A COMPARATIVE STUDY ON FINANCIAL PERFORMANCE ANALYSIS OF SELECTED TYRE COMPANIES IN INDIA

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ABSTRACT

The tyre industry in India one of the most recognized and quite well industries in the country. India stands fourth in world of tyre market. Through overseas collaboration, the tyre industry of India has indeed ready to absorb new technological advances. In this study three tyre companies data has been taken and the companies names are JK tyres industries limited, Balkrishna tyre industries and Apollo tyre limited. Period of the study is five year which is 2016-17 to 2020-2021. In this research study ANOVA test has been applied on ratios. Data has been collected from company's annual reports and from money control website. The majority of null hypotheses have been rejected, implying that alternative hypotheses have been accepted. The data reveals that there is a substantial variation in gross profit ratio, net profit ratio, current ratio, quick ratio, inventory turnover ratio among chosen tyre business.

Keywords: *ANOVA, Ratio Analysis, Profitability, Productivity, Current Ratio, Quick Ratio.*

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Introduction

The tyre market in India one of the more recognized and quite well industries in the country. Since then, the subdivision seems to have been a strong collaborator in the government's diversification efforts- particularly in the middle of economic reforms. An economy's wheels are given through the tyre business rides.

India stands fourth in largest tyre market into the globe China stands first while Europe stands second. The market in India has been undertaking a development. Enhanced radialization of tyres, specifically in vehicles, is driving this trend.

Furthermore, the tyre business encompasses a large number of enterprises. These have been utilized in several models of cars & have a large number of clients. The primary driver of tyre demand is economic growth OEMs and replacement customers are the two end-user categories. The Replacement market presently has the upper hand. The tyre market accounts for the majority of overall sales.

The OEM business segment requirement is influenced by because new vehicle sales market, however the substitution industry has been influenced with usage. Substitution phases and structures, the tyre market continues booming In India, these top ten businesses are highly potent.

Almost eighty percentage of the overall market is accounted for. MRF, Currently, Apollo Tyres, CEAT Tyres, & JK Tyres serve customers the market's leading players.

The Indian tyre business has had strong development in recent years, mainly to both the expanding passenger vehicle plus two-wheeler businesses. This is also one of the most popular the biggest emerging marketplaces, even with the new digital technology advent, amazingly manufacturing

The subdivision has been increasing in terms of infrastructure and raw material ease of use and set to enlarge a lot further.

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From traditional biases or longitudinal ply tyres with in past to today's steel radial tyres, tubeless tyres, significant operational features have been added in tyre construction. Having a low viewing angle, puncture-resistant tyres, and etc. As a result, testing procedures had already formed so determine that good performance, efficiency, safety, stability, and lifespan are all important factors a set of tyres.

Through overseas cooperation, the Indian tyre sector has indeed been ready to absorb the newest technological advances as adjust them to Indian requirements. Organizations are now also putting money through into improvement of processes of Green tyres and radial tyre capacity expansion. Finance was among the most essential areas of every other organization. For a healthy atmosphere, an annual business situation is crucial. It is for the proper raising of cash that any firm is operated as well as the efficient use of money.

Review of Literature

- **Hardeep Singh, (2019),** had done a case study of critical manufacturing process in Tyre Manufacturing Industry. The researcher discovered that in order to be competitive in the worldwide market, the company must improve its goods. New technologies are being used by the Indian tyre sector. The major goal is to manufacture structured and long-lasting tyres at a reasonable cost by identifying the most essential manufacturing process in the tyre industry. The focus of the study was on identifying the most essential production process. For these reasons, several expert opinions have been considered. The end reveals that tyre construction comes next. The procedure of tyre curing is quite important. This research shows how a process may be improved to improve the quality of tyre production.

- **S Mohankumar, (2001),** tried to analyze impact of Economic Reforms on Tyres industry. Researchers attempt to determine the influence of economic reforms on the automated tyre manufacturing business in this article. The focus of this study was on the truck and bus tyre segment. Because so many MNCs have entered the market since the reform, the tyre industry is on the verge of a major shake-up. Emphasize the need for product mix optimization, preferring radial tyres for large-scale investment.

- **Prof.Achrekar, (2013),** studied the various factor requirements in cement industry. To analyze asset liquidity, Finance liquidity, cash liquidities, etc by Ratio analysis. The Researcher analyzed the relative significance of various source of working capital.

Purpose of the Study

The purpose of this study is to examine the overall Financial Performance of a number of tyre firms in India from 2016 to 2020. The study's overarching objectives are as follows:

- Researching the profitability of selected tyre businesses in India.

- To assess the liquidity of the chosen Indian tyre firms.

- Assess the chosen tyre firms' long-term solvency in India.

- Compare and contrast their financial soundness, performance throughout the course of the research.

