AUTOMOBILE INDUSTRY & COMPANY ANALYSIS

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Introduction & Industry evolution

- India is the 5th largest automobile market & contributes 7.1% to GDP.
- The sector is currently dominated by IC engines manufacturers & is split into four segments including 2-wheelers, 3-wheelers, passenger vehicles and commercial vehicles.
- The two main revenue drivers are vehicle sales and maintenance & spare parts.
- The bulk of the costs for passenger car , apx 80% costs is of material, labour & Admin costs.

Timeline

Years and important dates

BEFORE 1982

LICENSE RAJ

- Closed market with only 5 players
- Seller dominated market
- Low quality product with longer delivery timelines

1983-92

STRATEGIC COLLABORATIONS

- PPP with government for manufacturing cars in India by Suzuki
- Seller dominated market started to convert to buyers market

1992-2020

LIBERALIZATION

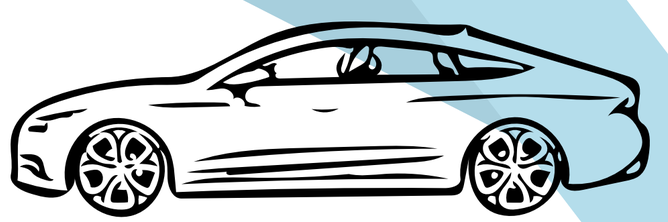
- Major OEMs started assembly operations
- Import permitted from 2021
- Updated engine norms from BS-IV norms in 2017 & BS-VI norms in 2020

2020 ONWARDS

TECHNOLOGY

- Production-linked Incentive (PLI) Scheme
- Clean Tech Scheme & FAME for promoting EV production
- EV policy ; giving TAX subsidy to buyers

PESTLE ANALYSIS



Political

CARBON EMISSION REGULATIONS
Environmental Regulations are being set up by the government to carbon emissions emitted into the atmosphere.

SAFETY POLICIES
Governments have implemented strict vehicle safety regulations in the automobile industry. Keeping in mind that safety protocol has become a necessity while launching a car.

Economic

PANDEMIC OF COVID-19
The most important impact of the pandemic is the worldwide economic recession, increasing unemployment rate, and lower buying power. Such economic factors decreased the sale of automotive companies.

EMERGING ECONOMIES
They have cheap labour, lower production cost and a vast consumer market with a lot of growth potential. Multinational automotive brands are relocating their manufacturing and production units.

Social

TRENDS
The automobile companies know the shopping trends, lifestyle of people, and customer attraction features. They target the customers accordingly. Most importantly, such trends have increased the growth, sale, and revenue of the industry.

Technology

ADVENT OF ELECTRIC VEHICHLES
Automobile companies have come up with innovative technological advancements like longer ranges, faster charging and economical pricing in the EV sector. Hyundai, Tata, and Mahindra are leading the pack in EVs.

AUTONOMOUS TECHNOLOGY
Technological development and AI have made it possible for automobile companies like Tesla, BMW, and Toyota to launch self-driving autonomous vehicles in the market. They're now working to make the technology more efficient.

Legal

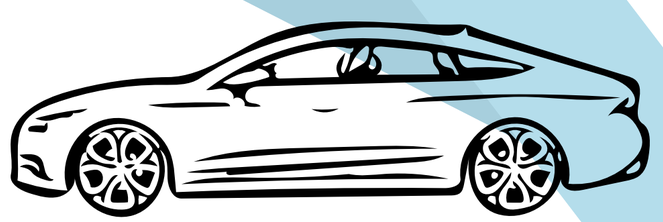
IPR
The IPR (intellectual property rights) is a common issue in the automobile industry. Different automotive brands file patent, design, trademark, and copyright lawsuits on other brands to protect their interests.

Regulations
There are many states that have strict restrictions on the number of vehicles on the road, which can help them lower air pollution.

Environmental

POLLUTION
The automobile industry has two major environmental issues; air pollution and carbon emission. Automobile companies are moving towards electric vehicles to address environmental concerns.

