

SWOT analysis of vehicle rubber tire manufacturing firm: GOOD YEAR

GOODYEAR®



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Vehicle Rubbers Tire Manufacturing Industry recap



In the previous assignment, we analyzed the state of vehicle rubber tires manufacturing industry in **December 2021** using the **Porter's five forces framework** and concluded that the industry was **pretty unattractive** in 2021 with a **very low average profitability**. The **median ROE** for this industry was around **7%** according to S&P Global market intelligence report.



Interestingly, it turns out that ROE for top firms like Michelin, Goodyear, Bridgestone in 2021 was **well above the median ROE of 7%**. (see the table attached). We wonder how these companies were able to make good profits despite being in an industry with very poor economics and high competition.

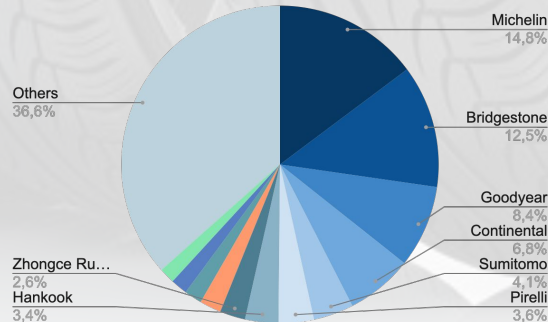
ROE in FY 21

Company	ROE
Goodyear Tire & Rubber	17.58%
Michelin	15.58%
Bridgestone	13.61%
Continental	11.23%



We found out that market was fragmented in and that the concentration was pretty low (CR4 < 40% in FY 2021, see pie chart to the right).

The top players based on global market share in FY 21



For our analysis, we choose the firm “**Good Year**” and perform its **SWOT analysis**, and try to understand what makes it so successful in an industry with a very poor profitability, and generate some recommendations on how it can improve further and possibly become number one in terms of market share and revenue.

Firm: Goodyear Tire And Rubber Company (GT)



Founded in 1898, it is one of the major US based rubber tire manufacturing firm. See *financial results on the right*



Global presence: it employs about 72,000 people and manufactures its products in **57 facilities in 23 countries** around the world, including all the major regions: Asia-Pacific, Europe & Africa & Middle East, and America. It sells its products in more than **180 countries worldwide**.



Product range: It has an enormously diverse range of products.

- Consumer tires: under different brands- for different geographies and requirements (see the next slides)
- Speciality tires (see the next slide)



Its main strategy is innovation:

Its two Innovation Centers in Akron, Ohio and Colmar-Berg, Luxembourg, strive to develop state-of-the-art products and services that set the technology and performance standard for the industry. One of their main current focuses is "Sustainability". (more details in "Strengths part")

FY 2022 data:

Total Sales: USD 20.8\$ BN

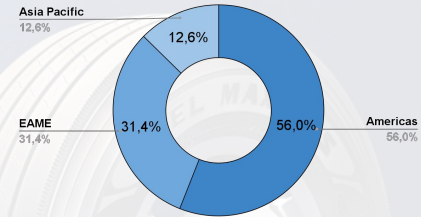
(OEM component: 16.6\$ BN while aftermarket: 4.2\$ BN)

Number of units sold: 192 MN

Global Market share: 10.5%

ROE: 24.2%

Geographical segments in FY22



Tire Segment	Sales Revenue (in billions of dollars)	Share of Total Sales
Passenger car tires	\$12.4	60%
Light truck tires	\$3.8	18%
SUV tires	\$2.2	11%
Truck and bus tires	\$1.8	9%
Other tire-related products	\$0.6	3%



Firm: Goodyear Tire And Rubber Company (GT)

GoodYear tire product range

Table1: Consumer tire brands







Consumer Tire Brand	Description
	The main US based manufacturer.
	Fulda is a German tire manufacturer . Has strong focus on producing tires that offer a good balance of safety, longevity, and cost-effectiveness .
	Dunlop is a well-established tire brand with a global presence, originally founded in the UK . Known for its high-performance tires, especially in motorsports and sports cars
	Sava is a Slovenian tire manufacturer .Tires are designed for both passenger cars and commercial vehicles with focus on providing reliable and cost-effective tire options .
	Kelly Tires is an American tire brand . The brand is known for its affordable pricing and a good balance of performance and longevity .
	Debica is a Polish tire manufacturer with a history dating back to the 1930s. It is known for their quality and are competitive in terms of pricing .

