



Q1: Use the Superstore data to develop a visualization to show how long it takes, on average, for orders to ship (the time it takes to ship an order after the order is received) on a monthly basis. (Hint - this will require a calculation.). How does the average shipping time vary by state?

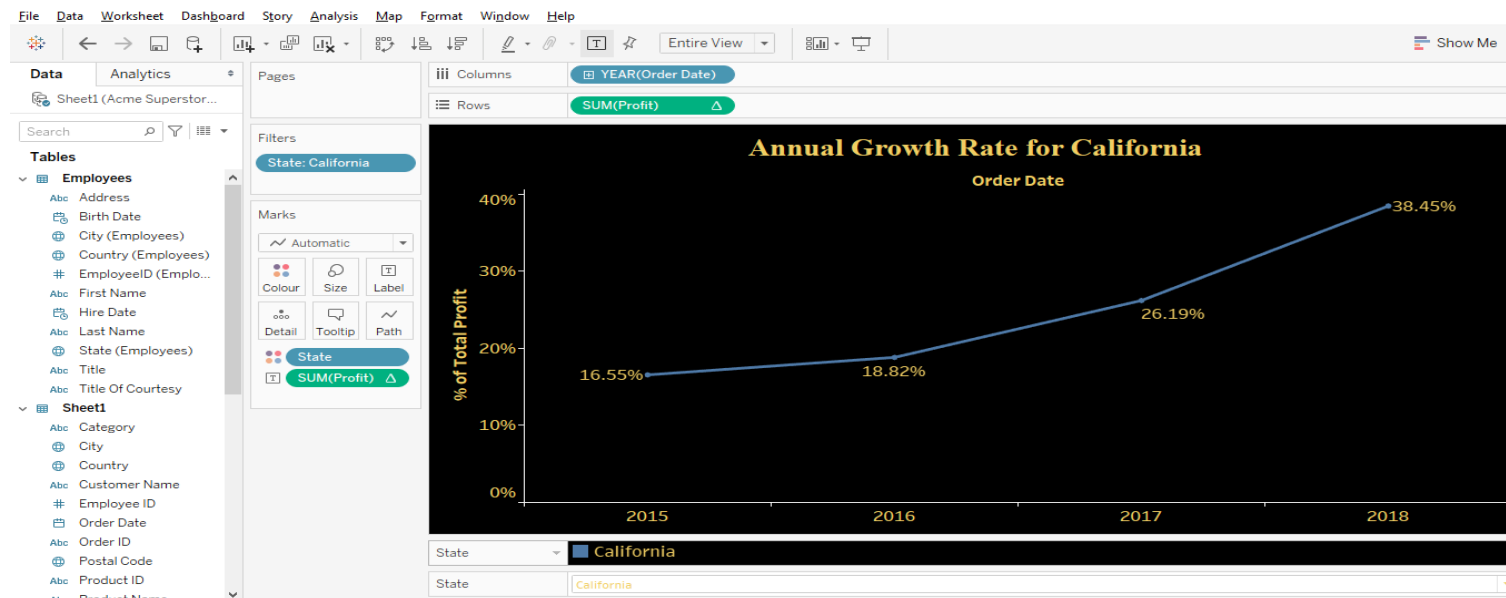
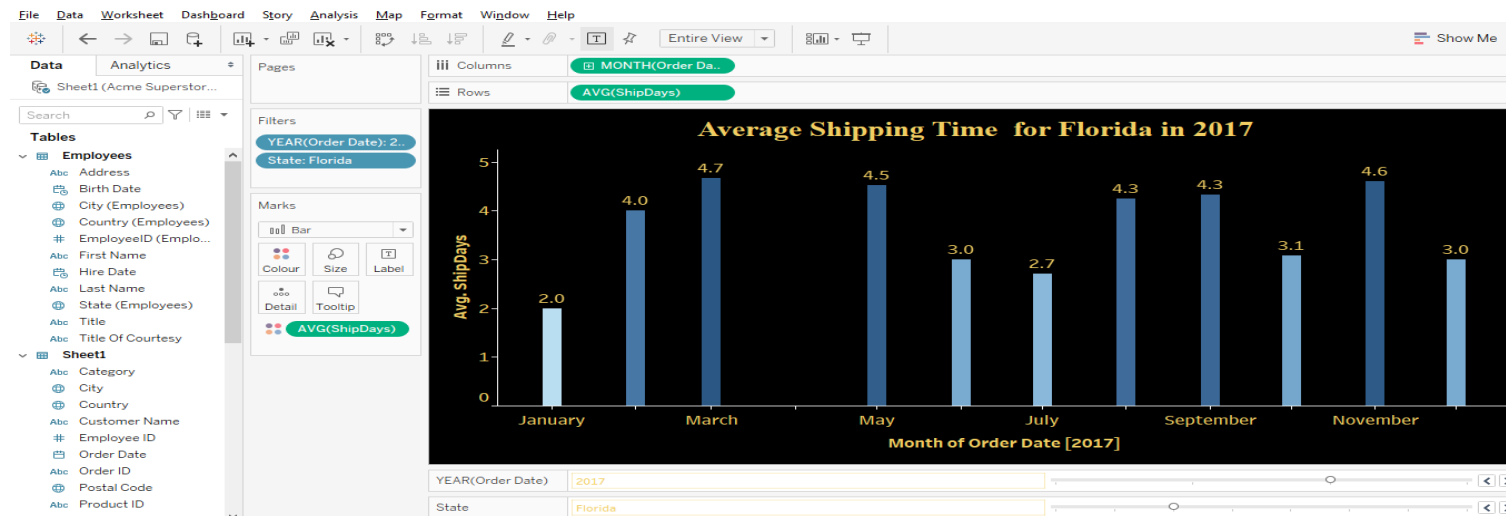
Q2: Use the Superstore data to produce a visualization to help managers understand annual growth (or lack thereof) in profit by state.

Q3: Use the Employees data to create a visualization that shows the number of customers per salesperson. Please display the salesperson's last name, not their ID. (Hint - you will need to join multiple tables so that the orders placed are attached to the employee who helped to place the order)

