



PROFIT PROJECTION OF SELECT TYRES MANUFACTURING COMPANIES IN INDIA

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Abstract: The tyre industry plays a very important title role as an auto element in the vehicle segment. Tyre and tube is the basic additive of the automotive vehicles. It is an essential element of any type of vehicle, which must be of first quality to have a safe and pleasant drive. The driving factors behind this growth are the continued increase in replacement sales and demand for commercial and passenger vehicles. The Indian automobile industry has always been a good indicator of the health of the economy, as the automobile sector plays a key role in both macroeconomic expansion and technological advancement. India has a strong position in the global heavy vehicle market as it is the largest tractor producer, second largest bus manufacturer and third largest heavy truck manufacturer in the world. India's annual automobile production in FY22 was 22.93 million vehicles. India has a strong market in terms of domestic demand and exports. This Study is Trend Projection of Select tyres Manufacturing Companies in India.

Keywords: Tyre Industry, Trend Projection on Profit and Correlation of sales and Profit.

I. Introduction and Rationale of the Study

The word tire is derived from the French word Tyre meaning “to pull”. Before the invention of pneumatic or air-filled tires, tires were made of strips of leather or iron placed on wooden wheels. This would protect the wheels of carts and wagons from rapid wear. In 1888, Irishman John Boyd Dunlop invented the first practical tire which later became Dunlop tires. He also tested the first pneumatic or air-filled tires on a tricycle and took it for a spin. Pneumatic tires gained popularity due to the increasing use of the bicycle in the late 18th century.

In 1926, Dunlop Rubber Limited became the first Indian company to establish a tire business in West Bengal. The MRF (Madras Rubber Factory Limited) followed in its footsteps and entered the tire manufacturing market in 1946, although it ventured into tread rubber manufacturing in 1952. Indian Tire Companies were able to grow by 6-8% in their annual production volume, reaching a new high of 27% in 2023-24. The driving factors behind this growth are the continued increase in replacement sales and demand for commercial and passenger vehicles.

II. Objectives of the Study

1. To know the Trend Projection of Profitability of Select Tyre Manufacturing industries.
2. To find out the Correlation between Select Tyre Manufacturing industries.

III. Review of Literature

Dr. Shreekant Vyas (2023) The trend and structure of production costs show that raw materials, electricity and fuel, labour, and selling and administrative overheads absorb the majority of the revenues of the tyre industry. The turnover of tyre firms is progressively rising, although a large amount of the income is spent on overhead. The cost of operating has increased for tyre firms, but they still make money, and their level of profit is rising. Expenses, net sales, and profit levels change significantly from one firm to the next, according to trend research.

Dr. Poonam Rani (2022) Currently Indian tyres industry has not only production and financial issues, but they fight with the strong wave of new oppositions from China. The major issues for the Indian tyre industry are to develop affordable, methodical and long lasting tyres at low price. The Indian tyre industry manufacturers the all range of tyres demanded by the Indian automotive industry besides of aero tyres and technical tyres. Research and development (R&D) start of advanced and environment friendly collaboration the market growth for Indian tyres. An R & D main aim has remained to develop tyres for consumers driving in northern conditions, safety and durability.

Mr.K.Jayakumar (2018) The Growth and financial health plays a significant role in the success of a company. The analysis practically reveals Net worth, Net profit, Sales, Total income, Net fixed assets, Total capital and Total assets have significant effect on the Growth position of the selected Tyres and Tubes companies in India during the study period. However the Growth position of selected Tyres and Tubes companies in India during the study period is satisfactory. In this study, the Growth performance of Apollo Tyres Ltd , MRF Ltd and Balkrishna industries Ltd was found to be good compare when the other companies. The study will help investors to identify the nature of Tyres and Tubes industry in India and will help to take decision regarding investment.

IV. Research Methodology

Research methodology ensures the application of relevant methods of research to accomplish the desired objectives of the study. Proper research design, appropriate sampling plan, necessary tools used for data collection and suitable framework of analysis would result into systematic conduct and documentation of the research. The study has dealt with secondary data. The secondary data were collected from the published and unpublished financial records of companies in Tyre industry in India. The further information needed for this study was also gathered through the reports of Tyre Manufactures' Association, magazines, books, journals and web portals.

4.1 Sampling Design

By following purposive sampling method, 3 top level Tyre industries have been selected based on Revenue and Market Share of the companies for an in-depth study focussing on the Trend Projection for the period of 5 years. These Three industries were Madras Rubber Factory limited (MRF), Balkrishna Industries Limited (BKT) and Apollo.

4.2 Tools used for the study

The study has been used with secondary data and tools used for Analysis are Trend Projection and Correlation Analysis.

