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COMPARATIVE ANALYSIS OF PROFITABILITY RATIOS AMONG INDIA'S TOP PHARMACEUTICAL COMPANIES

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ABSTRACT

This document studies the success levels of Indian pharmaceutical companies in the years 2019 to 2024 through the analysis of key profitability ratios such as the Operating Profit Ratio (OPR) ratio, Gross Profit Margin, (GPM), Operating Profit Margin (OPM) and Net Profit Ratio (NPM). The research finds considerable differences, in the level of profitability across the companies, which is a function of the market, the regulation, and management. Results indicate Sun Pharmaceutical and Divi's Laboratories were ranked approved due to successful strategies for reducing cost and innovation.

1. INTRODUCTION

With its exports dominating the supply of generic drugs, India's pharmaceutical sector is often regarded as the world's generic drug capital. The present research examines the success of five major players - Sun Pharmaceutical, Dr. Reddy’s Laboratories, Cipla, Divi’s Laboratories and Aurobindo Pharma – in terms of return on equity over five years (2019-2024). Through the use of important profitability ratios, the research explains the tactics that companies employ to remain successful and manage market adversities.

2. STATEMENT OF THE PROBLEM

Although enjoying a global market presence, Indian pharmaceutical companies are confronted with issues such as price controls, large investments in R&D, and competition which affect their profitability margins. The purpose of this study is to evaluate these challenges and such profitability-enhancing methods that create shareholder wealth.

3. OBJECTIVES OF THE STUDY

1. To determine the profitability ratios of selected pharmaceutical firms.
2. To apply different statistical tools in determining the intercompany differences in the profitability ratios.

4. REVIEW OF LITERATURE:

Pharmaceutical companies have a variety of factors that significantly govern their profitability including R&D intensity, marketing competition, and administrative efficiency.

Research has confirmed that actively sharpening working capital management (WCM), exporting intensity (EXI) and physical capital can alter the profitability patterns in the pharma industry in India. Asset efficiency measured by return on assets (ROA) is now more associated with higher profits (Mahor & Banerji, 2023).

There are two sides to the extent of research and development (R&D) investments. On the one hand, if leveraged effectively, more R&D investment can improve the competitive edge of products developed. This, however, can also have an adverse effect on profit levels in the short term as an enormous amount is invested upfront. On the other hand, working capital efficiency and intensity of export ratio have always shown a positive effect on return on assets. In this case, it has been determined that 10% higher EXI should raise the profit levels by 0.70% which goes to show that it is important to penetrate international markets (Mahor & Banerji, 2023).

Debt financing also provides an interesting situation as it has been shown that on one hand, it is possible for increased leverage to improve the profitability potential of certain firms within a context but excessive dependence on debt may undermine financial stability. Firms that adopt dynamic strategies, including structural adjustments during economic shocks, often outperform others in terms of profitability and market resilience (Mahor & Banerji, 2023).

5. HYPOTHESIS OF THE STUDY

H_1: There is no significant difference in Gross Profit Margin (GPM) across the groups.

H_2: There is no significant difference in Operating Profit Margin (OPM) across the groups.

H_3: There is no significant difference in Net Profit Margin (NPM) across the groups.

H_4: There is no significant difference in Operating Profit Ratio (OPR) across the groups.

6. METHODOLOGY

The present research covers the timeframe from the year 2019 to 2024. The data was obtained from official annual reports of the companies and financial databases such as MoneyControl and Screener. The profitability ratios considered in this study include OPR, GPM, NPM and OPM. To study the impact of years-on-year differences in profitability, one-way ANOVA was employed.

7. RESULTS AND DISCUSSION

1. GPM

- H_0 (Null Hypothesis): There is no significant difference in Gross Profit Margin across the groups.
- H_1 (Alternative Hypothesis): There is a significant difference in Gross Profit Margin across the groups.

ANOVA Table:

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1592.106	4	398.0264	43.24866	4.6E-08	3.055568
Within Groups	138.0481	15	9.203208			
Total	1730.154	19				

Interpretation:

- F-value (43.24866) > F crit (3.055568), and P-value (4.6E-08) < 0.05, indicating that there is a statistically significant difference in GPM among the groups.
- This suggests that factors differentiating the groups impact their GPM significantly.

2. **OPM**

Hypotheses:

- H_0 (Null Hypothesis): There is no significant difference in Operating Profit Margin across the groups.
- H_1 (Alternative Hypothesis): There is a significant difference in Operating Profit Margin across the groups.

ANOVA Table:

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1988.277	4	497.0692	75.33555	9.56E-10	3.055568
Within Groups	98.97105	15	6.59807			
Total	2087.248	19				

Interpretation:

- F-value (75.33555) > F crit (3.055568), and P-value (9.56E-10) < 0.05, indicating a statistically significant difference in OPM among the groups.
- The variability in OPM is highly influenced by group-specific factors.

2. NPM

Hypotheses:

- H_0 (Null Hypothesis): There is no significant difference in Net Profit Margin across the groups.

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- H_1 (Alternative Hypothesis): There is a significant difference in Net Profit Margin across the groups.

ANOVA Table:

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1161.887	4	290.4719	49.79008	1.75E-08	3.055568
Within Groups	87.50895	15	5.83393			
Total	1249.396	19				

Interpretation:

- F-value (49.79008) > F crit (3.055568), and P-value (1.75E-08) < 0.05, indicating a statistically significant difference in NPM among the groups.
- Group-specific factors, such as cost control and revenue efficiency, significantly impact NPM.

4. **OPR**

Hypotheses:

- H_0 (Null Hypothesis): There is no significant difference in Operating Profit Ratio across the groups.
- H_1 (Alternative Hypothesis): There is a significant difference in Operating Profit Ratio across the groups.

ANOVA Table:

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	7262.761	4	1815.69	435.9078	2.56E-15	3.055568
Within Groups	62.47963	15	4.165308			
Total	7325.241	19				

Interpretation:

- F-value (435.9078) > F crit (3.055568), and P-value (2.56E-15) < 0.05, indicating a highly significant difference in OPR among the groups.

- The variation in OPR is exceptionally influenced by group-specific operational factors.

8. SUGGESTIONS:

1. Gross Profit Margin (GPM):
   - Reduce raw material costs by 10%, increasing GPM from 25% to 35%.
   - Adjust pricing strategies quarterly to maintain a 10% margin buffer.
2. Operating Profit Margin (OPM):
   - Streamline operations to cut overhead by 15%, boosting OPM from 15% to 25%.
   - Invest in automation with 5% of profits to improve productivity by 20%.
3. Net Profit Margin (NPM):
   - Diversify product offerings to achieve a 5% annual revenue increase.
   - Reduce financing costs by 10%, improving NPM from 10% to 20%.
4. Operating Profit Ratio (OPR):
   - Benchmark top-performing groups to raise OPR from 40% to 60%.
   - Invest in staff training, allocating 3% of budgets to achieve a 15% efficiency gain.

9. CONCLUSION:

The Indian pharmaceutical sector is plagued with challenges such as government price controls, competition and R&D expenses. However, profitability, on the other hand, is determined by cost control measures, efficiency in operations, and flexibility pertaining to the market.

KEY CONCLUSIONS:

- Both Divi's Laboratories and Sun Pharmaceutical were observed to be in positive trends regarding profitability.
- Cipla Ltd. enhanced profitability by employing cost control measures.
- Aurobindo Pharma has volatility due to the water flows of the market.

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