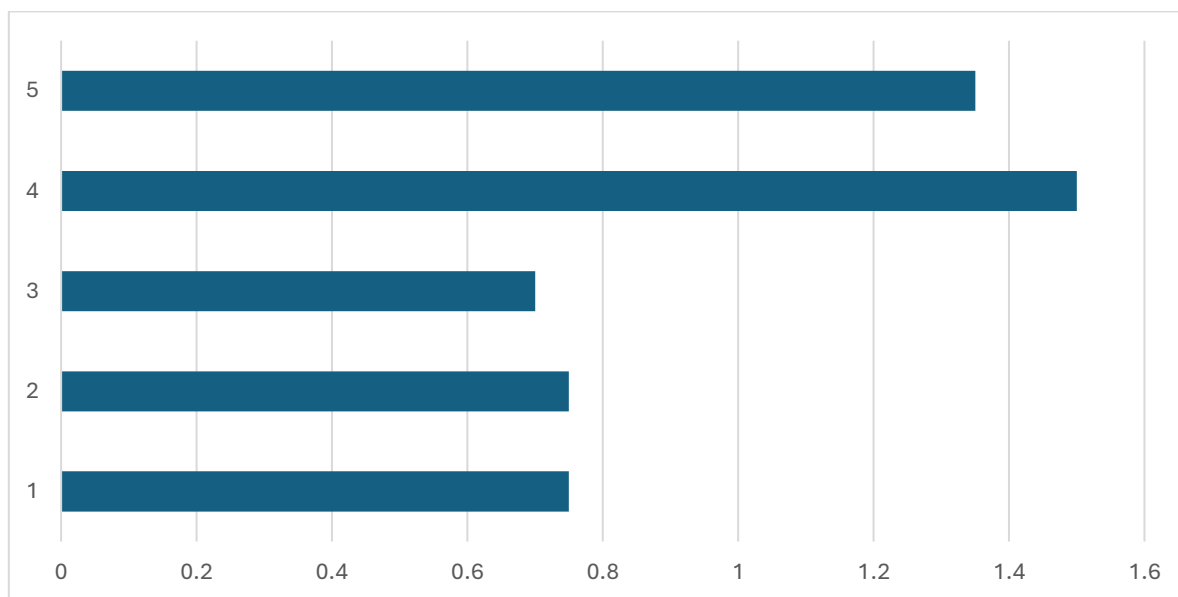
Figure 3: Profit Margin Comparison

Source: Author’s compilation based on annual reports (2020–2025)

Table 4: Current Ratio

Company	Current Ratio
IOCL	0.75
BPCL	0.75
HPCL	0.70
ONGC	1.50
Reliance	1.35

Source: Author’s calculation



**Figure 4: Comparison of Current Ratio.**

Note: The compilation was made by the author according to annual reports (2020-2025).

**Interpretation:**

Regarding the graphic, ONGC and Reliance industries continually have current ratios of more than 1.0, which means high liquidity and ability to meet short-term liabilities in a good manner. Instead, the current ratios of IOCL, BPCL, and HPCL are lower than 1.0 implying relatively weak liquidity positions and higher short-term financing.

