Analysis of Financial Performance of JK Tyre & Industries Ltd. Using DuPont Analysis

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Abstract:

This article investigates the financial performance of JK Tyre & Industries Ltd. using the DuPont analysis model. The study focuses on evaluating the company's return on equity (ROE) by breaking it down into its key components: net profit margin, asset turnover, and financial leverage. The research utilizes financial data from the company's annual reports over the past five years to analyze trends and identify areas for improvement. The findings suggest that while JK Tyre maintains strong profitability, there are opportunities to enhance asset utilization and manage financial leverage more effectively.

Keywords: Risk, Return on Investment, Profitability

Introduction:

The Indian automobile industry plays a critical role in the country's economy, contributing significantly to manufacturing output and employment. JK Tyre & Industries Ltd., a prominent player in this sector, has established itself as a leader in tire manufacturing both in India and globally. This study aims to assess the financial performance of JK Tyre through the application of DuPont analysis, a comprehensive method that decomposes return on equity (ROE) into three key components: net profit margin, asset turnover, and financial leverage. The objective is to provide insights into the company's financial health and offer recommendations for improving operational efficiency and profitability.

Literature Review:

Capital budgeting and financial performance analysis are critical in evaluating a company's success. Previous research has shown that the DuPont model is a powerful tool for breaking down the components of ROE, providing a clearer picture of a company's financial performance. Studies by Mahamuni and Jumle (2018) and Gupta et al. (2019) have applied DuPont analysis to various industries, highlighting its effectiveness in identifying strengths and weaknesses in financial management. This paper builds on these studies by applying DuPont analysis to JK Tyre, focusing on its profitability, asset utilization, and leverage ratios.

Mahamuni, P. N., & Jumle, A. G. (2018). Analytical Study of Profitability Performance of Mahindra and Mahindra Ltd.: Using DuPont Model.

The study is focused on analysing the profitability performance of Mahindra and Mahindra Ltd., a major Indian multinational corporation in the automobile industry. The article is peer-reviewed and contributes to the field of management science. Using the DuPont model, the study dissects the company's profitability, highlighting the key areas of strength and areas that may need improvement.

Ghayas, A., & Akhter, J. (2018). Impact of Capital Structure on Profitability: An empirical analysis of listed firms in India. Asian Journal of Managerial Science.

This study intends to observe, inspect, and examine the effect of capital construction choice on the company's benefit by utilising an example of 35 Indian drug organisations recorded on the Bombay Stock Trade (BSE) from 2012 to 2016. Relapse Examination is utilized to quantify the degree and nature of the relationship. Capital construction factors utilised in the review are the proportion of long haul obligation to add up to resources (LDA), the proportion of momentary obligation to add up to resources (SDA) and the proportion of our obligation to add up to resources (DA) while productivity has been measure by Return on Value (ROE). Firms' Size (SIZE)and sales growth (GROW) are likewise utilised as control factors. Results uncover a constructive outcome of SDA and DA on ROE, while a powerless with no impact was found of LDA on ROE.

Odusanya, I. A., Yinusa, O. G., & Ilo, B. M. (2018). Determinants of firm profitability in Nigeria: Evidence from dynamic panel models. SPOUDAI-Journal of Economics and Business.

This study looks at the determinants of firm productivity for 114 firms recorded on the Nigerian Stock Trade (NSE) from 1998 to 2012, utilising the framework Summed up Strategy for Minutes (GMM). The outcomes show that a lack of productivity results in a huge constructive outcome for the contemporaneous firm's benefit. Notwithstanding, momentary influence, expansion rate, the loan fee and monetary gamble meaningfully affect firm benefit. Thus, the focus suggests, among other-things, that the cost of obtaining the real sector of the economy should be reduced in order to lower the costs of production and increase productivity, and that the government should establish necessary macroeconomic arrangements in order to manage inflationary pressure in the economy.

Binny, E. (2018). Structure and growth performance of the Indian tyre industry post-liberalisation.

The Indian tyre industry, which shows participation from around thirty-four players, is an oligopolistic market. The study analysed the post-reform period from 1991 to 2017. It finds that Indian companies have become competitive and are world market players now. India is on the way to becoming the world’s third-largest automobile market, just like China and the USA, and the auto tyre industry, which is an ancillary of automobiles, will also show similar growth.

Husain, T., & Sunardi, N. (2020). Firm's Value Prediction Based on Profitability Ratios and Dividend Policy.