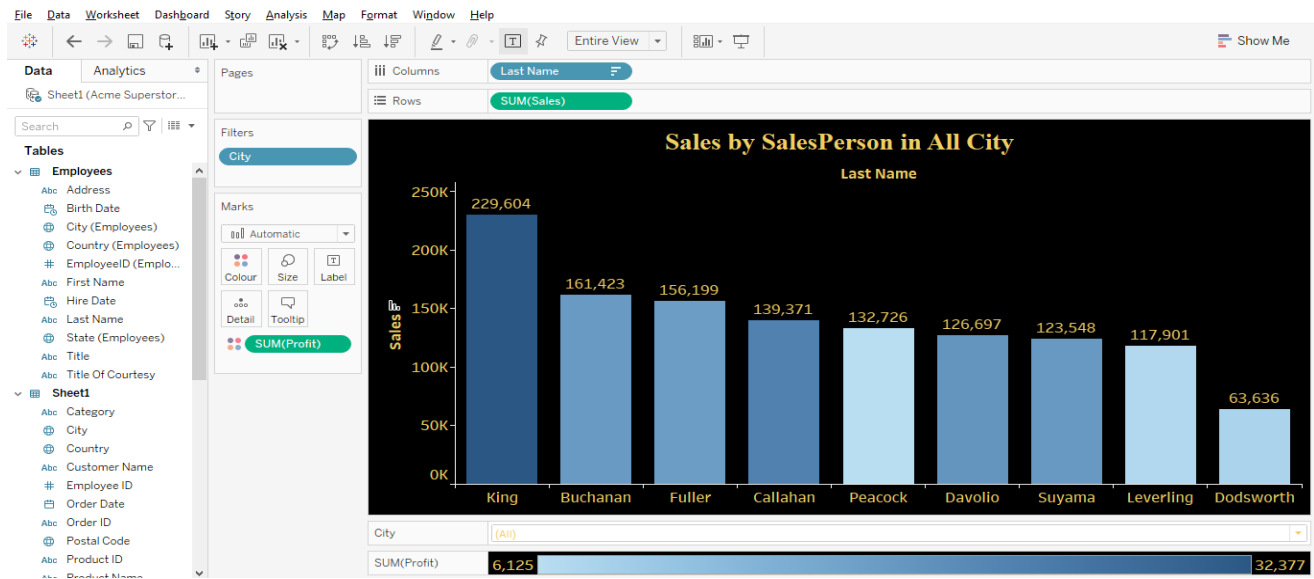
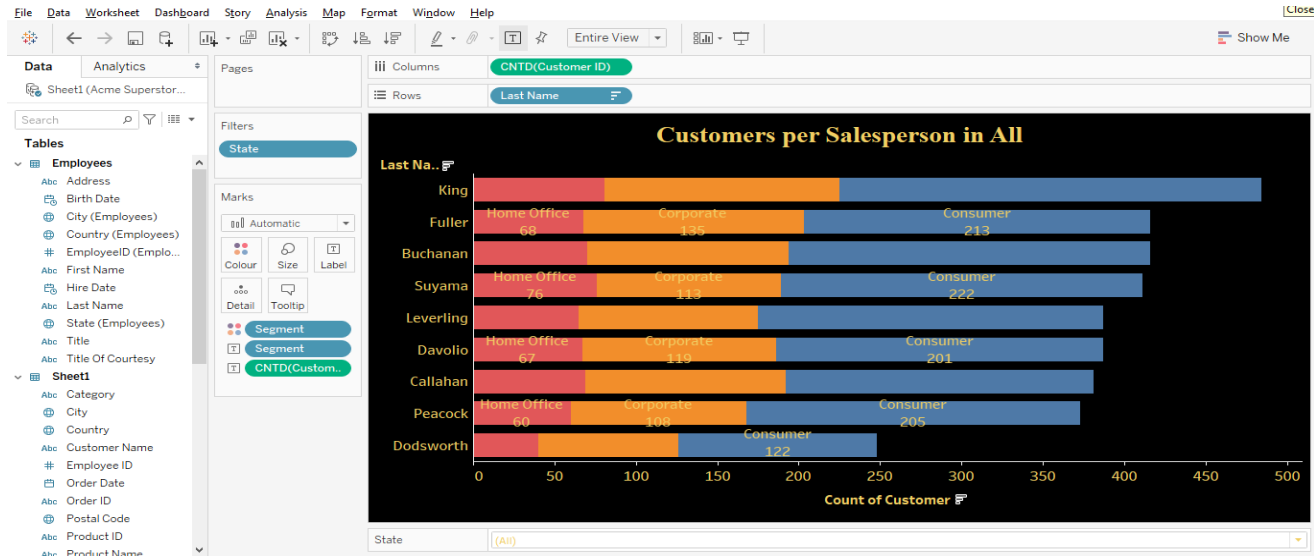
Q4: Use the Employees data to produce a visualization that shows total Sales by SalesPerson and City to analyze which salesperson is selling how much, and where they are selling.