PORTER'S FIVE FORCES (1/2)



Threat of new entrants: Weak

1. Large amount of capital requirement.
2. Legal and regulatory barriers like the BS norms.
3. All automotive companies have established brand image and reputation which is established after years.
4. Products are mainly differentiated by design and engineering quality which requires extensive R&D.
5. New entrants might not have easy access to suppliers and distributors.
6. It is very hard to achieve economies of scale for small companies
7. Governments often protect their home markets by introducing high import taxes on foreign automobile companies.

Bargaining power of buyers: Moderate

1. Most of the buyers are individuals that purchase single quantity, but corporations or governments usually buy large fleets and can bargain for lower prices.
2. It doesn’t cost much for buyers to switch to another brand of vehicle or to start using other type of transportation.
3. Buyers can easily choose alternative automobile brand.
4. Buyers are price sensitive and their decision is often based on how much does a vehicle cost.
5. Price differentiation is very low in the market, so at the end it boils down to the reputation of the brand and if the customer likes the features.

PORTER'S FIVE FORCES (2/2)

Threat of new substitutes: Weak

1. Substitutes of automobiles are plenty, such as bicycles, motorcycles, trains, buses or planes.
2. However, these substitutes rarely offer the same convenience as that of automobiles.
3. Technologically advanced, alternative types of transportation like Hyper-loop might come up in the future and will be more environmentally friendly.
4. But, even if these substitutes do come up or get better, it will take a lot of time to change the habit of the masses.

Bargaining power of suppliers: Weak

1. The number of suppliers for automotive part is large.
2. There are a few suppliers that are large, but mostly there are small players.
3. Materials used are widely accessible and so is the technology.
4. Suppliers do not pose any threat of forward integration

Industry Rivalry: Strong

1. There are a decent number of competitors.
2. If a firm would decide to leave an industry it would incur huge losses, so most of the time it either goes bankrupt or stays in the automotive industry for the lifetime.
3. Automobile Industry is matured
4. Customers are mostly loyal to their brands.
5. Increase in the number of foreign players entering in the automobile industry.

EVOLUTION OF AUTOMOBILE

Electric Vehicles

Emissions-free mobility enabled by vehicle electrification

EV:10% new vehicles sales by 2025

Autonomous Cars

Driverless cars enabled by AI, ML and deep neural networks

Global Autonomous car market growth: 12% CAGR

Connected Cars

Assesing driver's & passenger's requirements through sensors

Connected car market growth: 22.2% CAGR

Car Sharing

Carpools, and Car rentals

Projected Revenue Growth: 5.48% by 2026

FUTURE PROFITABILTY

Industry profit pools:
Battery-powered electric vehicles (BEVs), data and connectivity services, and on-demand mobility offerings

Result:
Slower growth in volume of new car sales
Revenue however is expected to see a boost due to price increase

Automakers:
Will need to invest in new tech, especially EV
Suppliers: Engine control units, BEVs, navigation systems, AV software and sensors

On Demand mobility companies:
New infra — Traffic management control centers, pickup and drop-off hubs, and designated lanes.
Local operations— Maintenance, parking, charging, cleaning, and roadside assistance

Overall industry Investments:
The automotive industry will need to invest more than $900 billion by 2030 and more than $2.4 trillion by 2035 in key areas to capitalize on the growth of mobility tech.