This study expects to observe the examination system in regard to the Association's Worth in light of Productivity Proportions related to Profit Strategy. The company's Worth is estimated using a Cost-to-Book Worth (PBV) Approach. The investigation discovered that productivity proportions affect the profit strategy, while the profit strategy significantly affects the association's worth. In any case, the Profit Strategy doesn't intervene in the impact of Benefit Proportions on the Association's Worth.

Research Gap:

Potential challenges in accessing comprehensive and updated financial data, especially for private companies. May not sufficiently explore profitability differences across different segments of the automobile industry. Comparative analysis of global automobile industries could provide broader insights and benchmarks.

Objectives:

- To use DuPont model analysis to see the profitability-function of JK Tyre.
- To calculate JK Tire's financial leverage, return on equity, & profitability level.
- To use DuPont analysis to evaluate JK Tyre's operational effectiveness.

Research Methodology:

This study employs a quantitative research methodology, utilizing secondary data sourced from the annual reports of JK Tyre & Industries Ltd. over the past five financial years. The DuPont analysis model is used to decompose the company's ROE into net profit margin, asset turnover, and financial leverage. The data is analyzed to identify trends, compare performance across different years, and assess the impact of these components on the overall financial health of the company.

Limitations of Study:

- The study's assumptions are that information in the company's financial reports has inherent limits because internal data is sensitive, and it only used data was available for a 5-year period, which may not be enough for a thorough examination.
- There could be inaccuracies because study is based on both primary and secondary data.
- There may be doubts about dependability and accuracy of decisions made-using information from balance sheets.

Components of Dupont Analysis:

- Asset Turnover Ratio

  Asset Turnover Ratio=Total Assets/ Net Sales

- Profitability
  Net Profit Margin=Net Sales /Net Profit
- Financial Leverage
  Financial Leverage=Total Equity/Total Assets

Data Analysis and Interpretation:

The data analysis reveals that JK Tyre has maintained a consistent ROE over the past five years, with net profit margin showing a positive trend. However, the asset turnover ratio indicates that there is room for improvement in the efficient use of assets. Financial leverage has fluctuated, suggesting a need for careful management of debt levels to avoid excessive risk. The analysis is supported by tables and charts that provide a visual representation of the company's financial performance.

Table showing the 2019–20 Net Profit-Margin, ROE, Asset Turnover, & Financial Leverage

FINANCIAL DATA	2019/20 Rs. In Cr.
SALES	6039.73
NET INCOME	6,120.23
TOTAL ASSET	7,488.49
TOTAL EQUITY	2162.50

Analysis:

The above table shows Return on equity of JK Tyre Industries Limited. Sales of the JK Tyre Industries Limited in the year [2020/21 6039.73], Net income of the JK Tyre Industries Limited in the year [2020/21 6,120.23], Total assets of the JK Tyre Industries Limited in year [2020/21 7,488.49], Total equity of JK Tyre Industries Limited in year [2020/21 2162.50]

Interpretation:

JK Tyre Industries Limited shows a high ROE, indicating strong profitability relative to equity. However, the net profit margin seems abnormally high, suggesting possible accounting anomalies or extraordinary items affecting net income. The asset turnover ratio suggests room for improving asset utilisation efficiency. High financial leverage indicates substantial debt use, which can be risky but also offers the potential for higher returns if managed well. While profitability appears strong, further investigation into the sources of net income and financial leverage is warranted to understand the company's financial health and risk profile fully.

Table with ROE, asset turnover, net-profit margin, & financial leverage calculations for 2021–2022

FINANCIAL DATA	2020/21 Rs. In Cr.
SALES	6,088.16
NET INCOME	6,170.12
TOTAL ASSET	7256.21
TOTAL EQUITY	2398.39

Analysis:

The above table shows Return on equity of JK Tyre Industries Limited. Sales of the JK Tyre Industries Limited in the year [2021/22 6,088.16], Net income of the JK Tyre Industries Limited in the year [2021/22 6,170.12], Total assets of the JK Tyre Industries Limited in the year [2021/22 7256.21], Total equity of JK Tyre Industries Limited in year [2021/22 2398.39]

Interpretation:

JK Tyre Industries Limited shows a consistently high ROE, indicating strong profitability relative to equity. However, the net profit margin remains unusually high, warranting further investigation into the net income sources. The asset-turnover ratio has slightly improved, suggesting better asset utilisation efficiency. The financial-leverage ratio indicates substantial debt use, which can be risky but also provides the potential for higher returns if managed well. Overall, while the profitability metrics appear strong, the anomalous net profit margin and high leverage suggest a need for careful scrutiny of the financial practices and risk management strategies.