Research Methodology

The approach used in this study is quantitative research which is based on quantitative data. The study's basic data source is secondary data acquired from the Financial Records of Chosen Indian Tyres companies have been released. The information about theoretical issues has been used. Historical information was gathered from websites, journals, and other sources. Magazines, newspapers, and books are all examples of this.

The availability of this year was a factor in the decision. The exploratory approach was used for this aim. Because it aids in the investigation of any problem with appropriate. It is also necessary for the clarification of the theory.

Sources of Data

The research is based on secondary sources of data including such company annual reports, websites, books, articles, theses, and research papers. Some data are also collected from Money control website.

Period of the Study

In this study five year data has been taken from 2016-17 to 2020-21.

Limitations of the Study

- In this study secondary data are used which may affect the results.
- The period of the research analysis is only two years.
- Ratio analysis can only be used to assess profitability, efficiency, & financial soundness; it is not an answer to a real situation problem.

Tools for Analyzing Data

Because there are three firms, the hypotheses were tested using one-way ANOVA.

Hypothesis Testing

Hypothesis 1 Current Ratio

H_0:   There is no significant difference between PBT ratios of selected tyre companies.

H_1:   There is a significant difference between PBT ratios of selected tyre companies.

Current ratios of tyre companies from 2016-17 to 2020-21

Year	Ratio	Year	JK Tyres	Balkrishna Tyres	Apollo Tyres
1	**Current Ratio**	2016-17	0.98	1.07	1.11
2		2017-18	0.83	1.42	1.59
3		2018-19	1.04	1.76	1.33
4		2019-20	0.98	1.28	0.71
5		2020-21	1.08	1.35	1.13

Analysis of Current Ratio

Summary				
Groups	**Count**	**Sum**	**Average**	**Variance**
JK Tyres	5	4.91	0.982	0.00902
BalkrishnaTyres	5	6.88	1.376	0.06323
Apollo Tyres	5	5.87	1.174	0.10468

ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	0.388173	2	0.194087	3.290906	0.072537	3.885294
Within Groups	0.70772	12	0.058977			
Total	1.095893	14				

On ratios of this company one way ANOVA test has been applied. In table number 1 P Value is 0.072537 which is higher than 0.05 so H0 has been accepted.

Finding: in this table of current ratio significance difference of companies has not been renowned. In this analysis while calculating variance in ANOVA 0.10468 is highest from Apollo company while 0.00902 is lower from Jk tyres industries. Calculated value of F is 3.290906 which are lower than F critic value 3.885294. In this study we can see mean is different in from each other.

Hence, we can give a conclusion that there is no significant difference between the Current ratios of the companies.

Hypothesis 2 Quick Ratio Of tyre companies from 2016-17 to 2020-21

H_0:   There is no significant difference between net profit ratios of selected tyre companies.

H_1:   There is a significant difference between net profit ratios of selected tyre companies.

Quick Ratios of Tyre Companies from 2016-17 to 2020-21

Year	Ratio	Year	JK Tyres	Balkrishna Tyres	Apollo Tyres
1	**Quick Ratio**	2016-17	0.68	0.78	0.51
2		2017-18	0.53	0.99	1.03
3		2018-19	0.68	1.25	0.55
4		2019-20	0.63	0.89	0.27
5		2020-21	0.64	0.84	0.65

Analysis of Quick Ratio

Summary				
Groups	**Count**	**Sum**	**Average**	**Variance**
JK Tyres	5	3.16	0.632	0.00377
Balkrishna Tyres	5	4.75	0.95	0.03405
Apollo Tyres	5	3.01	0.602	0.07672

ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-Value**	**F Crit**
Between Groups	0.37188	2	0.18594	4.870089	0.028282	3.885294
Within Groups	0.45816	12	0.03818			
Total	0.83004	14				

After calculating this ratios of the company's one way ANOVA test has been applied. P value is 0.028282 which is lower than 0.05 so H0 has been rejected.

Finding

In this table of Quick ratio significance difference of companies has been renowned. In this analysis while calculating variance in ANOVA 0.07672 is highest from Apollo company while 0.00377 is lower from Jk tyres industries. Calculated value of F is 4.870089 which are higher than F critic value 3.885294.

Hence, we can give a conclusion that there is significant difference between the Quick ratios of the companies.

Hypothesis 3 Net Profit Ratio of tyre companies from 2016-17 to 2020-21

H_0:   There is no significant difference between current ratios of selected tyre companies.

H_1:   There is a significant difference between current ratios of selected tyre companies

Net Profit Ratios of Tyre Companies from 2016-17 to 2020-21

Year	Ratio	Year	JK Tyres	BalkrishnaTyres	Apollo Tyres
1	**Net Profit Ratio**	2016-17	5.55	19.19	8.98
2		2017-18	0.66	16.62	6.04
3		2018-19	2.68	14.91	4.79
4		2019-20	3.75	19.75	4.59
5		2020-21	4.18	20.06	6.16

Analysis of Net Profit Ratio

Summary				
Groups	**Count**	**Sum**	**Average**	**Variance**
JK Tyres	5	16.82	3.364	3.34323
Balkrishna Tyres	5	90.53	18.106	5.02963
Apollo Tyres	5	30.56	6.112	3.07427

ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	614.5568	2	307.2784	80.52981	1.11E-0.07	3.885294
Within Groups	45.78852	12	3.81571			
Total	660.3454	14				

After calculating this ratios of the company's one way ANOVA test has been applied. P value is -0.07 which is lower than 0.05 so H0 has been rejected.

