

# Car Sales Analysis Report

Note: here (I used Excel for data cleaning and Transformation and used Power BI for Report generation)



## Top Performance (Market Presence & Reach)

- Strong performance observed from **Maruti, Hyundai, Tata, Mahindra, Honda, and Toyota**.
- Maruti and Hyundai dominate both in terms of **volume and performance**, followed by Tata.
- Other brands like Chevrolet, Ford, Renault, and Volkswagen show smaller but notable contributions.

## Key Performance Indicators (KPIs)

- **Total Sales Value:** ₹291.44 Million
- **Total Cars Sold:** 722 units
- **Price Range of Cars:** ₹30,000 – ₹8,500,003
- **KM Range:** 0 – 400,000 KM

### Top Sales (Revenue Contribution)

- **Toyota:** ₹17M
- **Tata:** ₹12M
- **Volkswagen:** ₹7M
- **Skoda:** ₹3M

### Top Companies by Sales Value:

- **Maruti** leads with sales above ₹60M.
- **Mahindra** follows with ~₹50M.
- **Hyundai** comes next at ~₹40M.
- Honda and Toyota are comparatively lower (~₹15M each).

### Fuel-Wise Analysis (KM Driven)

- **Diesel cars:** 18.9M KM (56% of total)
- **Petrol cars:** 14.7M KM (44% of total)
- **LPG cars:** 0.2M KM (1%)

### Sales by Year (Trend)

- Sales remained **low before 2005**, then started growing steadily.
- **2005–2015:** Peak growth years with steep rise in sales.
- **Post-2015:** Decline observed, possibly due to **market shifts, policy changes, or competition**.

## Sales by Year – Trends and Peaks

Company	Highest Sales Period	Lowest Sales Period	Observation
Honda	2010–2015	Before 2005	Strong rise post-2010.
Hyundai	2015 (overall highest)	Before 2000	Market leader in peak years.
Mahindra	2012–2015	Before 2000	Competitive rise during 2012–15.
Maruti	2005–2012	Before 1995	Consistent leader before Hyundai peak.
Tata	2010–2012	Before 2000	Moderate but steady growth.

## Challenges Faced During Report Preparation

- 1. Raw Data Issues:** Missing values, duplicates, inconsistent naming (e.g., company names).
- 2. Data Cleaning in Excel:**
  - Removed duplicates.
  - Handled missing values.
  - Standardized formats (price, dates, company names).
- 3. Data Transformation:**
  - Converted text fields into numeric.
  - Grouped categories (fuel types, brands).
  - Applied filters for outliers.
- 4. Visualization in Power BI:**
  - Imported the cleaned CSV file into Power BI.
  - Built interactive visuals: bar chart (top companies), donut chart (top sales), treemap (performance), line chart (yearly trend), pie chart (fuel usage).

## Conclusion

- **Maruti, Mahindra, and Hyundai** are top overall performers in terms of sales value.
- **Toyota** dominates in high-value sales contribution.
- **Diesel cars** lead in kilometers driven, showing their importance in long-distance use.
- **Hyundai** achieved the **highest peak sales around 2015**, followed by Maruti's strong period (2005–2012).
- **Sales trends peaked between 2010–2015**, but all brands declined afterward.

This analysis provides clear insights into **brand performance, fuel usage trends, and year-wise sales growth**, making it a strong foundation for **business strategy, sales forecasting, and market evaluation**.

## Insights

1. **Hyundai's 2015 dominance** shows potential in reviving strategies around that period (new model launches, promotions).
2. **Toyota's high-value sales** suggest focusing on **premium customer segments**.
3. **Decline post-2015** → companies need to analyze **changing consumer behavior, EV adoption, and policy shifts**.
4. **Diesel dominance** indicates a market for **fuel-efficient and long-distance vehicles**, but with rising EV trends, companies should plan ahead.
5. **Maruti's long-standing strength** shows customer trust; leveraging this with new tech (EVs, hybrids) could sustain leadership.