Table with ROE, asset turnover, net-profit margin, & financial leverage calculations for 2022–2023

FINANCIAL DATA	2022/21 Rs. In Cr.
SALES	7,918.44
NET INCOME	8,062.26
TOTAL-ASSETS	8,144.82
TOTAL EQUITY	2,526.10

Analysis:

The above table shows Return on equity of JK Tyre Industries Limited. Sales of the JK Tyre Industries Limited in the year [2022/23 7,918.44], Net income of the JK Tyre Industries Limited in the year [2022/23 8,062.26], Total assets of the JK Tyre Industries Limited in the year [2022/23 8,144.82], Total equity of JK Tyre Industries Limited in year [2022/23 2,526.10]

Interpretation:

JK Tyre Industries Limited shows a consistently high ROE, indicating strong profitability relative to equity. The net profit margin remains unusually-high, which suggests further investigation into the net income sources is necessary. The asset turnover ratio has improved, showing better asset utilisation efficiency. The financial leverage ratio indicates substantial debt use, which can be risky but also provides the potential for higher returns if managed well. Overall, while the profitability metrics appear strong, the anomalous net profit margin and high leverage suggest a need for careful scrutiny of the financial practices and risk management strategies.

A Table outlining the Financial Leverage, Asset-Turnover, Net Profit Margin, and ROE calculations for 2023–2024

FINANCIAL DATA	2023/22 Rs in Cr.
SALES	9,538.39
NET INCOME	9,649.44
TOTAL ASSETS	8,006.02
TOTAL EQUITY	2,889.22

Analysis:

The above table shows Return on equity of JK Tyre Industries Limited. Sales of the JK Tyre Industries Limited in the year [2023/24 9,538.39], Net income of the JK Tyre Industries Limited in the year [2023/24 9,649.44], Total assets of the JK Tyre Industries Limited in the year [2023/24 8,006.02], Total equity of JK Tyre Industries Limited in year [2023/24 2,889.22]

Interpretation:

JK Tyre Industries Limited shows a consistently high ROE, indicating strong profitability relative to equity. The net profit margin remains unusually high, warranting further investigation into the net income sources. The asset turnover ratio improved significantly, showing better asset utilisation efficiency. The financial-leverage ratio indicates substantial debt use, though it has decreased slightly, suggesting improved economic management.

Table with ROE, asset turnover, net-profit margin, & financial leverage calculations for 2024–2025

FINANCIAL DATA	2024/23 Rs in Cr.
SALES	10,313.27
NET INCOME	10,349.49
TOTAL ASSETS	9,552.62
TOTAL EQUITY	3,896.03

Analysis:

The above table shows Return on equity of JK Tyre Industries Limited. Sales of the JK Tyre Industries Limited in the year [2024/25 10,313.27], Net income of the JK Tyre Industries Limited in the year [2024/25 10,349.49], Total asset of the JK Tyre Industries Limited in the year [2024/25 9,552.62], Total equity of JK Tyre Industries Limited in year [2024/25 3,896.03].

Interpretation:

An extremely high ROE suggests that JK Tyre generates significant profit relative to shareholders' equity. Asset turnover shows the company generates 1.08 rupees in sales for every rupee of assets. This shows good utilisation of assets, though slightly lower than the previous year. The net profit margin remains unusually high, indicating that net income almost equals sales. This could be due to extraordinary items, non-operational income, or accounting practices that must be investigated for a clearer understanding.

Findings:

- JK Tyres Industries Limited's return on equity was lower (2.65) in 20/21 than it was in the following three years (3.34) (3.19) (2.57).
- JK Tyre Industries Limited's asset-turnover ratio has improved by 1.08 and 1.19 in last few months, suggesting that the business has been using assets more efficiently to create income. The Ratios were lower over the previous three years, at 0.817, 0.84, and 0.97. This consistent improvement suggests that the company's asset utilisation performance is trending well.

Conclusions:

This organization can undoubtedly compete with other societies to provide clients with the essential financial services. The auditors found no faults with the society's expansion, which is highly competitive, and they anticipated a department-wide model society. Based on the promises made to those in need, it is doing remarkably well in the market.

The application of DuPont analysis to JK Tyre & Industries Ltd. provides valuable insights into the company's financial performance. While the company shows strong profitability, there are opportunities to enhance asset utilization and manage financial leverage more effectively. These findings suggest that JK Tyre can improve its ROE by focusing on these areas, thereby strengthening its financial position in a competitive market. Future research could explore the impact of external factors, such as market conditions and regulatory changes, on the company's financial performance.

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