test

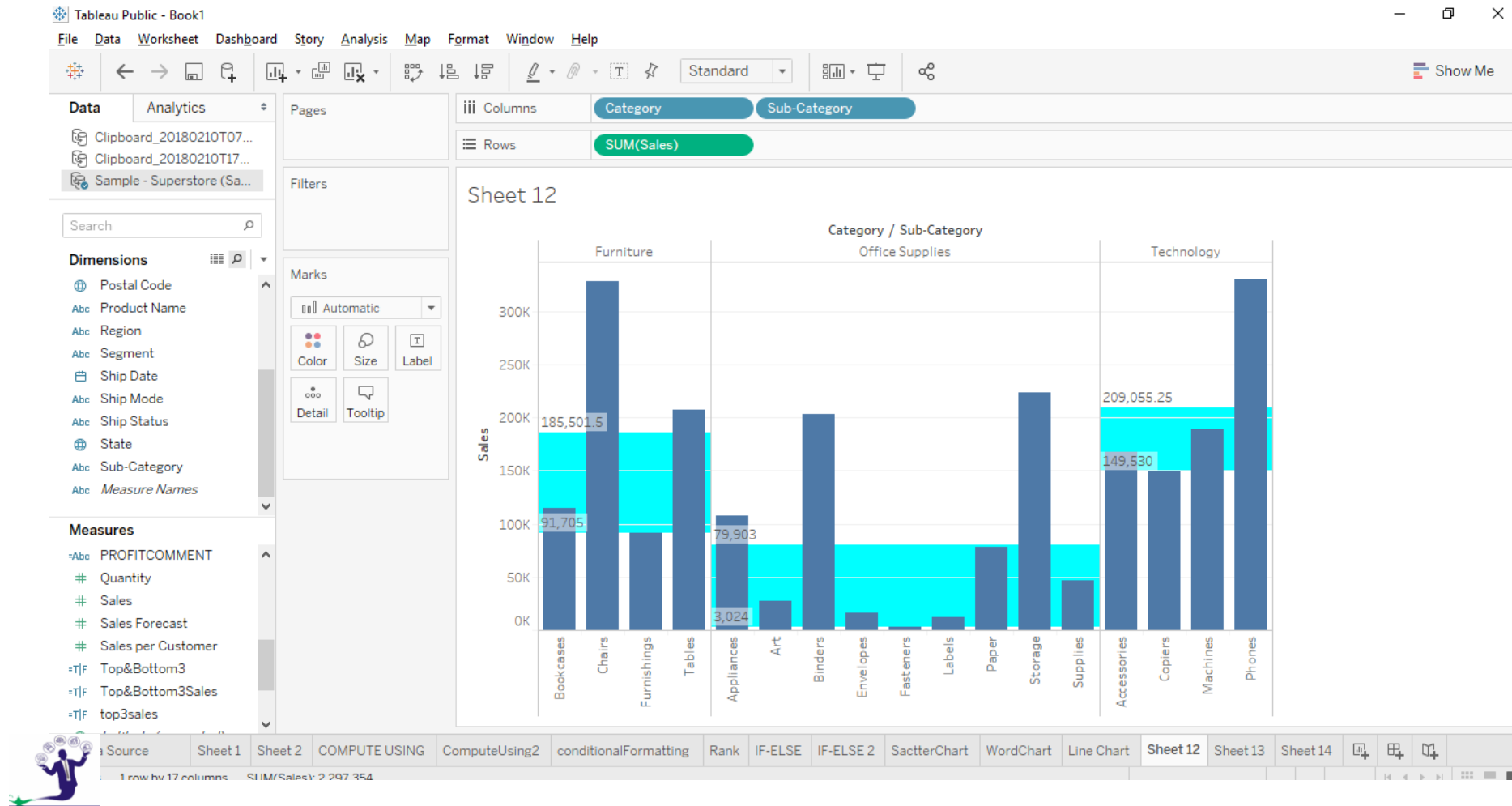


test



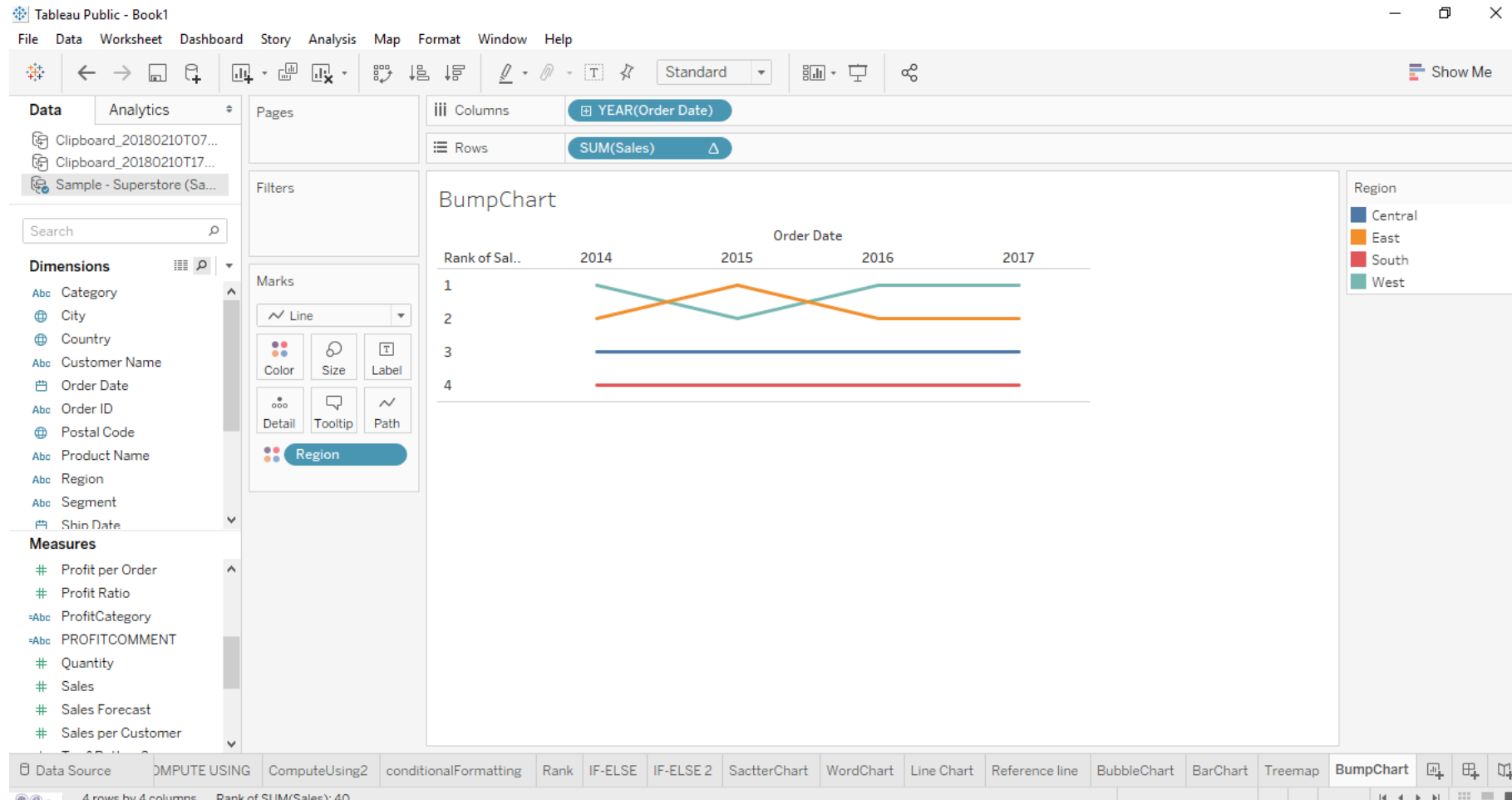
CHARTS

Reference Lines: These are used to identify / highlight the values with respect to a certain level. Eg: If we need to identify the below average and above average sales. To add a reference line right click on X axis and click on add reference line.



CHARTS

Bump Chart: It is the line chart where the rank changes with time.



