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## Detailed Explanation of Power BI Visuals with Graphs

### Sum of Profit by Segment and Sub-Segment

In this visual, a bar chart is created to analyze the 'Sum of Profit' by 'Segment' and 'Sub-Segment' in Power BI.

1. Visualization Type: Clustered Bar Chart.

2. Fields Used:

- Axis: Segment.
- Legend: Sub-Segment.
- Values: Sum of Profit.

3. Insights:

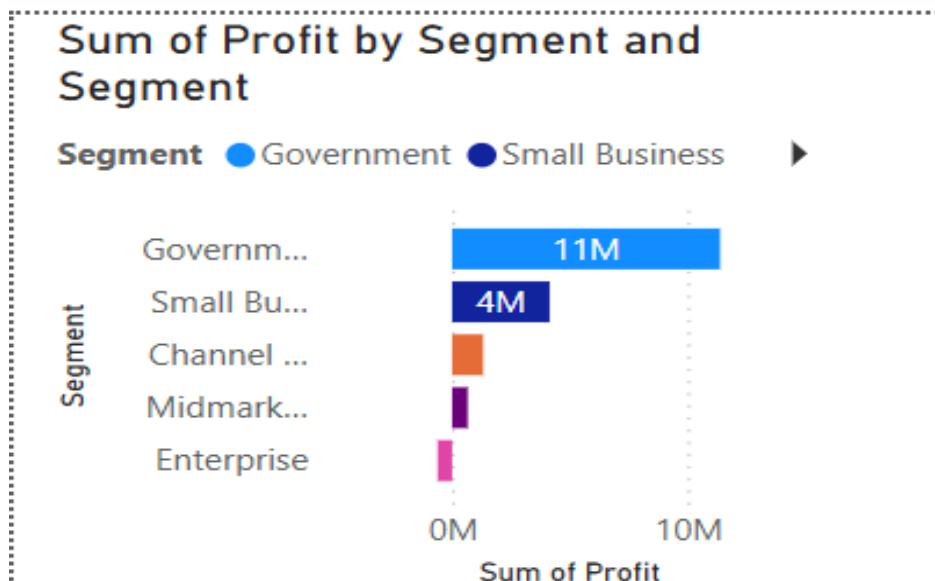
- The chart compares profits among different business segments such as Government, Small Business, Channel Partner, Midmarket, and Enterprise.

- The Government segment shows the highest profit (11M), followed by Small Business (4M).

- The color legend differentiates each segment for clear comparison.

4. Purpose:

- To easily identify which business segments contribute most to overall profit.
- Helps decision-makers focus on profitable areas.



## Sum of Sales by Product and Discount Band (Filtered View)

This page visualizes how product sales are distributed across different discount bands.

1. Visualization Type: Clustered Column Chart (multiple visuals).

2. Fields Used:

- Axis: Discount Band.
- Legend: Product.
- Values: Sum of Sales.

3. Description:

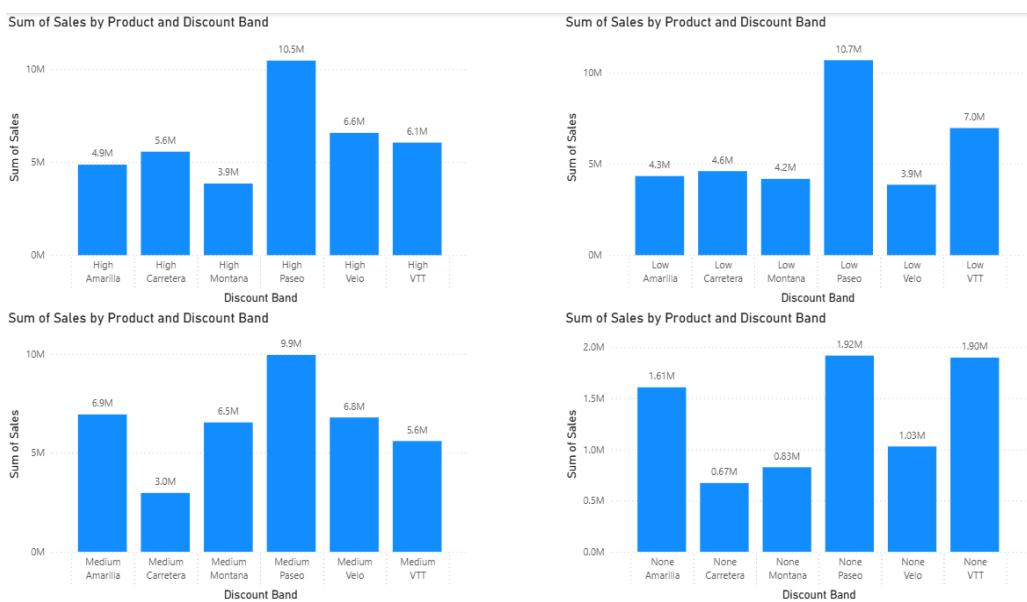
- Multiple bar charts are displayed for each discount band category: High, Medium, Low, and None.