**Table 5: Quick Ratio**

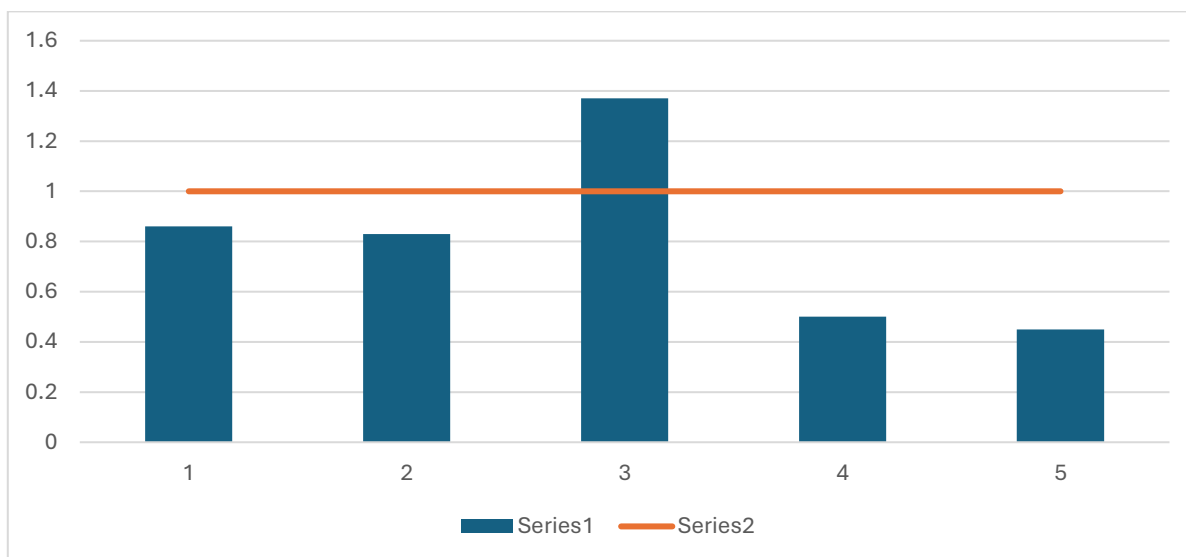
Company	Average
IOCL	0.25
BPCL	0.27
HPCL	0.24
ONGC	1.30
Reliance	1.10

Source: Author’s calculation

**Table 6: Debt–Equity Ratio**

Company	Average
IOCL	0.86
BPCL	0.83
HPCL	1.37
ONGC	0.50
Reliance	0.45

Source: Author’s calculation



**Figure 5: Debt -Equity with Benchmark.**

According to the reports of annual reports (2020-2025), the author compiled the information given by the company.

**Interpretation:**

As evident in the chart, HPCL is above the standard debt-equity ratio of 1 which implies that the company has an increased financial risk and is highly dependent on debt financing. Conversely, ONGC and Reliance have ratios that are below 1 and this indicates a high level of financial stability. The leverage of IOCL and BPCL is moderate as it is below benchmark.

**Table 7: Interest Coverage Ratio**

Company	Ratio
ONGC	8.5
Reliance	7.2
IOCL	4.1
BPCL	3.8
HPCL	1.2

Source: Author’s calculation

**Table 8: Efficiency Ratio (Asset Turnover)**

Company	Value
Reliance	1.8
ONGC	1.3
IOCL	1.2
BPCL	1.1

HPCL	0.9
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Source: Author’s calculation