Finding

in this table of Net Profit Ratio significance difference of companies has been renowned. In this analysis while calculating variance in ANOVA 5.02963 is highest from Balkrishna Company while 5.42983 is lower from Balkrishna tyre industries. Calculated value of F is 80.52981 which are higher than F critic value 3.885294.

Hence, we can give a conclusion that there is significant difference between the PBT Ratios of the companies.

Hypothesis 4 PBT Ratios of tyre companies from 2016-17 to 2020-21

H₀: There is no significant difference between quick ratios of selected tyre companies.

H₁: There is a significant difference between quick ratios of selected tyre companies

Year	Ratio	Year	JK Tyres	Balkrishna Tyres	Apollo Tyres
1	PBT	2016-17	7.68	28.33	12.15
2		2017-18	0.98	25.14	8.42
3	Ratio	2018-19	4.00	22.55	6.52
4		2019-20	1.39	23.47	5.25
5		2020-21	6.44	26.58	8.96

Analysis of PBT Ratio

Summary				
Groups	**Count**	**Sum**	**Average**	**Variance**
JK Tyres	5	20.49	4.098	8.84512
Balkrishna Tyres	5	126.07	25.214	5.42983
Apollo Tyres	5	41.3	8.26	6.93385

ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	1251.076	2	625.5382	88.48283	6.56E -0.08	3.885294
Within Groups	84.8352	12	7.0696			
Total	1335.912	14				

After calculating this ratios of the company's one way ANOVA test has been applied. P value is -0.08 which is lower than 0.05 so H0 has been rejected.

Finding

In this table of Profit before tax Ratio significance difference of companies has been renowned. In this analysis while calculating variance in ANOVA 8.84512is highest from Jk tyres industries while5.42983 is lower from Balkrishna industries. Calculated value of F is 88.48283 which are higher than F critic value 3.885294.

Hence, we can give a conclusion that there is significant difference between the PBT Ratios of the companies.

Hypothesis 5 Inventory Turnover ratios of tyre companies from 2016-17 to 2020-21

H₀: There is no significant difference between inventory turnover ratios of selected tyre companies.

H₁: There is a significant difference between inventory turnover ratios of selected tyre companies.

Year	Ratio	Year	JK Tyres	Balkrishna Tyres	Apollo Tyres
1	Inventory	2016-17	6.42	8.11	5.17
2	Turnover	2017-18	6.29	7.48	5.98
3	Ratio	2018-19	6.70	7.36	6.02
4		2019-20	5.56	8.24	6.12
5		2020-21	5.14	6.33	5.65

Analysis of Inventory Turnover Ratio

Summary				
Groups	**Count**	**Sum**	**Average**	**Variance**
JK Tyres	5	30.11	6.022	0.42032
BalkrishnaTyres	5	37.52	7.504	0.57713
Apollo Tyres	5	28.94	5.788	0.15047

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.65956	2	4.32978	11.31554	0.001731	3.885294
Within Groups	4.59168	12	0.38264			
Total	13.25124	14				

P value is 0.001731 which is lesser than 0.05 so null hypotheses has been rejected.

Finding

In this table of Inventory Turnover Ratio significance difference of companies has been renowned. In this analysis while calculating variance in ANOVA is 0.57713 highest from Balkrishna industries while 0.15047is lower from Apollo tyres industries. Calculated value of F is 11.31554 which are higher than F critic value 3.885294.

Hence, we can give a conclusion that there is significant difference between the Inventory Turnover Ratios of the companies

Overall Suggestions

If the current ratio continues to decline, the firm's management must become more watchful in order to preserve or better the existing position.

It is necessary to have a rigorous credit policy.

Inventory control should be implemented properly to minimize superfluous stock and keep it in good condition to sufficient lead time

The company should execute appropriate policies and procedures.

Measures to dispose of scrap and by-products during the built-up process in order to create an extra revenue stream

Appropriate sales marketing activities can be implemented to improve sales.

Conclusion

The tyre industry in India makes a substantial contribution to the Economic development. The financial performance of various prominent tyre businesses is examined in this research. The data was gathered from tyre businesses' annual reports from 2016-17 through 2020-21 and reviewed using one way ANOVA as such statistical technique. The majority of null hypotheses have been rejected, implying that alternative hypotheses have been accepted. The data reveals that there is a substantial variation in gross profit ratio, net profit ratio, current ratio, quick ratio, inventory turnover ratio among chosen tyre business.

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