- Each chart shows the 'Sum of Sales' for products such as Paseo, VTT, Velo, Amarilla, Montana, and Carretera.

- Paseo shows the highest sales in both high and low discount bands (10.5M and 10.7M respectively).

4. Purpose:

- To compare sales across varying discount levels.
- Understand how discounts impact product sales volume.



## Sum of Sales by Product and Discount Band (Small Multiples)

This visual uses Power BI's 'Small Multiples' feature to present a breakdown of sales for each discount band separately.

1. Visualization Type: Clustered Column Chart with Small Multiples.

2. Fields Used:

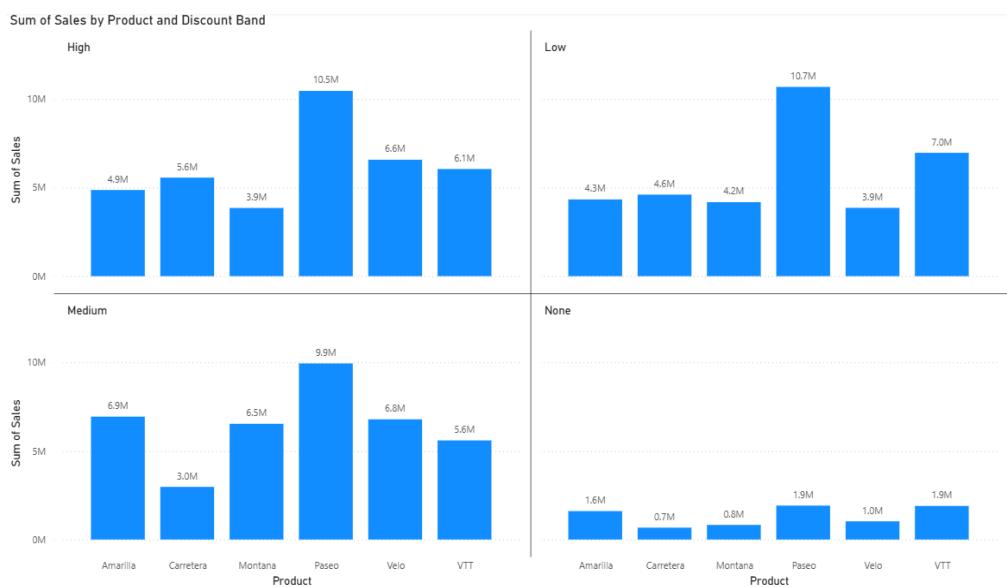
- X-Axis: Product.
- Y-Axis: Sum of Sales.
- Small Multiples Field: Discount Band (High, Medium, Low, None).

3. Insights:

- Each panel (small multiple) represents one discount category.
- Paseo consistently shows strong sales across all discount levels.
- The 'None' discount category shows significantly lower sales than others, confirming the effect of discount strategies.

4. Purpose:

- To allow easier comparison of the same metric across multiple subcategories.
- Enhances readability and reduces visual clutter.



## Sum of Sales by Country (Drill-Down Visual)

Title: Sum of Sales by Country

Type of Visual:

Pie Chart

Purpose:

The purpose of this visual is to display the **proportion of total sales contributed by each country**. A pie chart provides a clear, quick visual comparison of sales distribution across different regions.

Field	Role in Visualization	Description
Country	<i>Legend</i>	Determines the categories (slices of the pie). Each slice represents a country.
Sum of Sales	<i>Values</i>	Represents the size of each slice — the total sales value for each country.
Discount Band	<i>Filter</i>	Allows the user to filter the data based on discount levels (e.g., High, Medium, Low, None).
Product	<i>Filter</i>	Enables filtering of sales data by specific product lines.
Segment	<i>Filter</i>	Allows segmentation of sales based on customer or business types (e.g., Government, Small Business).

What Has Been Done:

1. The **Pie Chart visual** was selected from the Visualizations pane.
2. The **Country** field was placed in the **Legend** area to categorize data by country.
3. The **Sum of Sales** measure was added to the **Values** field to calculate total sales per country.
4. Additional context filters — **Discount Band**, **Product**, and **Segment** — were applied under the **Filters pane** to enable interactive analysis.
5. The visual automatically calculated and displayed the **percentage contribution and total sales (in millions)** for each country.
6. Formatting adjustments (e.g., data labels and colour differentiation) make the chart visually clear and balanced.

## Interpretation / Insights:

- The **United States of America** has the highest share of total sales ( $\approx 21\%$ ), indicating it is the largest contributor.
- **France** and **Mexico** follow closely with around **20-21%** each, suggesting strong markets.
- **Germany** and **Canada** also contribute significantly, maintaining a well-balanced global sales distribution.
- The filters allow analysts to explore how these proportions shift when specific **products, discount levels, or segments** are selected.