**Table 9: Overall Ranking**

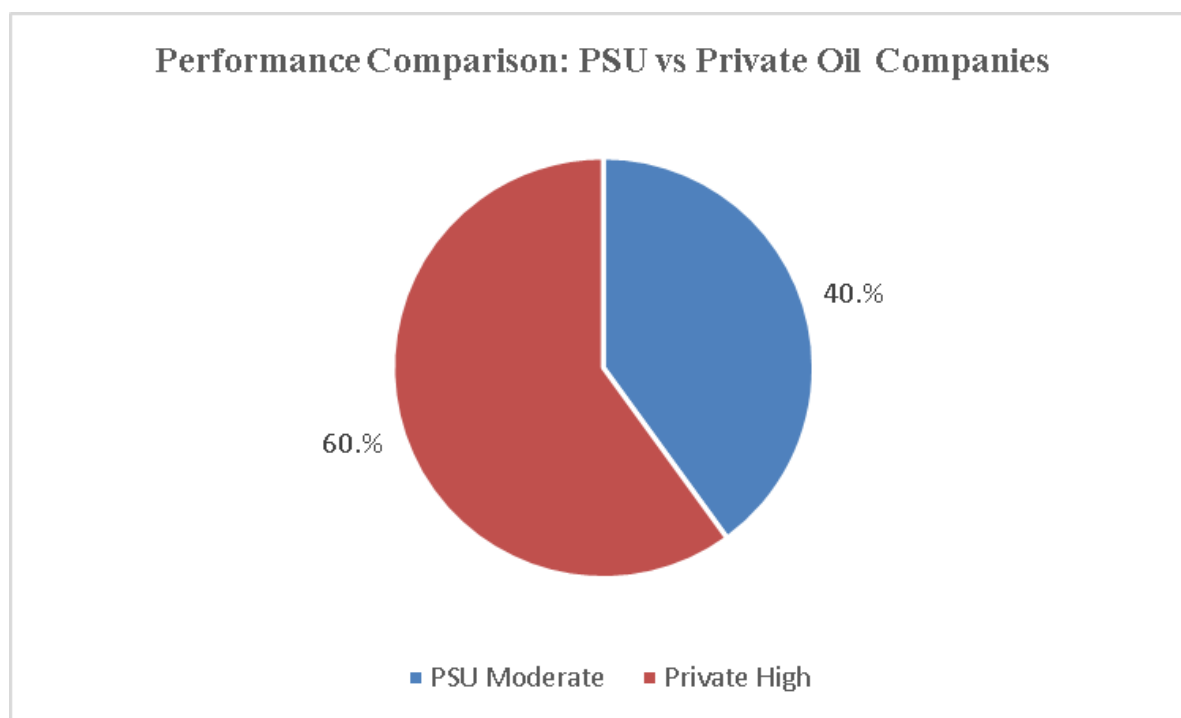
Rank	Company
1	Reliance
2	ONGC
3	IOCL
4	BPCL
5	HPCL

Source: Author’s analysis

**Table 10: PSU vs Private Sector Performance**

Sector	Performance
PSU	Moderate
Private	High

Source: Author’s analysis



**Figure 6: PSU and Private Sector Performance Comparison.**

Note: This is compiled by the author on the basis of annual reports (2020-2025).

**Interpretation:**

The pie chart shows that the performance of the private sector companies is better than that of the public sector companies. This is mainly because of the increased flexibility in operations, diversified business models and price strategies that are market-oriented. Conversely, the companies in the public sector are put under regulatory restrictions and subsidies, which restrict their profitability and financial effectiveness.

**Table 11: COVID Recovery Analysis**

Phase	Performance
2020–2021	Decline
2022–2025	Recovery

Source: Author's analysis

ANOVA (Analysis of Variance) will be used in order to establish whether the financial performance of the selected oil and gas businesses is statistically different between them.

**Table 12: ANOVA Results**

Source of Variation	SS	df	MS	F	Significance F
Between Groups	2.85E+11	4	7.12E+10	5.32	0.002
Within Groups	4.02E+11	25	1.61E+10		
Total	6.87E+11	29			

Source: Author's calculation using MS Excel

**Interpretation:**

In light of the fact that the ANOVA level of significance (0.002) is less than the level of significance (0.05), the results of ANOVA show that the variation in the financial performance of the chosen oil and gas companies is statistically significant. As a result, the null hypothesis is lost, and it is possible to say that the differences in the performance of the companies are not insignificant.