ASSIGNMENT

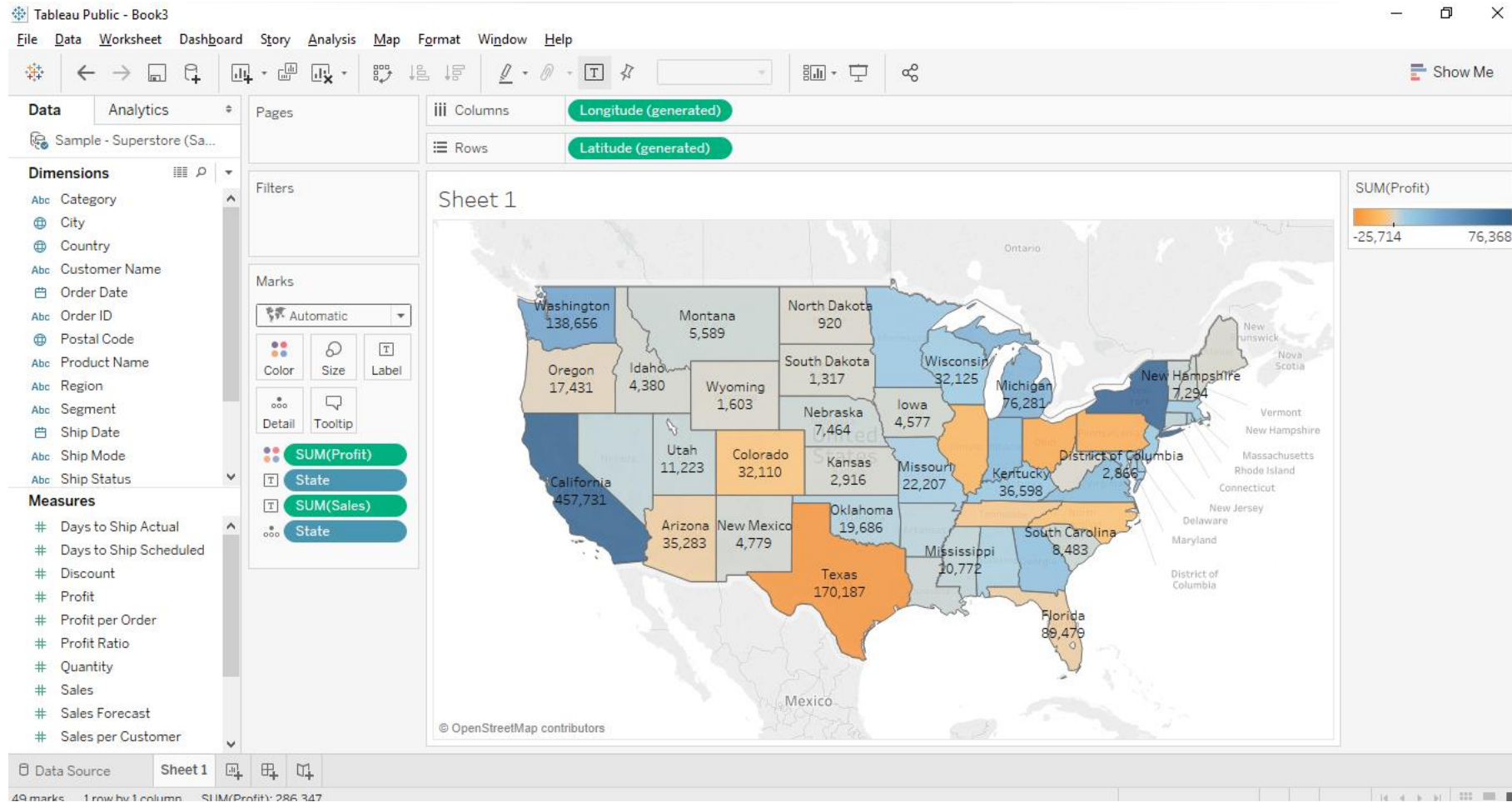


1. Create a Scatter chart to represent profit & sales for each segment.
2. Represent State wise sales using Word map.
3. Use a line graph to represent monthly Profit, Min & Max profit along with the month should be displayed.
4. Represent profit using a Bar chart category & Subcategory wise, focus should be on subcategories following above average (reference line).
5. Represent Region wise Sales & Profit using Bubble Chart
6. Tree map to represent Category, Segment, Region wise Sales
7. Adv Funnel to represent subcategory Sales
8. Represent segment wise profit using Pie Chart
9. Represent Subcategory wise profit using water fall chart



MAPS

MAPS: To represent the data geographically we create a Map chart.