Table 2. Range of Speciality Tires

Speciality Tires	Description
Aviation Tires	For use on aircraft, including airplanes and helicopters .
Commercial truck Tires	Built for heavy-duty trucks , such as semis, delivery trucks, and buses.
Off-the-road Tires	Used on vehicles designed for off-road and industrial applications, including construction equipment, mining vehicles, and agricultural machinery.
Racing Tires	Engineered for high-speed performance and grip , catering to motorsports like Formula 1, NASCAR, and other racing disciplines.
RV (recreational vehicles) Tires	Designed for motorhomes, travel trailers, and campers.

Opportunities for Goodyear Tires: Analysis of external factors



Growing Electric Vehicles market

EV market is growing at a rapid pace. **By 2030**, it is estimated to account for **40% of global sales** which is more than 5 times the number of EVs sold in 2022, according to a report by Morningstar research Services LLC. EVs have **specific tire requirements** such as low rolling resistance for enhanced efficiency.



Online sales channels are gaining prominence as consumers increasingly prefer the convenience of purchasing tyres online. A study by Forrester research found that **57% of consumers prefer to purchase tyres online**, and a report by Statista predicts that the global online tire market will reach USD 75 Bb by 2025.



Growing demand for Smart Tire Technologies

Automotive Smart Tire Market is experiencing rapid growth fueled by several factors such as autonomous vehicles, IOT etc. The integration of sensors and smart technologies for real time monitoring of tire health, pressure and temperature is gaining popularity as this contributes to increased safety, fuel efficiency and overall vehicle performance. According to Dublin Global Newswire, the **CAGR forecast** for this market is **7.7% for period 2022-2030**.



Growing focus on sustainability and eco-friendly tyres

Consumers are becoming increasingly sensitive about the environmental impact of production, thus are demanding products with longer lifespans, recyclability and manufactured out of eco-friendly materials from the firms. According to a report by MarketsAndMarkets, the **green tire market** is projected to grow at a **CAGR of 6.5% from 2023 to 2030**.



Emerging markets in developing countries

Developing economies in Asia and Africa are experiencing increased motorization rates. The International Energy Agency (IEA) projects that the number of passenger cars in **Asia will grow from 330 Mn in 2020 to 740 Mn in 2040**, while in **Africa**, they are projected to grow from **40 Mn in 2020 to 100 Mn in 2040**. Expanding into these regions and tailoring products to suit local preferences and road conditions could be a lucrative opportunity.



Expansion of new markets:

The **aftermarket/replacement tire market** is projected to grow at **CAGR of 2.1% during 2022-28**; expanding into this can diversify revenue stream and reduce reliance on OEM, who have high bargaining powers and high risk of fluctuations in demand.

Threats to Goodyear Tires: Analysis of external factors



Increasing raw material prices

Natural rubber is a key raw material in tire production, and it accounts for about **30% of the cost of a tire**. The price of natural rubber has been rising in recent months due to a number of factors, including **supply chain disruptions, increased competition for land for rubber plantations, labour shortages and increased demand**. According to experts, price of natural rubber is **expected to increase 5-10% this year**.



Industry stage: Maturity

The industry is in maturity stage, which means that companies try to take each other's market share to increase their profits as the **demand has reached a saturation level**.



Government regulations

Government policies w.r.t export duties, import duties, and taxes levied on automobile sales can raise costs and reduce profitability. For instance, the **Trade war between China and the US** could encompass the rubber tires industry and raise costs through taxes. Also, **subsidies by govt. for domestic producers** can hurt Goodyear's sales. For instance, Chinese govt. provided subsidy of RMB 10 Mn in 2021.



Environmental regulations:

Environment-protecting penalties for polluting and hazardous components used in the tire manufacturing process can reduce profitability. Complying with such regulations involves high additional costs. **REACH regulation** is one of the most prominent examples for this.



High rivalry between firms

- The tire industry is highly competitive with low market concentration (CR4 is approx. 34% in 2021- see pie chart on first slide), which leads to **price wars and huge marketing expenses**.

- The other major players such as Bridgestone, Michelin and Continental keep **vying for market share**, and they have a very strong brand presence both in OEM and aftermarket.

- These companies **are also quite advanced in their sustainability efforts (like Michelin) and R&D (e.g. Continental)**.



Fluctuations in OEM sales

Hence, The demand for tires is intricately linked to the offer of vehicles. In case, the **demand for vehicles wou reduce**, say due to better public transportation facilities in the country or increase in prices of oil or vehicles themselves, then **sales of tyres would be hurt**.

(Part-1/2) Strengths of Goodyear Tires: Analysis of internal factors



Excellence in Innovation

Goodyear is committed to innovation and invests heavily in research and development. It has received numerous awards for its innovation, including the **Automotive News PACE Award** and the **Frost & Sullivan Global Tire Technology Innovation Award**.