COMPANY ANALYSIS

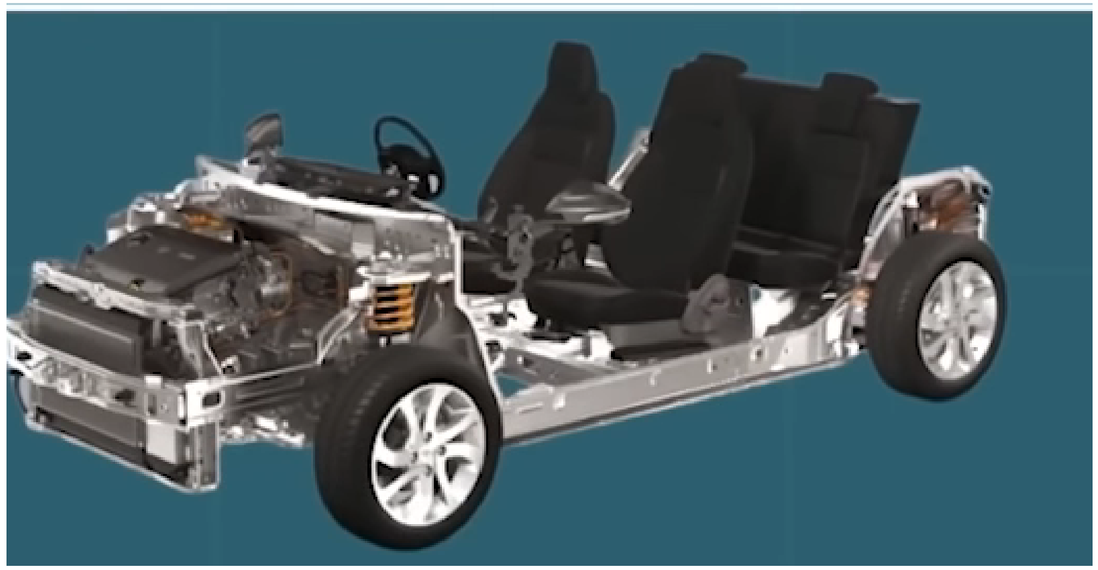
Competitive advantage before 2008:

1. **Expertise in manufacturing engines and trucks**
2. **Supply chain and backward integration:**

Procurement of raw material; Has a strategic advantage as 17% of car cost comes from steel and they have a backward integration ion the same

3. **JVs & strategic engagement** with Mercedes , FIAT

Competitor Analysis today



Technological innovation:

Cost leadership by using common platforms for cars , reducing their fixed costs, inventory costs.

Differentiating vehicles based on quality , safety & operational edge for extreme Indian terrains.

Learning curve & supply chain advantage

Relationship with vendors has **reduced defective parts** thereby decreasing warranty claims.

Competitor Analysis today

- **TCS aided Tata power** with technology charging station support.
- **TATA elxsi with Tata motors** for superior platform design innovation.
- **TATA capital & motor finance** for easy vehicle finance

VRIO ANALYSIS

Resource capability	Valuable	Rare	Imitable	Organization	Competitive advantage impact
Technological innovation	Yes	No	Yes	Yes	Long term
Learning curve advantage	Yes	Yes	Yes	Yes	Long term
Supply chain advantage	Yes	Yes	No	Yes	Long term
Eco system support	Yes	Yes	Yes	Yes	Long term