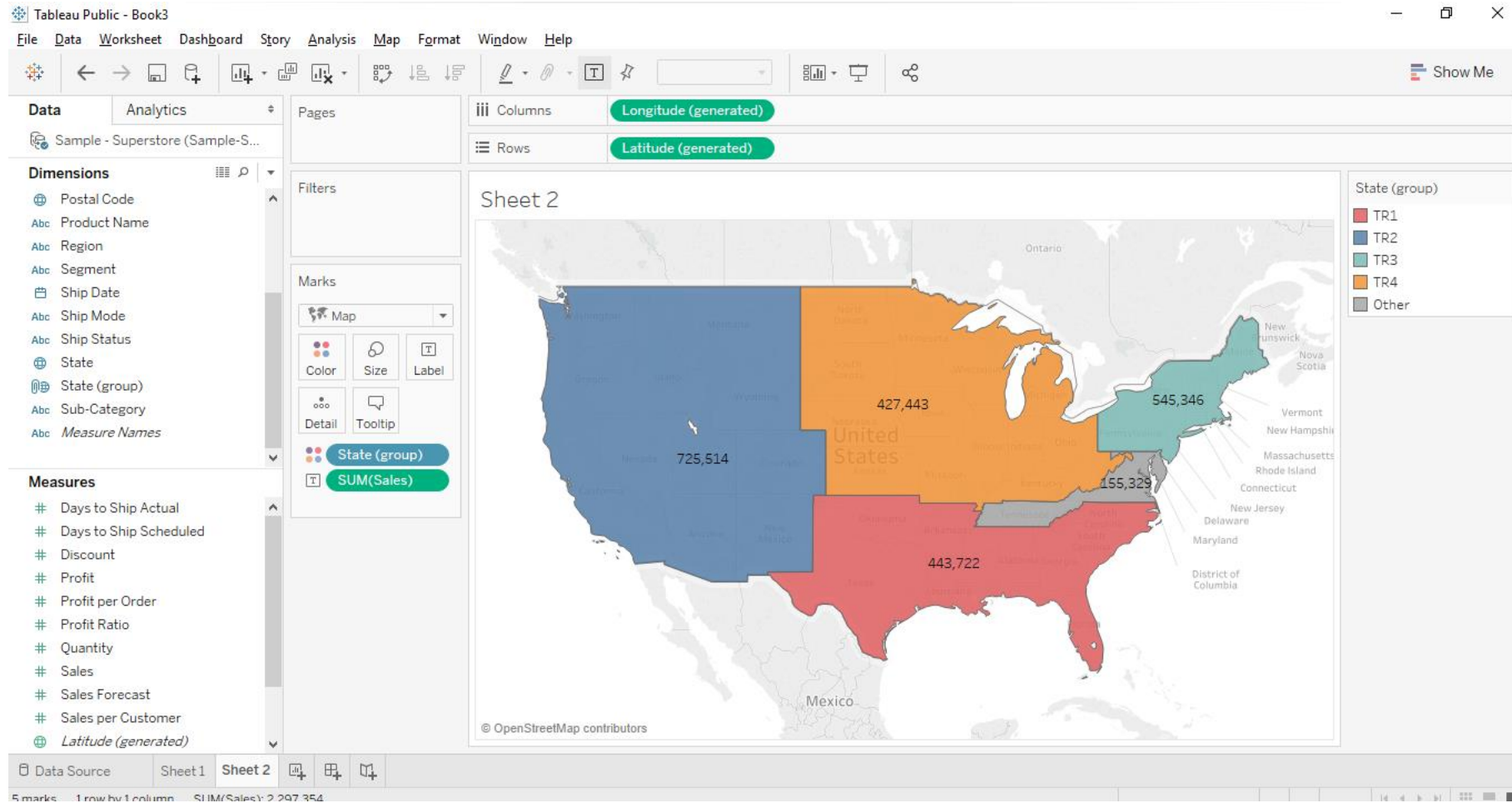


We can manipulate the maps using map options, map layers, Custom Territories



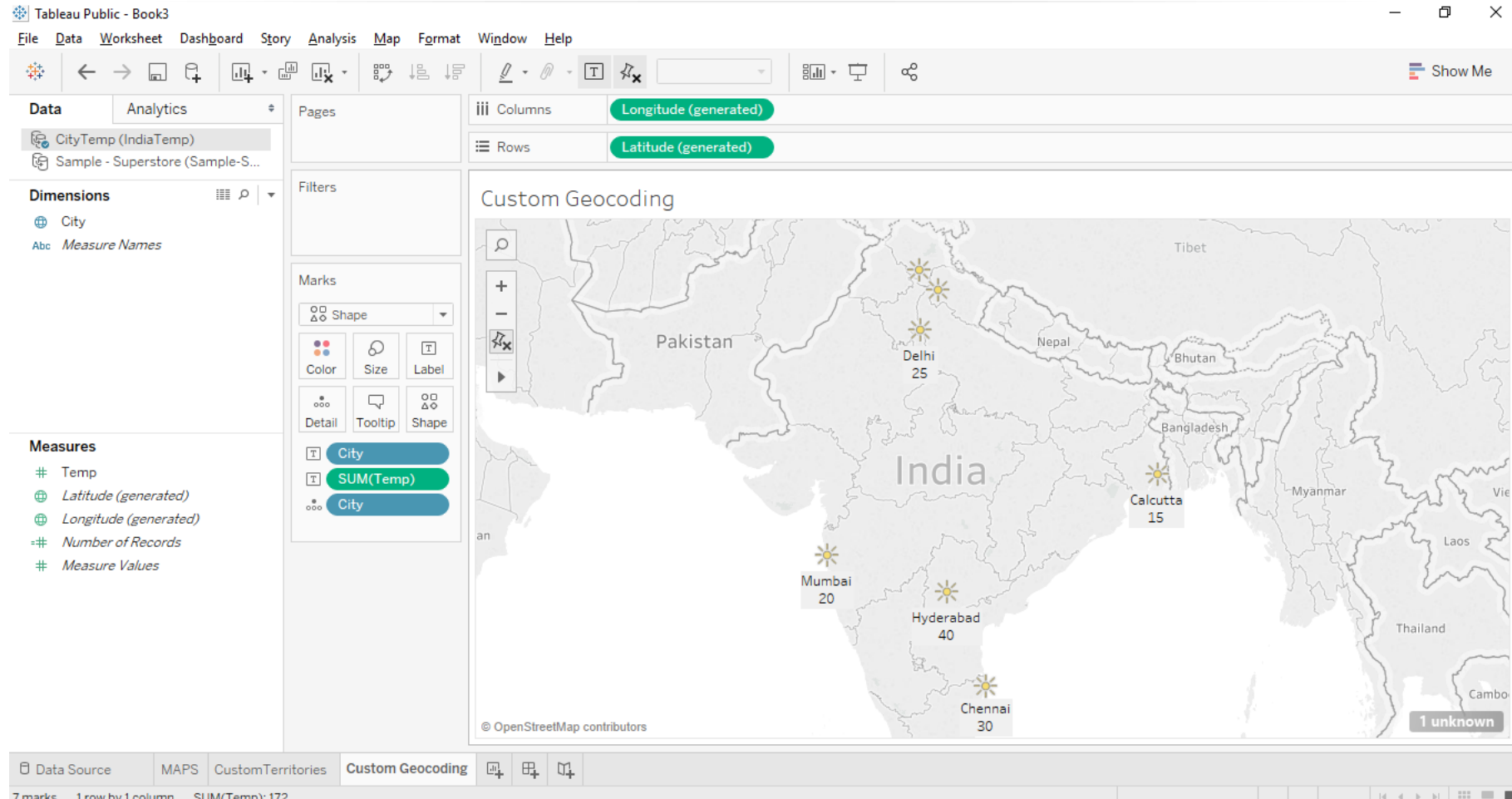
MAPS

Custom Territories : These are used to create custom groups.



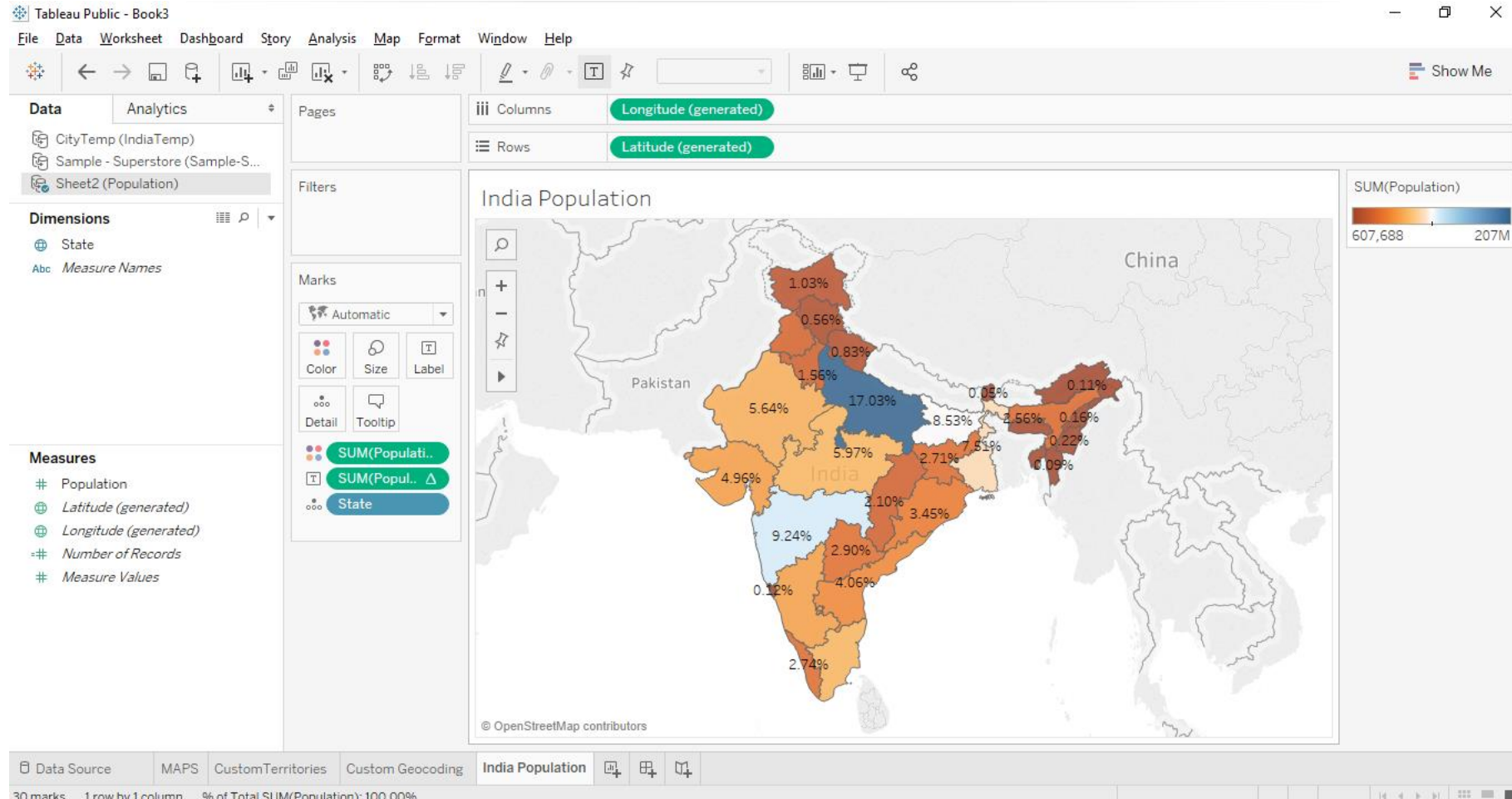
MAPS

Custom Geo-coding: These are used to customize the geographic area not recognized by tableau. groups.



MAPS

India Map: Display the population of various states in India.



Worksheet Options

- Create a new sheet. – Ctrl+M
- Rename a sheet
- Delete
- Copy & Paste
- Duplicate
- Duplicate as Crosstab
- Export
- Copy Formatting & Paste Formatting
- Describe Sheet
- Show Title
- Show Caption
- Show Summary
- Show Cards
- Show View Toolbar
- Highlighting



ASSIGNMENT



- Create a Category interactive sales bump chart to display subcategory wise bumps on the basis of years.
- Represent the state wise population percentage of India using MAP.
- Create a Region Interactive Horizontal Bar chart to represent Category & Subcategory wise Profit. The Chart should also display Dynamic Title & Caption.



Actions

Actions: These are the activities performed when we trigger an event.

Actions Filter : Target visual will be filtered with reference to source visual.

Tableau Public - Book3

File Data Worksheet Dashboard Story Analysis Map Format Window Help

Data Analytics

CityTemp (IndiaTemp)

Sample - Superstore (Sample-S...)

