Regional Sales Analysis

1A

Create a parameter for the **Primary Region** and another for the **Secondary Region** to allow region selection, listing all regions in them

Create the Primary Region parameter

1. In **Data Pane** → right-click → **Create Parameter**
2. Configure it as:

Property	**Value**
Name	Primary Region
Data Type	String
Allowable Values	List
Values	Click **Add values from → Region**
Current Value	Any default (e.g., Central)

3. Click **OK**

Create the Secondary Region parameter

1. In **Data Pane** → right-click → **Create Parameter**
2. Configure it as:

Property	**Value**
Name	Secondary Region
Data Type	String
Allowable Values	List
Values	Click **Add values from → Region**
Current Value	Any default (e.g., West)

3. Click **OK**

Show both parameters

Right-click **Primary Region** → **Show Parameter**

Right-click **Secondary Region** → **Show Parameter**

1B

Create calculated fields to filter the data based on the selected regions

Steps: A

1. Create calculated fields: **Primary Region Filter**
2. Formula: [Region] = [Primary Region]
3. Drag **Primary Region Filter** → **Filters**
4. Keep only **True**

Steps: B

1. Create calculated fields: **Secondary Region Filter**
2. Formula: [Region] = [Secondary Region]
3. Drag **Secondary Region Filter** → **Filters**
4. Keep only **True**

1C

Display the **total sales** for each **region**, using separate worksheets for the primary and secondary regions

Steps: A

1. Create a new worksheet → Rename it to: **Primary Region – Total Sales**
2. Drag **Sales** → **Text** (Marks card)
3. Ensure aggregation is **SUM(Sales)**
4. Drag **Primary Region Filter** → **Filters**
5. Select **True**
6. Drag **Region** → **Rows**
7. Parameters → **Primary Region** → Show Parameters

Steps: B

1. Duplicate the first worksheet → Right-click → **Duplicate** → Rename it to: **Secondary Region – Total Sales**
2. Drag **Sales** → **Text** (Marks card)
3. Ensure aggregation is **SUM(Sales)**
4. Drag **Secondary Region Filter** → **Filters**
5. Select **True**
6. Drag **Region** → **Rows**
7. Parameters → **Secondary Region** → Show Parameters

2A

Create a worksheet showing the **average sales per order** for both the primary and secondary regions

Steps:

1. Create calculated fields

1st Avg Sales per Order – Primary

Formula:

SUM(IF[Region]=[Primary Region]THEN [Sales]END)
/
COUNTD(IF[Region]=[Primary Region]THEN[Order ID]END)

2nd Avg Sales per Order – Secondary

Formula:

SUM(IF[Region]=[Secondary Region]THEN[Sales]END)
/
COUNTD(IF[Region]=[Secondary Region]THEN[Order ID]END)

2. Create a new worksheet
3. Rename it to: **Avg Sales per Order – Region Comparison**
4. Drag **Measure Names → Columns**
5. Drag **Measure Values → Text**

   In *Measure Values*, keep only:

   Avg Sales per Order – Primary

   Avg Sales per Order – Secondary
6. Marks → **Text Table**

2B

Include a **count of the total number of orders** in each region

Steps:

1. Create calculated fields

1st Order Count – Primary

Formula:

COUNTD(IF[Region]=[Primary Region]THEN[Order ID]END)

2nd Order Count – Secondary

Formula:

COUNTD(IF[Region]=[Secondary Region]THEN[Order ID]END)

2. Go to your worksheet: **Avg Sales per Order – Region Comparison**
3. Drag **Measure Names → Columns**
4. Drag **Measure Values → Text**

   In *Measure Values*, keep only:

   Order Count – Primary

   Order Count – Secondary
5. Marks → **Text Table**
6. Dynamic title → (Insert → Parameter → **Parameters.Primary Region/ Parameters.Secondary Region**)

   Formula:

   Order Performance Comparison
   < Parameters.Primary Region > vs < Parameters.Secondary Region >

2C

Filter each worksheet to display data only for the selected region

3A

Create a worksheet displaying the **number of unique customers** in each region

Steps:

1. Create calculated fields

1st Unique Customers – Primary

Formula:

