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Dataset name and source link

**Dataset name:** MW Worldwide Sales Records (2010–2024)

**Source:** Provided dataset file — <u>BMW sales data (2010–2024) (1).csv</u>

(If you got it from a course, teacher, or internal file, you can write "Internal dataset for academic use.")

#### Number of rows and columns

Rows: 50,000Columns: 12

## **Key variables (features)**

Column Name	Description
Model	BMW car model (e.g., X5, 3 Series, i8, etc.)
Year	Year of sale (2010–2024)
Region	Market or region where the car was sold (e.g., Europe, Asia, Africa)
Color	Car color
Fuel_Type	Fuel used (Petrol, Diesel, Electric, Hybrid)
Transmission	Gear type (Manual or Automatic)
Engine_Size_L	Engine size in liters
Mileage_KM	Total mileage in kilometers
Price_USD	Selling price in U.S. dollars
Sales_Volume	Number of cars sold
Sales_Classification	High or Low sales classification
Unnamed: 11	Empty column (removed during cleaning)

## Your research questions

1. How have BMW sales volumes changed over time (2010–2024) across different regions?

What did you learn?

From the Pivot table and chart, BMW's total sales were very high as of 2019 in North America and the lowest in Asia, as of 2020.

Asia and North America continually represented the highest sales volumes, and Europe and South America represented lower volumes of sales.

Minor fluctuations occurred within individual years, due to market or economic conditions most likely; but the overall trend was one of growth.

Why is it important?

This is important because it shows the areas where BMW's strongest markets exist and where they can expand.

Knowing where the sales are being directed can help BMW's future on investments, advertising, and production.

For example, the consistent development in Africa and the Middle East may indicate an increasing demand within emerging markets.

What is your conclusion?

Overall, BMW worldwide sales between 2010 and 2024 demonstrate remarkable growth with leadership by Asia and North America.

The steady sales growth across various areas reflects the fact that BMW has effectively increased its penetration across the world but is not tapping the new markets effectively.

2. What things affect the price of BMW vehicles the most (for instance, engine size, fuel type, or region)?

What discoveries did you make?

From the pivot tables and charts, it was clear that fuel type strongly influences BMW car prices more than the engine size.

Vehicles running with the hybrid fuel system usually had reduced mean prices within African and Middle Eastern markets.

Of the fuels, the costliest ones are electricity and diesel vehicles, and the cheapest ones are hybrid and petrol vehicles on an average.

There also were regional variations, with the Asian and North American prices on average being higher than elsewhere.

Why is it relevant?

This is important because it reveals the way technological characteristics and market position influence prices.

Understanding what causes prices to be higher helps BMW and other businesses make decisions on where to introduce luxury models or direct market efforts.

It also helps consumers to understand the effect of technology and geography on their cost.

What's your conclusion?

Finally, the region and type of fuel help to set BMW prices.

More advanced fuel systems like electric or the not to advance model, diesel models attract higher prices, especially in developed markets.

This suggests that innovation have a growing effect on car value, but people are still dwelling on their outdated systems.

3. What BMW sells the most units of and where and by trans do sales vary the most?

What discoveries did you make?

The research indicates that BMW i8 and BMW 7 Series automobiles generated the greatest sales within the time frame from 2010 to 2024.

Comparative region analysis captured the largest market shares from Asia and Europe reflecting strong market demands within these markets. Conversely, Africa and South America contained the lowest sales shares but also embody the potential growth.

Moreover, the cars with manual transmissions outsold automatic ones in all regional markets.

# Why is it significant?

This is important because it identifies market strengths and consumer preference.

Knowing the models and characteristics that reach the greatest sales volumes helps BMW to target the versions and technologies that are best received by customers.

It also determines paths to expand popular models to new markets.

## What's your conclusion?

Overall, the 7 Series and the i8 are BMW's best-selling models and are mainly sold based on manual transmissions within North America and Asia.

These figures confirm BMW's success with luxury vehicles and Taleghani's strong international interest in comfort and convenience goods.