Sheet2 (Population)

Dimensions

Product Name

Region

Segment

Ship Date

Ship Mode

Ship Mode (group)

Ship Status

State

State (group)

Sub-Category

Measure Names

Measures

Days to Ship Actual

Days to Ship Scheduled

Discount

Profit

Profit per Order

Profit Ratio

Quantity

Sales

Sales Forecast

Sales per Customer

Columns

Category

Rows

SUM(Sales)

Filters

Source

Actions

Connect sheets to external web resources using URL actions, or to other sheets in the same actions and Highlight actions.

Name	Run On	Source
Filter1	Select	Sample - Superstore (Sampl...

Add Action >

Show actions for all sheets in this workbook

200K

100K

0K

Furniture

Office Supplies

Technology

Edit Filter Action

Name: Filter1

Source Sheets:

Sample - Superstore (Sample-SuperstoreV1)

Run action on:

Category Wise Sales

Custom Territories

Highlighting

MAPS

Source

Target

Select

Menu

Run on single select only

Target Sheets

Target

Clearing the selection will:

Leave the filter

Show all values

Exclude all values

Target Filters

Selected Fields

All Fields

Source Field	Target Field	Target Data Source

Add Filter...

Edit...

Remove

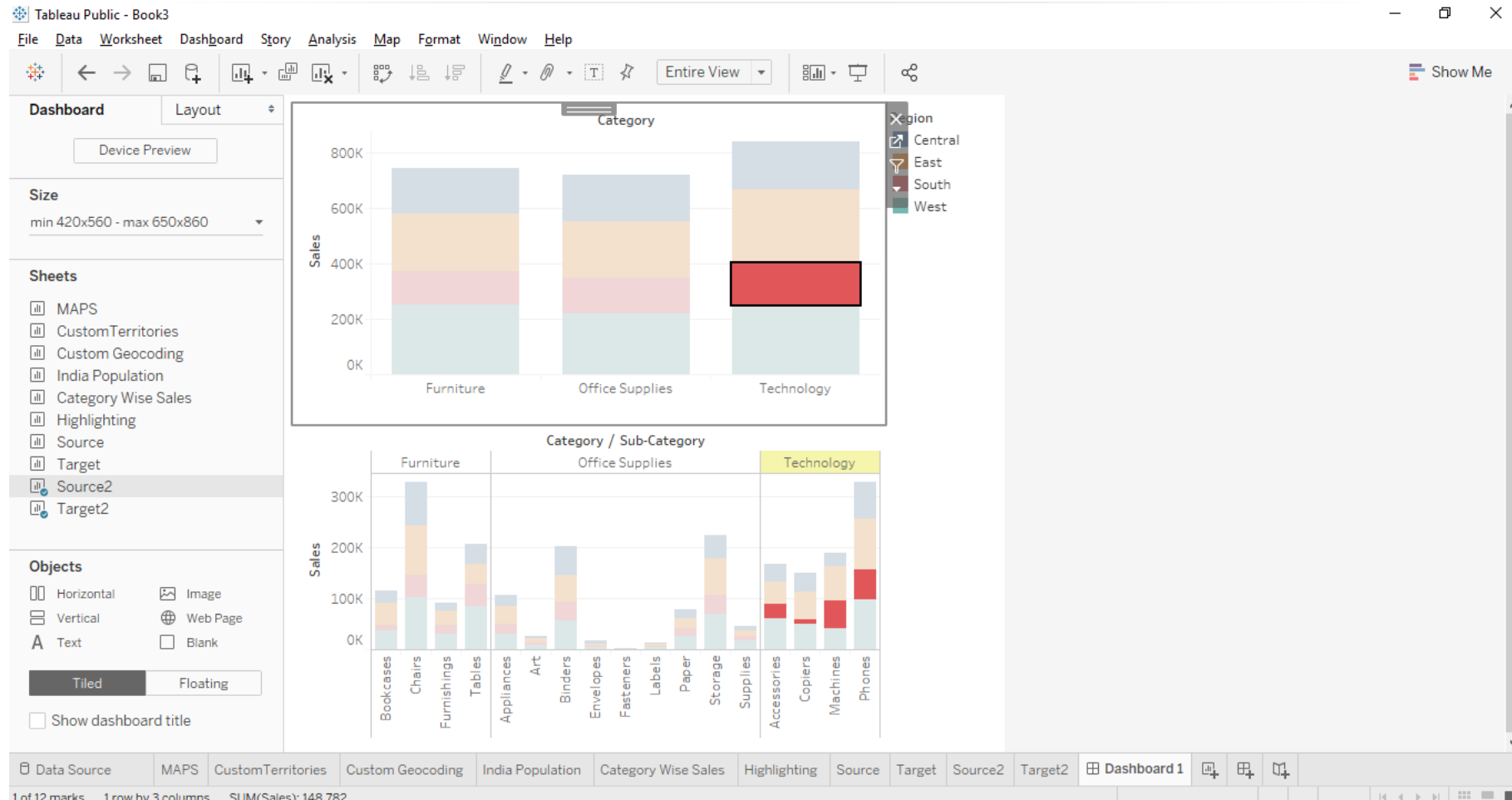
OK

Cancel



Actions

Actions Highlight: Using this feature highlighting will be done with some event.



Actions

Actions URL: This feature allows us to open a browser when some event occurs.

The screenshot shows the Tableau Public interface with a map of the United States. The map displays state sales data with labels for each state. The 'Actions' dialog box is open, showing the 'Edit URL Action' configuration for a 'Hyperlink1' action.

Actions Dialog Box:

- Name:** Hyperlink1
- Run On:** Menu
- Source:** Sheet 3
- Fields:** State

Edit URL Action Dialog Box:

- Name:** Hyperlink1
- Source Sheets:** Sheet 3
- Run action on:** Hover, Select, Menu (Menu is selected)
- URL:** <https://en.wikipedia.org/wiki/<State>>
- Test Link:** <https://en.wikipedia.org/wiki/<State>>
- URL Encode Data Values:** ☐
- Allow Multiple Values:** ☐
- Item Delimiter:** ,
- Delimiter Escape:** \
- URL Target:** ☒ New Browser Tab, ☐ Web Page Object, ☐ Browser Tab if No Web Page Object Exists



Actions

Actions Parameter : This feature allows us to dynamically set the value of the parameter.

- Create a parameter
- Create a Calculated field
- Assign action to assign the value to the parameter

The screenshot displays the Tableau interface with a horizontal bar chart titled "ACTION PARAMETER". The chart shows sales data categorized by "Category" and "SC". The x-axis represents "Sales" from 0K to 800K. The y-axis lists categories: Technology (Phones, Machines, Accessories, Copiers), Furniture, and Office Supplies. The bars are colored red for Technology, blue for Furniture, and orange for Office Supplies. The chart is titled "ACTION PARAMETER" and has columns for "Category" and "SC".

Two dialog boxes are overlaid on the chart:

- Actions Dialog:** Shows a list of actions. The first action is "Parameter 1" with "Run On" set to "Select", "Source" set to "ACTION PARAMETER", and "Fields" set to "PSC".
- Edit Parameter Action Dialog:** Shows the configuration for the "Parameter 1" action. The "Name" is "Parameter 1". The "Source Sheets" section shows "ACTION PARAMET..." selected. The "Run action on:" section has "Select" selected. The "Target" section shows "Parameter" set to "Abc PSC", "Field" set to "Abc", and "Aggregation" set to "None". The "Clearing the selection will:" section has "Set value to" selected.