COUNTD(IF[Region]=[Primary Region]THEN[Customer ID]END)

2nd Unique Customers – Secondary

Formula:

COUNTD(IF[Region]=[Secondary Region]THEN[Customer ID]END)

2. Go to your worksheet: **Avg Sales per Order – Region Comparison**
3. Drag **Measure Names → Columns**
4. Drag **Measure Values → Text**

In *Measure Values*, keep only:

Unique Customers – Primary

Unique Customers – Secondary

5. Marks → **Text Table**

3B

Create a worksheet showing the **number of distinct products sold** in each region

Steps:

1. Create calculated fields

1st Distinct Products – Primary

Formula:

COUNTD(IF[Region]=[Primary Region]THEN[Product ID]END)

2nd Distinct Products – Secondary

Formula:

COUNTD(IF[Region]=[Secondary Region]THEN[Product ID]END)

2. Go to your worksheet: **Avg Sales per Order – Region Comparison**
3. Drag **Measure Names → Columns**
4. Drag **Measure Values → Text**

In *Measure Values*, keep only:

Distinct Products – Primary

Distinct Products – Secondary

5. Marks → **Text Table**

2C & 3C

- **Filter each worksheet** to display data only for the selected region
- **Apply filters to each worksheet** to ensure data accuracy for the selected regions

Note => I avoid region filters in comparison worksheets because the parameter-based calculations already define the region logic. Applying filters would cause double filtering and lead to incorrect aggregations.

[double filtering issu]

Logic =>

- Parameter logic: checks for Primary/Secondary Region
- Filter logic: removes all other regions first

If the parameter changes to **West**, the data is already gone
Result = **0 or incorrect values**

<u>best practice</u>

Use filters for scope
Use parameters for logic
Never mix both for the same purpose

Final output based on parameter

1. Go to your worksheet: **Avg Sales per Order – Region Comparison**
2. Drag **Measure Names → Columns**
3. Drag **Measure Values → Text**

In *Measure Values*, keep only:

Avg Sales per Order – Primary

Avg Sales per Order – Secondary

Order Count – Primary

Order Count – Secondary

Unique Customers – Primary

Unique Customers – Secondary

Distinct Products – Primary

Distinct Products – Secondary

4. Marks → **Text Table**
5. Dynamic title → (Insert → Parameter → **Parameters.Primary Region/ Parameters.Secondary Region**)

   Formula:

   Order Performance Comparison
   < Parameters.Primary Region > vs < Parameters.Secondary Region >
6. Right-click **Primary Region** → **Show Parameter**
7. Right-click **Secondary Region** → **Show Parameter**

Final output based on filter

1. Go to your worksheet: **Primary Region – Total Sales**
2. Drag **Sales** → **Text** (Marks card)
3. Ensure aggregation is **SUM(Sales)**
4. Drag **Primary Region Filter** → **Filters**
5. Select **True**
6. Parameters → **Primary Region** → Show Parameters
7. Drag **Sales** → **Text** (Marks card)
8. Ensure aggregation is **Avg(Sales)**
9. Drag **Order ID** → **Text** (Marks card)
10. Ensure aggregation is **count distinct (Order ID)**
11. Drag **Customer ID** → **Text** (Marks card)
12. Ensure aggregation is **count distinct (Customer ID)**
13. Drag **Product ID** → **Text** (Marks card)
14. Ensure aggregation is **count distinct (Product ID)**
15. Dynamic title → (Insert → Parameter → **Parameters.Primary Region/ Parameters.Secondary Region**)
    Formula: Primary Region: <Parameters.Primary Region>
16. Marks shelf → Text → edit label

    Total Sales: <SUM(Sales)>
    Average Sales: <AVG(Sales)>
    Order Count: <CNTD(Order ID)>
    Unique Customers: <CNTD(Customer ID)>
    Distinct Products Sold: <CNTD(Product ID)>