It has a large network of Goodyear Innovation Centers (GIC) spread across the world which are equipped with state of the art equipments, research tools and best scientists and engineers. Its **R&D budget in 2023 was 3.5% of revenue**.



Excellence in Sustainability efforts

Goodyear has made significant strides in sustainability, incorporating eco-friendly practices across its operations.

- **Recycled Materials:** Goodyear incorporates recycled materials into its tires, reducing waste and conserving resources. In 2021, the **company used over 66 million pounds of recycled materials** in its tire manufacturing processes.
- **Renewable Energy:** Goodyear is committed to increasing its use of renewable energy sources. In 2020, the company's **global renewable energy consumption reached 19%**, and it aims to achieve 50% renewable energy usage by 2030.

Sustainable Products:

- **Fuel-Efficient Tires:** Goodyear develops tires that are designed to improve fuel efficiency, contributing to reduced greenhouse gas emissions. The company's FuelMax tires have helped **save over 1.5 billion gallons of fuel** since they were introduced.
- **Low-Emission Tires:** Goodyear produces tires with lower rolling resistance, reducing emissions from vehicles. The company's EfficientGrip tires have helped **save over 4 million tons of CO2 emissions**.
- **Sustainable Tire Compounds:** Goodyear is developing new tire compounds made from renewable materials, such as soybeans and sunflower oils.

(Part-2/2) Strengths of Goodyear Tires: Analysis of internal factors



Strong brand recognition

According to 2023 survey by YouGov, Goodyear has a **brand awareness of 94%** among adults in the United States

Goodyear **tires are known for safety, durability and quality**, which led to a high level of brand loyalty among its customers. According to a 2022 survey by JD Power, Goodyear is the **top tire brand in terms of customer loyalty**. Below are some specific examples of highly admired goodyear tires:

Goodyear Eagle F1 Supercar 3: known for its excellent handling and traction in both wet and dry conditions.

Goodyear Assurance Weather Ready known to provide excellent performance in all weather conditions.

Goodyear Wrangler Duratrac: designed for off-road use and offers excellent durability and traction.



Diversified Product Portfolio

Good year's tire portfolio is quite diverse. It has several brands in the consumer tire segment and various categories of specialty tires. *(please refer to the slide on goodyear firm in the beginning for more details)*. Thus it **serves a very broad category of clients**.



Strong supplier network

Goodyear has a strong supplier network, thus it enjoys access to cheap raw materials and there is little risk of unavailability of raw materials.



Excellence in branding and marketing

Goodyear does not publicly disclose its specific branding and marketing budget. However, it is estimated that the company spends **hundreds of millions of dollars** on marketing each year. This spending is spread across a variety of channels, including advertising, public relations, social media, and sponsorships.

Goodyear has also won **numerous awards** for its **branding and marketing efforts**, such as the **Cannes Lions International Festival of Creativity** and the **Effie Awards**.



Leader in environmental policies compliance

Goodyear has been recognized for its environmental leadership by a number of organizations, including the **Environmental Protection Agency (EPA)** and it has been has been a recipient of **The U.S. Department of Energy (DOE): Star Partner of the Year Award**.



Excellent management and Global Presence

Goodyear has a team of well-trained **70,000+ employees** present in around 23 countries

Weaknesses of Goodyear Tires: Analysis of internal factors



Over-reliance on OEM sales:

Goodyear is heavily reliant on sales to original equipment manufacturers (OEMs), which account for a significant portion of its revenue. This reliance on OEM sales makes Goodyear **vulnerable to fluctuations in vehicle production** and changes in OEM preferences.

In 2022, **Goodyear's OEM sales accounted for 58% of its total revenue**. The global automotive industry is cyclical, and Goodyear's profits have been affected by downturns in the past.

Some OEMs like **General Motors, Volkswagen and Ford are increasingly developing their own tire brands**, which could pose a threat to Goodyear's OEM sales in the future.