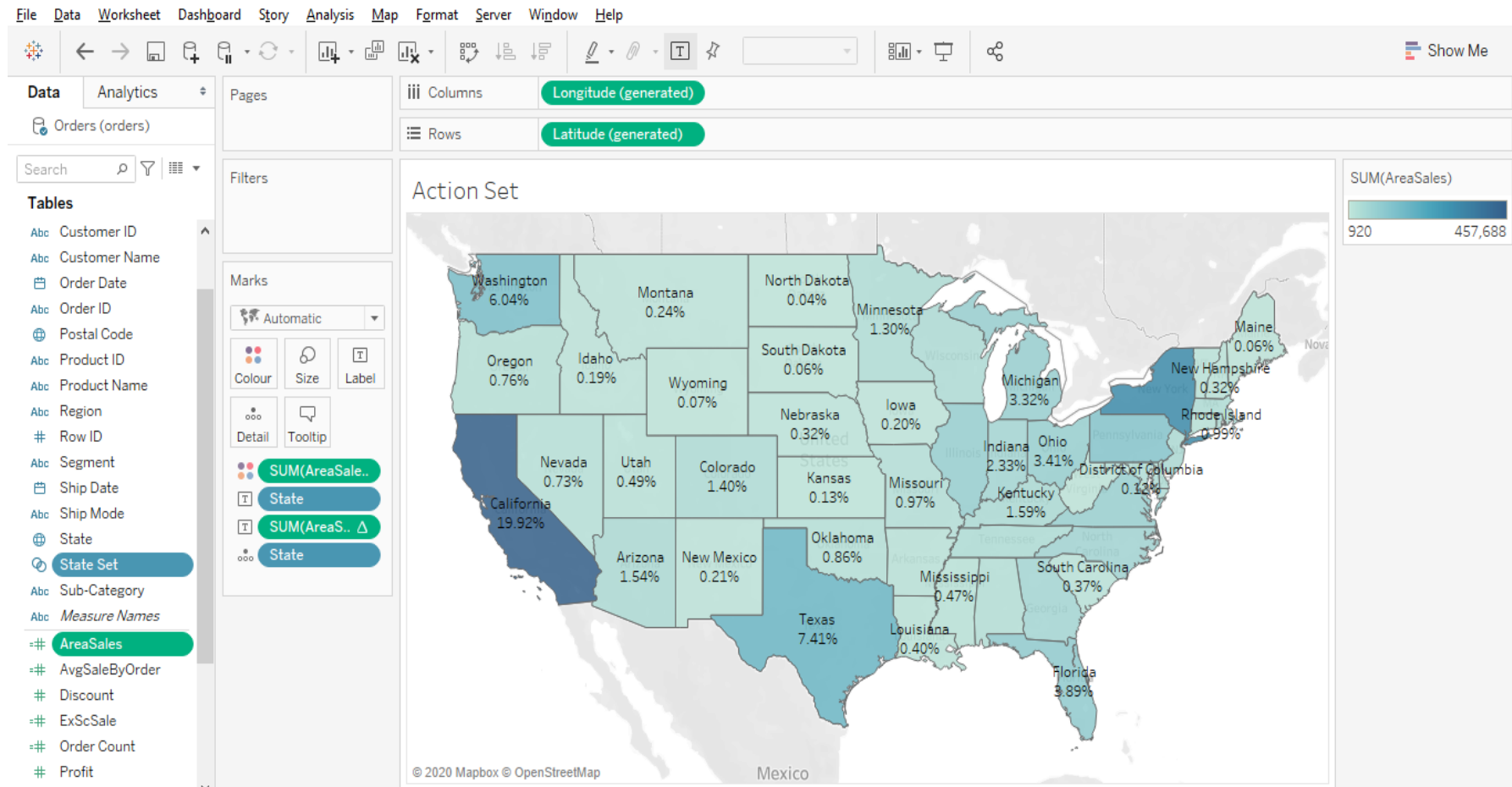
The background interface includes a menu bar (File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Window, Help), a toolbar, and a sidebar with "Data" and "Analytics" tabs. The "Data" tab shows a search bar and a list of tables (City, Country, Customer ID, Customer Name, Order Date, Order ID, Postal Code, Product ID, Product Name, Region, Row ID, SC, Segment, Ship Date, Ship Mode, State, State Set, Sub-Category, Measure Names, AREA SALES). The "Parameters" section shows "Abc PSC".



Actions

Actions Set: This feature allows us to dynamically pass the values to the set.

- Create a Set
- Create a Calculated field
- Assign action to set



ASSIGNMENT



- Using India Map Represent state wise percentage of Covid cases.
- In the another sheet create a bar chart to represent state wise Total Covid Cases, Recovered & Deaths.
- Use action so that the bar graph representation of Covid details should be displayed for the highlighted state.
- In sheet 1 represent Category & Region wise profit, category should be bifurcated on the basis of region.
- In sheet 2 represent Category , Subcategory & Region wise profit.
- Implement an Action on sheet 1 so that sheet 2 which is filtered on region & subcategory for the selected region in sheet 1.
- Create a US Map to display the %age sales contribution of each state. Implement an set action to give the sales comparison of the selected area.
- Represent segment wise profit using a barchart, Implement a action Parameter so that it can be drill down to region.



LOD Calculations

Level of detail expression allows us to compute aggregation that are not on level detail of the visualization

FIXED – Include the expression immaterial of it being included in the visualization is not included in the view

The screenshot shows the Tableau Desktop interface. The 'Columns' shelf contains 'Measure Names' and the 'Rows' shelf contains 'Category' and 'Sub-Category'. The main view is a table titled 'Sheet 9' showing sales data for 'Furniture', 'Office Supplies', and 'Technology' categories. A dialog box for the 'FIXEDCATSALES' measure is open, displaying the calculation `{FIXED [Category] : SUM([Sales])}`. The status bar at the bottom indicates '34 marks' and '17 rows by 2 columns'.