17. Go to your worksheet: **Secondary Region – Total Sales**
18. Drag **Sales** → **Text** (Marks card)
19. Ensure aggregation is **SUM(Sales)**
20. Drag **Secondary Region Filter** → **Filters**
21. Select **True**
22. Parameters → **Secondary Region** → Show Parameters
23. Drag **Sales** → **Text** (Marks card)
24. Ensure aggregation is **Avg(Sales)**
25. Drag **Order ID** → **Text** (Marks card)
26. Ensure aggregation is **count distinct (Order ID)**
27. Drag **Customer ID** → **Text** (Marks card)
28. Ensure aggregation is **count distinct (Customer ID)**
29. Drag **Product ID** → **Text** (Marks card)
30. Ensure aggregation is **count distinct (Product ID)**
31. Dynamic title → (Insert → Parameter → **Parameters.Primary Region/ Parameters.Secondary Region**)
    Formula: Primary Region: < Secondary.Primary Region>
32. Marks shelf → Text → edit label

    Total Sales: <SUM(Sales)>
    Average Sales: <AVG(Sales)>
    Order Count: <CNTD(Order ID)>
    Unique Customers: <CNTD(Customer ID)>
    Distinct Products Sold: <CNTD(Product ID)>

Additional

1. Create a new worksheet → Rename it to: **Maps-primary region**
2. Drag **Country** → **Drop field**
3. Drag **State** → **Label**
4. Drag **Sales** → **Colour**
5. Drag **Sales** → **Label**
6. Drag **Primary Region Filter** → **Filters**
7. Keep only **True**
8. Right-click **Primary Region** → **Show Parameter**
9. Dynamic title → (Insert → Parameter → **Parameters.Primary Region**)
   Formula: Primary Region - <Parameters.Primary Region>

10. Create a new worksheet → Rename it to: **Maps-secondary region**
11. Drag **Country** → **Drop field**
12. Drag **State** → **Label**

13. Drag **Sales** → **Colour**
14. Drag **Sales** → **Label**
15. Drag **Secondary Region Filter** → **Filters**
16. Keep only **True**
17. Right-click **Secondary Region** → **Show Parameter**
18. Dynamic title → (Insert → Parameter → **Parameters. Secondary Region**)
    Formula: Primary Region - < Secondary.Primary Region>

19. Create a new worksheet → Rename it to: **Primary Region – sub.category**
20. Drag **Sub-Category** → **Rows**
21. Drag **Sales** → **Table area in Drop Field**
22. Aggregation → measure → **Average**
23. Drag **Sales** → **Table area in Drop Field**
24. Aggregation → measure → **Max**
25. Drag **Sales** → **Table area in Drop Field**
26. Aggregation → measure → **Min**
27. Drag **Sales** → **Table area in Drop Field**
28. Aggregation → measure → **Sum**
29. Drag **Primary Region Filter** → **Filters**
30. Keep only **True**
31. Right-click **Primary Region** → **Show Parameter**
32. Dynamic title → (Insert → Parameter → **Parameters. Primary Region**)
    Formula: Primary Region - < Primary.Primary Region>

33. Create a new worksheet → Rename it to: **Secondary Region – sub.category**
34. Drag **Sub-Category** → **Rows**
35. Drag **Sales** → **Table area in Drop Field**
36. Aggregation → measure → **Average**
37. Drag **Sales** → **Table area in Drop Field**
38. Aggregation → measure → **Max**
39. Drag **Sales** → **Table area in Drop Field**
40. Aggregation → measure → **Min**
41. Drag **Sales** → **Table area in Drop Field**
42. Aggregation → measure → **Sum**
43. Drag **Secondary Region Filter** → **Filters**
44. Keep only **True**
45. Right-click **Secondary Region** → **Show Parameter**
46. Dynamic title → (Insert → Parameter → **Parameters. Secondary Region**)
    Formula: Primary Region - < Secondary.Primary Region>

4] Comparative Analysis:

- Combine the individual worksheets into a single **dashboard**
- Use **containers** to partition the dashboard into sections for the primary and secondary regions
- **Add parameter controls** to allow users to select different regions and dynamically update the visualizations

Refer screen shorts files

https://public.tableau.com/app/profile/darshan.vaghasiya4274/viz/Book1_17697890412800/REGIONALSALESANALYSIS?publish=yes

https://github.com/DarshanTech-driven/Regional-Sales-Analysis/tree/main