Penetration level in Asian emerging economies is low

- Goodyear is mainly targeting on the us and Europe market, its Asia-Pacific sales only accounts for **12%** of the total revenue while Asia-Pacific market is the major market in the whole rubber tires industry.
- Goodyear operates **10 manufacturing plants** in Asia-Pacific which is the least among its global scope.
- In facing new entrants coming from Asia-Pacific, especially China, **Goodyear's competence in Asia-Pacific is not as strong & agile as other 4 key players.**



High operating risk and unhealthy cash flow situation

- Comparing Goodyear's financial statement with other major players' in Fy21, we learn Goodyear's revenue grew extremely fast, but the revenue is mainly generated from its extremely **high leverage**. For example, **D/E ratio is 5 times on average higher than Michelin** whereas the **ROI is only a bit higher than that of Michelin**.
- The **current ratio and quick ratio** are the **lowest** (which are **1.11% and 0.57%**) in 2021 amongst the 5 key players in the market. It indicates that the ability to pay its short-term liability is weak. Thus, **the operating risk is high and liquidity is poor.**



High cost structure

- The **operating cost (% of sales) % is 95.21%** in 2021 which is the **highest** among all the major players and **the administration cost (% of sales) % is 15.44%** in 2021 which is the **second highest** among all major players, just after 22.90% of Bridgestone. The cost structure could be improved because the cost% indicates an **inefficient profit generation**. This can actually be shown in some recent news of Goodyear which said that Goodyear has been facing a **profitability problem** and its stock price has thus been decreasing in recent years.

Good Year's Sources of Competitive Advantage



Finally, after the SWOT analysis of Goodyear firm, we can answer the question that we asked ourselves in the beginning. **“How can Goodyear achieve good profitability (ROE: 17.8% in FY21) in an industry very poor economics (median ROE:7% in FY21)?”**



We believe the following factors **increase the WTP of the customers(who are OEMs mainly):**

- Highly innovative products
- Product quality, safety and durability
- Sustainable products and practice of sustainable manufacturing processes as consumers become more environmentally conscious, they are increasingly making purchasing decisions based on sustainability factors.
- Strong brand name(word of mouth)
- Innovative branding and marketing efforts to draw the attention of buyers



While the following **factors decrease SOC:**

- Manufacturing facilities across the world reduce transportation costs and export duties for finished goods (tires). Thus distribution of goods does not incur very high overhead expenses.
- Strong supplier network allowing access to cheap raw materials.

Recommendations (Part-1/2)

After the detailed SWOT analysis of the Goodyear firm, we recommend the following to Goodyear so that it can reach the top position (from current position -3) in terms of both market share and revenue.

1. Preparing strategic expansion into emerging markets (Improving upon weakness to target the external opportunity)

Opportunity: Emerging market in developing countries in Asia and Africa

Weakness: Current low penetration in Asian market

Goodyear must **recognize the weakness of its low penetration in Asia** and **design a tailored strategy for entering emerging markets** in developing countries which offer potentially huge customer base (**strong opportunity relating to the motorization rate** which are increasing rapidly here).

Ways to implement this recommendation include:

- **Establishing manufacturing facilities** in these regions.
- **Designing new products** which are suited for the specific road conditions
- Starting to **forge partnerships** with local OEMs or distributors

2. Prioritize innovation in EV, Smart Tire, Green Tires (Capitalizing on strength to target the external opportunity)

Opportunity: Growing market for special EV tires, smart tires and green tires.

Strength: Excellent R&D and innovation facilities

Goodyear, leveraging on **its strength of excellence in innovation and sustainability efforts**, should develop more and more **tires tailored to EVs, embrace Smart and Green tire development technologies, recognizing the opportunity of growing demand for these.**

In addition to this, is not as strong in the high-performance tire market as some of its competitors, such as Michelin and Bridgestone, so it should look forward to improve its presence in this market.

Recommendations (Part-2/2)

3. Reduce reliance on OEM sales

(Improving upon weakness to thwart the external threat and target the opportunity)

Threat: Fluctuations in OEM market

Opportunity: Growing Online sales demand

Weakness: Current over-dependence on OEM sales

Goodyear should **look forward to expansion in the aftermarket/ replacement tire market** to diversify beyond OEM sales.

To do this, it should **invest in marketing campaign** to target individual customers directly and **develop/expand partnerships with independent tire retailers**. Some **value-adding services** might have to be developed, in order to serve the aftermarket (installation, balancing etc...). This recommendation relates to **the opportunity of increasing online sale channels**, as they are becoming the preferred place to buy tires for individual consumers.

4. Enhance operating and cost efficiency to improve profitability *(Improving upon weakness to thwart the external threat)*

Threat: Maturity stage of industry and high rivalry

Weakness: Current high cost structure, unhealthy cash flow situation and hence high operating risk

GoodYear must deal with a significant weakness which is **high cost structure**. Especially in an industry that has reached its **maturity stage** (as we mentioned in the threats) and in which becoming more profitable is extremely difficult. The company should thus follow the following steps:

- It should invest in **optimizing its operational processes** (streamlining manufacturing, distribution, and supply chain to eliminate inefficiencies)
- Enhance its **capital structure, decreasing its financial leverage**. Reducing interest expense would enable the company to allocate more resources to business operations and growth initiatives.