V. Results and Discussion

5.1. Trend Projection

The trend projection method is the most classic business forecasting method, which focuses on the evolution of variables over time. This method requires a long series of time series data. The trend projection method is based on the assumption that the factors responsible for past trends of the variables to be projected will continue to play their role in the future in the same manner and to the same extent as in the past by determining the magnitude and the direction of the variable.

$$y = a + bx$$

$$a = y/n$$

$$b = xy/x^2$$

Table Showing Trend Projection Analysis			
Years	MRF	BKT	Apollo
	Trend Value		
2019	1303	863	426
2020	1172	968	479
2021	1041	1074	533
2022	910	1180	586
2023	779	1286	639
2024	648	1392	692
2025	517	1498	746
2026	386	1604	799
2027	255	1710	852
2028	124	1816	906

Source : Calculated Value

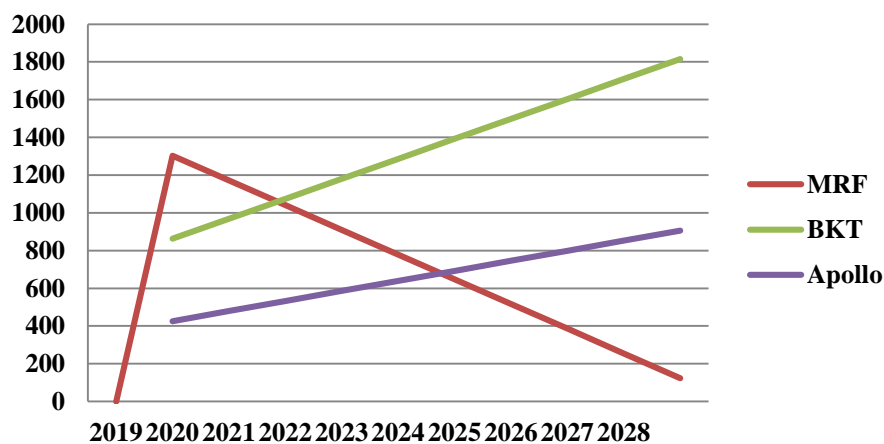
From the above table provided the data for three different entities (MRF, BKT and Apollo) over a period of time (2019-2028). The numbers represent a sort of trend value for each year. To interpret the trend projection, we can analyze the data to see how the values of each feature change over time.

It appears that the trend value of MRF is steadily decreasing over the years, the trend value of BKT is increasing, and the trend value of Apollo is also increasing, but at a slower rate than that of BKT.

To project the trend into the future, you can continue the trend by forecasting the values for the coming years based on the established patterns. For example, you can predict that the trend value of MRF will continue to decrease, while the trend values of BKT and Apollo will continue to increase.

However, it is important to note that projections based solely on past trends do not always accurately predict future results, as external factors and unforeseen events can influence trend.

Trend Projection



5.2. Correlation

Correlation analysis is a statistical method for assessing the degree to which two or more variables are connected. A scale of weak, moderate, and strong associations is represented by values ranging from 0 to +1/-1. A coefficient of one indicates a completely positive relationship: when one variable increases, the other also increases. A coefficient of -1 denotes a completely negative connection, in which as one variable increases, the other decreases accordingly. A coefficient of 0 indicates that there is no link between two variables.

H0: There is no significant relationship between Sales and Profit

H1: There is significant relationship between Sales and Profit

Table Showing Correlation						
Variables	MRF		BKT		Apollo	
	Sales	Profit	Sales	Profit	Sales	Profit
Sales	1	-0.74	1	0.57	1	-0.29
Profit	-0.74	1	0.57	1	-0.29	1

The correlation coefficient between sales and profit is -0.74. This indicates a strong negative correlation between sales and profit for **MRF**. In other words, as sales increase, profit tends to decrease, and vice versa. Since the sales and profit is showing a negatively correlation, we can reject H1 and accept H0.

The correlation coefficient between sales and profit is 0.57. This indicates a moderate positive correlation between sales and profit for **BKT**. In other words, as sales increase, profit tends to increase as well, and vice versa, but to a lesser extent than a perfect positive correlation. Since the correlation coefficient is significant and positive, we reject the null hypothesis (H0) and accept the alternative hypothesis (H1). There is a significant relationship between sales and profit for BKT.

The correlation coefficient between sales and profit is -0.29. This indicates a weak negative correlation between sales and profit for **Apollo**. In other words, there is a slight tendency for profit to decrease as sales increase, and vice versa, but the relationship is not very strong. Since the sales and profit is showing a negatively correlation, we can reject H1 and accept H0.

VI. Conclusion

MRF is constantly decreases over the years, indicating a decline in the measurement of the factor. This might suggest challenges or changes within the operations or market dynamics. BKT is constantly increasing with the growth or improvement in the relevant metric or factor associated with BKT. This could indicate successful strategies, market expansion, or growing demand for BKT's products or services. Apollo's trend value also increases over the years, but at a slower rate than BKT. This also indicates growth for Apollo, albeit at a more moderate pace. It's possible that Apollo faces some challenges or experiences slower growth than BKT, but it remains on a positive trajectory. In summary, MRF exhibits a strong negative correlation between sales and profit, BKT shows a moderate positive correlation, and Apollo demonstrates a weak negative correlation between these two variables.

VII. Reference

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