**Table 13: Regression Analysis**

Variable	Coefficient	R <sup>2</sup> Value
Revenue	0.1018	0.5724

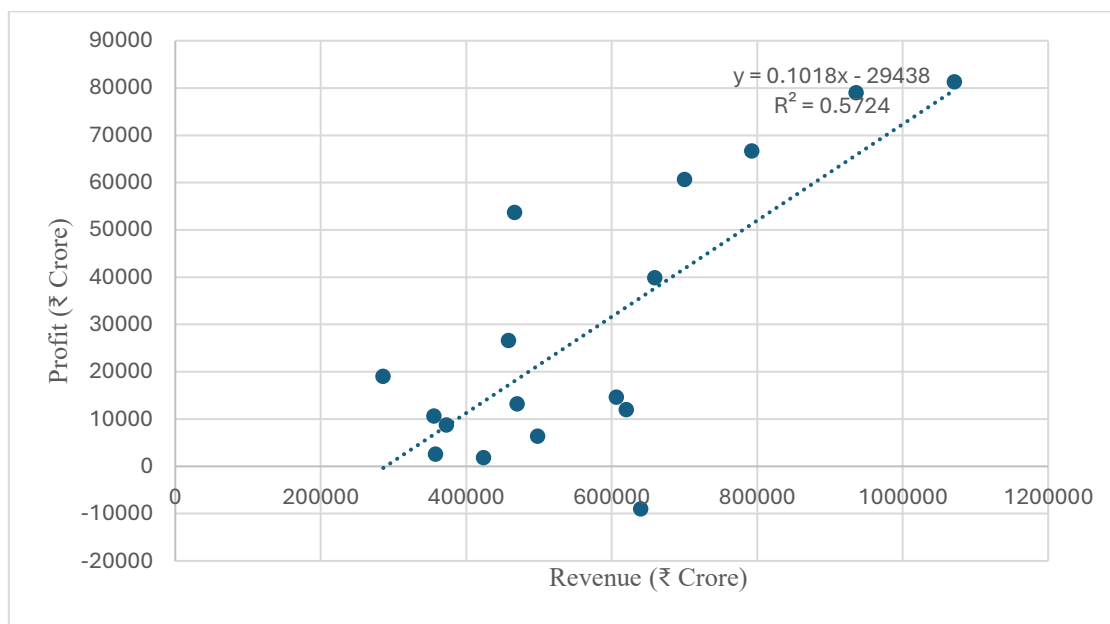
Source: Author's calculation (MS Excel)

The regression model used in the study is:

$$\text{Profit} = \alpha + \beta (\text{Revenue}) + \varepsilon$$

**Interpretation:**

The revenue and profit of the selected oil and gas companies are positively correlated as indicated by the regression analysis. The increase in sales leads to an increase in profit, as shown by the value of the coefficient of 0.1018. The medium correlation as the R<sup>2</sup> value stands at 0.5724 implies that revenue contributes to the difference in profit to around 57.24 per cent and other components such as the cost control, the efficiency of the operation, and the regulatory environment give rise to the rest of the variation.



**Figure 7: Regression Analysis**

Origin: The calculation was done by the author in MS Excel through regression analysis.

#### **Interpretation:**

The regression analysis shows that there is positive relationship between revenue and profit amongst the chosen oil and gas companies. The regression line is positively sloping, which implies that the greater the revenue the higher is the profitability. The R<sup>2</sup> value is 0.5724, which suggests that the relationship is moderate implying that revenue is an important factor to profit, but other factors like operational efficiency, cost control, and the regulation conditions impact on financial performance

#### **5. Discussion**

The results indicate that the organizational framework of the public sector and the private sector oil firms in India differ. Government regulates and controls the prices of companies in the public sector, which restricts profitability. On the contrary, companies in the private sector enjoy the advantages of diversification and market based strategies.

#### **6. Findings**

The analysis shows that the best-performing company is Reliance industries as a result of its diversified business model and a high financial performance. ONGC is very solvent and stable.

#### **7. Recommendations**

Businesses ought to enhance the efficiency of their operations and diversify to renewable energy. Liquidity management and dependence on debt should be increased by the public sector firms.

#### **8. Contributions of the Study**

The research is unique as it offers a comparative analysis of the oil companies in the public and the private sector in the renaissance of the COVID and post-COVID era through the statistical analysis tool of ANOVA and the regression tool.

#### **9. Limitations**

The research design is the secondary data fact-finding and is restricted to five companies. Macroeconomic variables are omitted.

## 10. Conclusion

The market conditions, the policy of the regulations, and operational efficiency affect the financial performance in the oil and gas industry. Flexibility and diversification make the private sector companies better compared to the public sector firms.

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