TATA
CONSULTANCY SERVICES
MOTORS
TECHNOLOGIES
COMMUNICATIONS

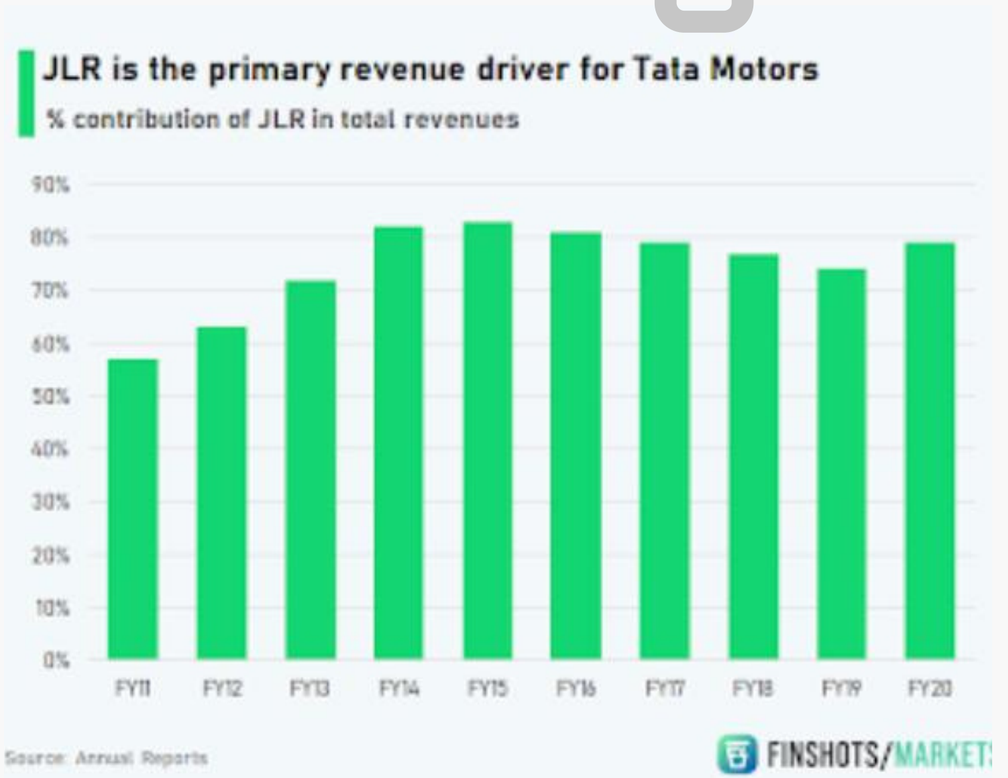
Roadblocks for TATA MOTORS

- **Jaguar Landrover is the primary revenue & cost driver for Tata motors such that it accounts for 73% of the total revenue. So company needs to diversify its revenue sources**

- **When we look at the direct competitor of Tata Motor which is Maruti, it has a higher penetration in the micro markets with a market share of 39%. Even of the service level, it has authorised service centres at every nook and corner. Currently, Tata Motors stands second in terms of customer satisfaction, there is scope for improvement.**

- **While producing the cars at the local levels have been very cost effective for Tata Motors, maintaining the quality has become a challenge. At the same time there has been a drastic advancement in the design and comfort of the passenger cars. The current competitors are constantly updating the style and structure. Tata Motors also needs to catch up in area.**

- **There is immense competition in the EV space, a lot of new and old entrants are doing a phenomenal job in terms of overall sustainable development in the automobile ecosystem. Though Tata has ventured into the EV space, it has a long way to go.**



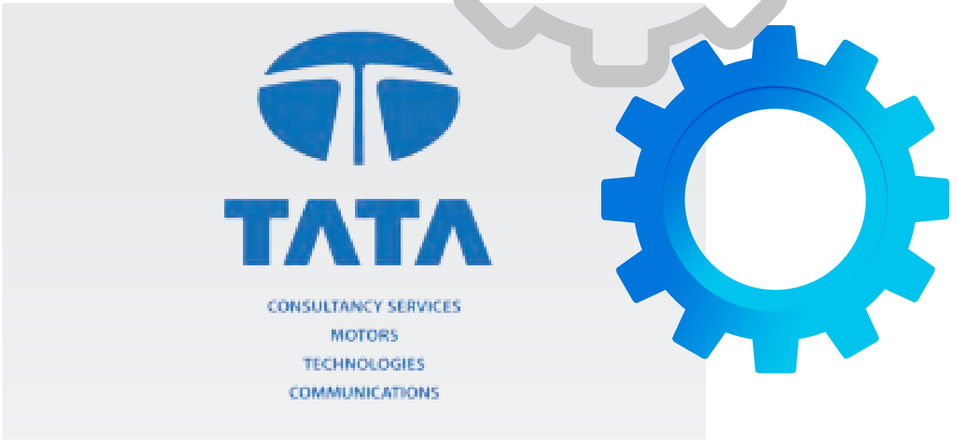
STRATEGY RECOMMENDATIONS

1. Sustaining the technological advantage

The automobile industry is evolving fast with the advent of EV. Tata Motors has made rapid strides in this segment with 72% market share, Maruti and Hyundai are not far behind. Even in the petrol and diesel segment, lots of innovation is happening all around. A detailed strategy for this will be to :