Our Experience of using LLMs

LLM models used

We used Chatgpt 3.5 and Google bard in our analysis.

How we used it

We asked the tool to provide an analysis of each component of SWOT individually and also several “WHY?”s. We did get some context and ideas to get started with our analysis, but for a major part, our experience was unsatisfactory.

Reasons for disappointment

- Chatgpt 3.5 and Google Bard both **came up with different answers**. (See image A- next slide). Chatgpt3.5 said that growing market for smart tires is an opportunity whereas Google bard noted that it is a threat. However, upon **further interrogation it changed its answer** and explained it is rather an opportunity.
- **Fluff statements:** Chatgpt 3.5 output only fluff statements without much concrete statistics to support the theory. We had to find most of this information ourselves through google search and reading various articles and reports. (See image B- next slide)
- **Confusing classification:** Initially Chatgpt3.5 noted that high competition is a weakness for Good Year firm (See image B- next slide), however upon confrontation, it noted that is better classified as a threat rather than (internal) weakness. (See image C- next slide)

Our learnings

Chatgpt3.5 and Google bard are **great at giving broad context/ guidelines** for analyses, however they do **not** provide information which is **specific enough** and supported with **real time data**. Sometimes they also output **wrong and contradictory statements, and classify the facts in wrong categories**. Hence, we felt like for now they should both be used as an aid to human Intelligence and they are still not fully reliable.

Image A: Note the difference in answers by Google Bard and Chatgpt 3.5

Chatgpt 3.5 output

I Is growing market for smart tires a threat or opportunity to Good Year firm?

The growing market for smart tires is generally considered an opportunity for Goodyear rather than a threat. Smart tires, equipped with advanced technologies such as sensors, connectivity features, and real-time monitoring capabilities, present an opportunity for innovation and business expansion. Here's a breakdown:

Regenerate

Google Bard output (Please note the contradiction with Chatgpt 3.5 answer and also observe how Google bard changes its answer upon interrogation)

I Why did you say that growing market for smart tires is a threat to Good Year firm?

The growing market for smart tires is a threat to Goodyear for a few reasons.

First, smart tires are more expensive than traditional tires. This could make it difficult for Goodyear to compete on price with other tire manufacturers that are offering smart tires.

I Why did you say that growing market for smart tires is a threat to Good Year firm?

I apologize for the error in my previous response. The growing market for smart tires is actually an opportunity for Goodyear, not a threat.

Smart tires are tires that are equipped with sensors that can monitor tire pressure, temperature, and tread depth. This information can be used to improve fuel efficiency, safety, and convenience.

Image B

I What is the weaknesses analysis for goodyear tires company?

As of my last knowledge update in January 2022, I don't have specific, up-to-date information on Goodyear's current weaknesses. However, I can provide you with some general factors that companies in the tire industry might face, and these could potentially be weaknesses for Goodyear as well. Keep in mind that the actual weaknesses may have changed, and it's crucial to refer to the latest reports and analyses for the most accurate information.

1. **Competition:** The tire industry is highly competitive, with several major players vying for market share. Goodyear may face challenges in terms of maintaining or increasing its market share, especially if competitors offer similar or superior products at competitive prices.
2. **Economic Factors:** Economic downturns can impact consumer spending on non-essential items such as new tires. If there is a decline in economic conditions, Goodyear's sales could be affected.

Image C: Note how Chatgpt3.5 is unsure about classification of the facts.

I Why did you say that high competition is a weakness? Isn't high competition a threat rather than weakness as it is an external factor and not an internal one?

You are correct, and I appreciate your clarification. High competition is indeed considered an external threat rather than an internal weakness. I made an error in my response, and I appreciate your diligence in pointing it out.

Challenges faced and References

Finding the specific data posed the greatest challenge for us. We wish to have found more data to support our analysis.

The references we used are as following:

<https://www.mbaskool.com/brandguide/automobiles/1824-goodyear.html>

<https://projects4mba.com/swot-analysis-of-goodyear-tyres/4513/>

<https://corporate.goodyear.com/us/en/about/global.html>

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<https://www.european-rubber-journal.com/article/2091486/tire-supply-chains-to-reshape-for-the-future>

Marketline 2023 Report on Rubber Tires manufacturing industry, Marketline 2023 Global Supply Chain analysis for rubber tires industry\

Help from Chatgpt 3.5 and Google Bard