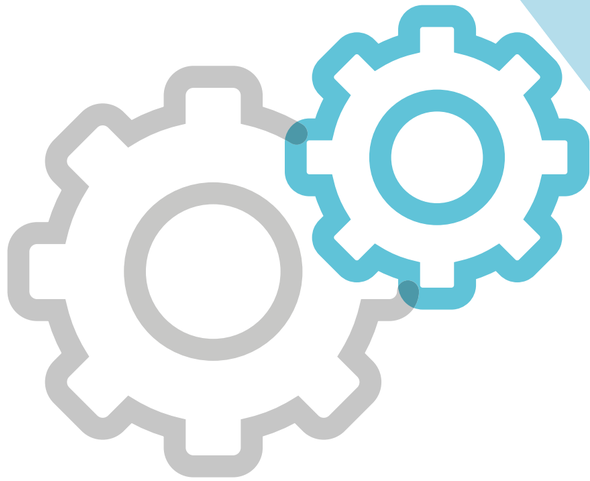
- Leverage expertise of Tata Group companies like TCS, Tata Technologies, Tata Communications, Tata Motors Finance and Tata Chemicals

- Increased technology exchange with JLR regarding - ADAS, electronic architecture, a connected car, and over-the-air software updates along with the ongoing EV collaboration.



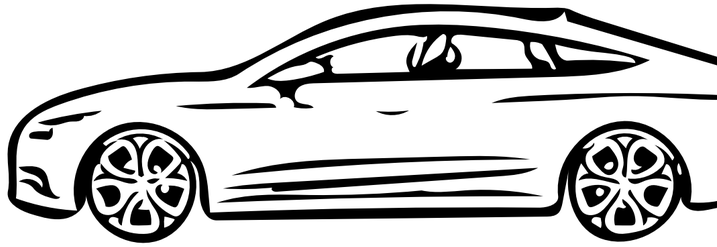
STRATEGY RECOMMENDATIONS

2. Venturing into new technologies



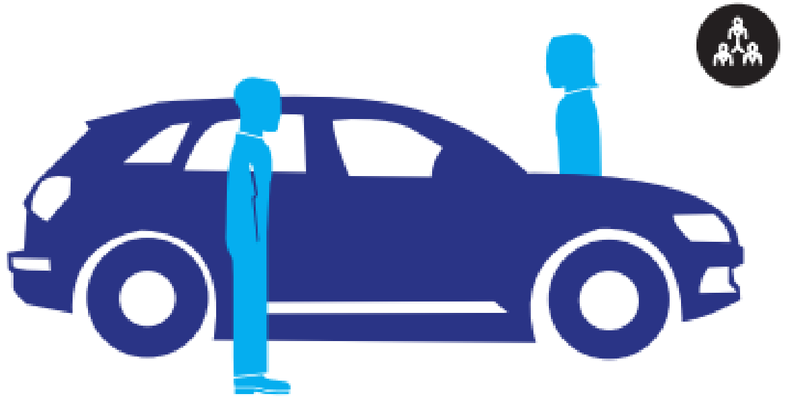
Tata Motors made giant strides in the automobile car segment in India and across by coming up with the design platform Impact 2.0. More such innovations in the long term should drive future strategy.

- **Impact 3.0 -** Tata Motors can come up with its upgraded design platform, which can be more digitalised. TCS Digital has teamed up with Jaguar Racing to form a team in FormulaE. The learnings from this can be used for this platform and overall innovation.
- **Swappable batteries -** EVs currently suffer with range issue and 4-5 years down the line, Tata Motors might come up with the concept of swappable batteries. For this they can leverage Tata Chemicals and Tata AutoComp Systems.
- **Chip Manufacturing -** JLR sales went down because of the chip shortage during Covid. Tata Motors in the long term could get into semi-conductor chip manufacturing in partnership with companies like Renesas electronics.



STRATEGY RECOMMENDATIONS

3. Focus on User Experience



Tata Motors can position itself as a 'Customer First' brand. Some initiatives for this can be -

- 24x7 on-road assistance
- Authorised third party vendors for after sales service and repairs
- Customer focussed features like connectivity in cars

4. Resource Optimisation

Cost and Resource Optimisation strategies that Tata Motors can implement are -

- Implementing Agile in some of its processes to optimise resource allocation and faster rollout of products.
- Strengthening the supply chain management.
- Intense cost reduction exercise across the product range through the Value Analysis Value Engineering (VAVE) approach

THANK YOU

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