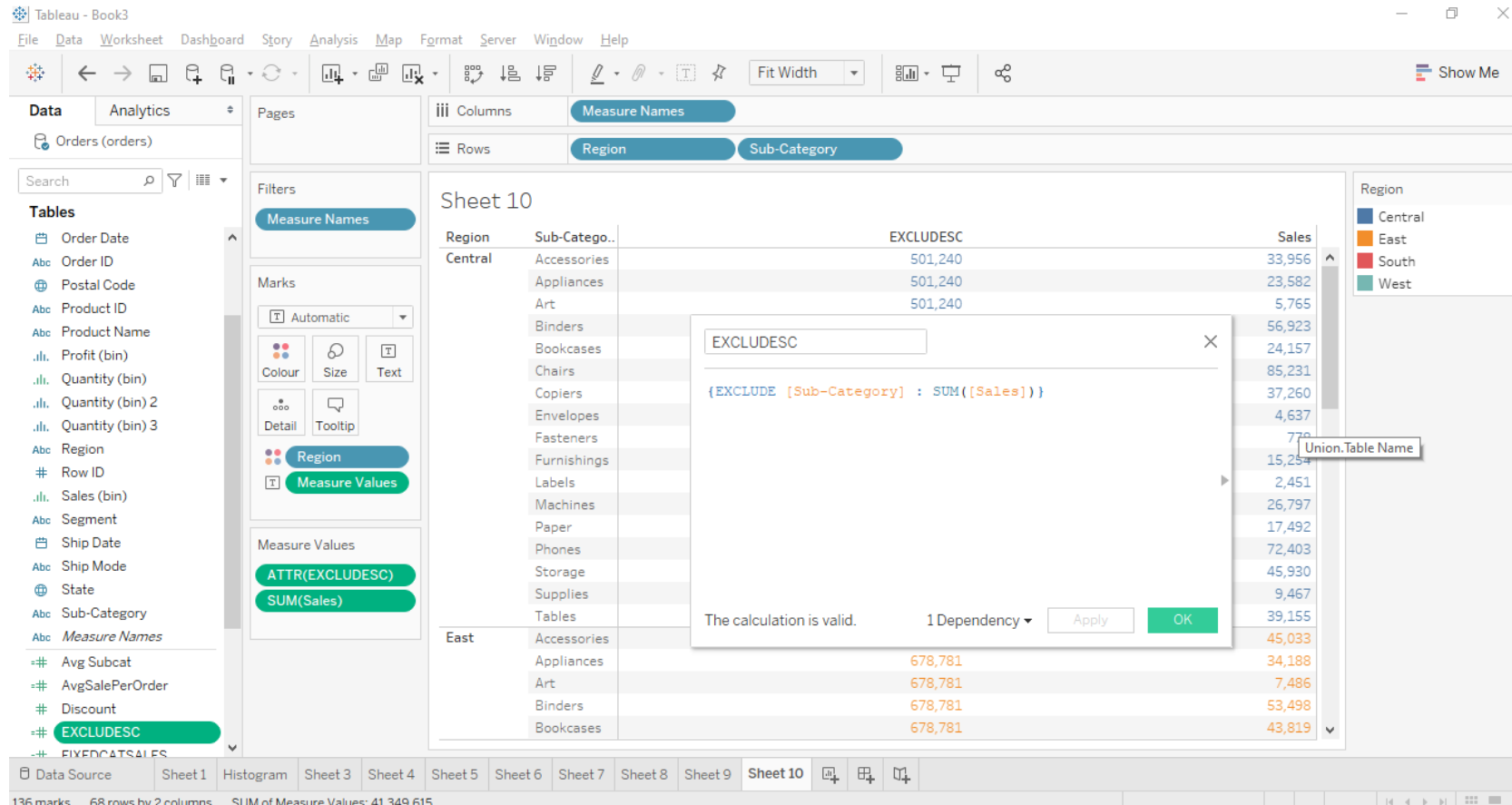
Category	Sub-Category	FIXEDCATSALES	Sales
Furniture	Bookcases	742,000	114,880
	Chairs	742,000	328,449
	Furnishings		91,705
	Tables		206,966
Office Supplies	Appliances		107,532
	Art		27,119
	Binders		203,413
	Envelopes		16,476
	Fasteners		3,024
	Labels		12,486
	Paper		78,479
	Storage		223,844
	Supplies		46,674
	Technology	Accessories	
Copiers		836,154	149,528
Machines		836,154	189,239
Phones		836,154	330,007



LOD Calculations

Level of detail expression allows us to compute aggregation that are not on level detail of the visualization

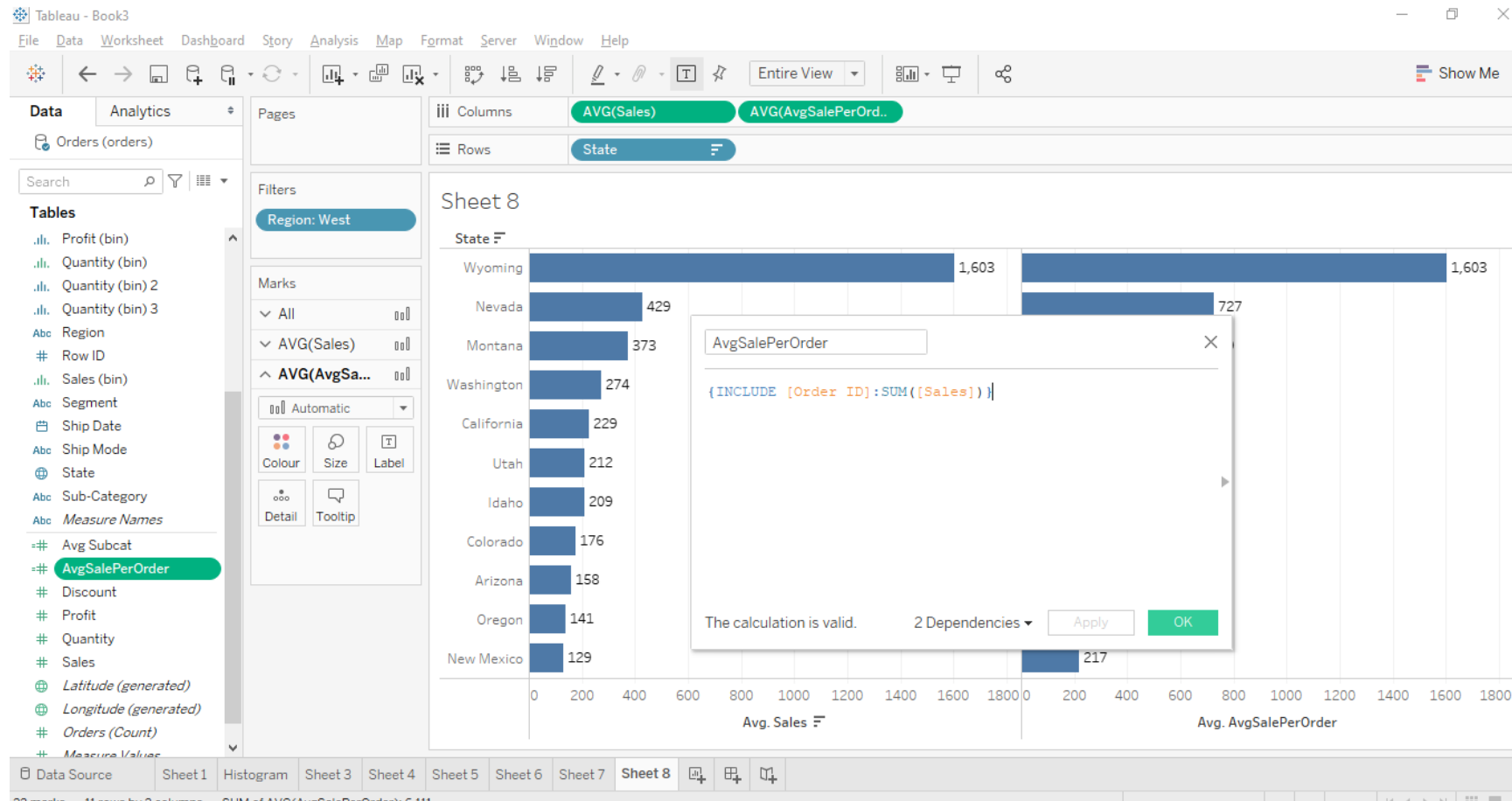
EXCLUDE – exclude the expression even if it is included in the view



LOD Calculations

Level of detail expression allows us to compute aggregation that are not on level detail of the visualization

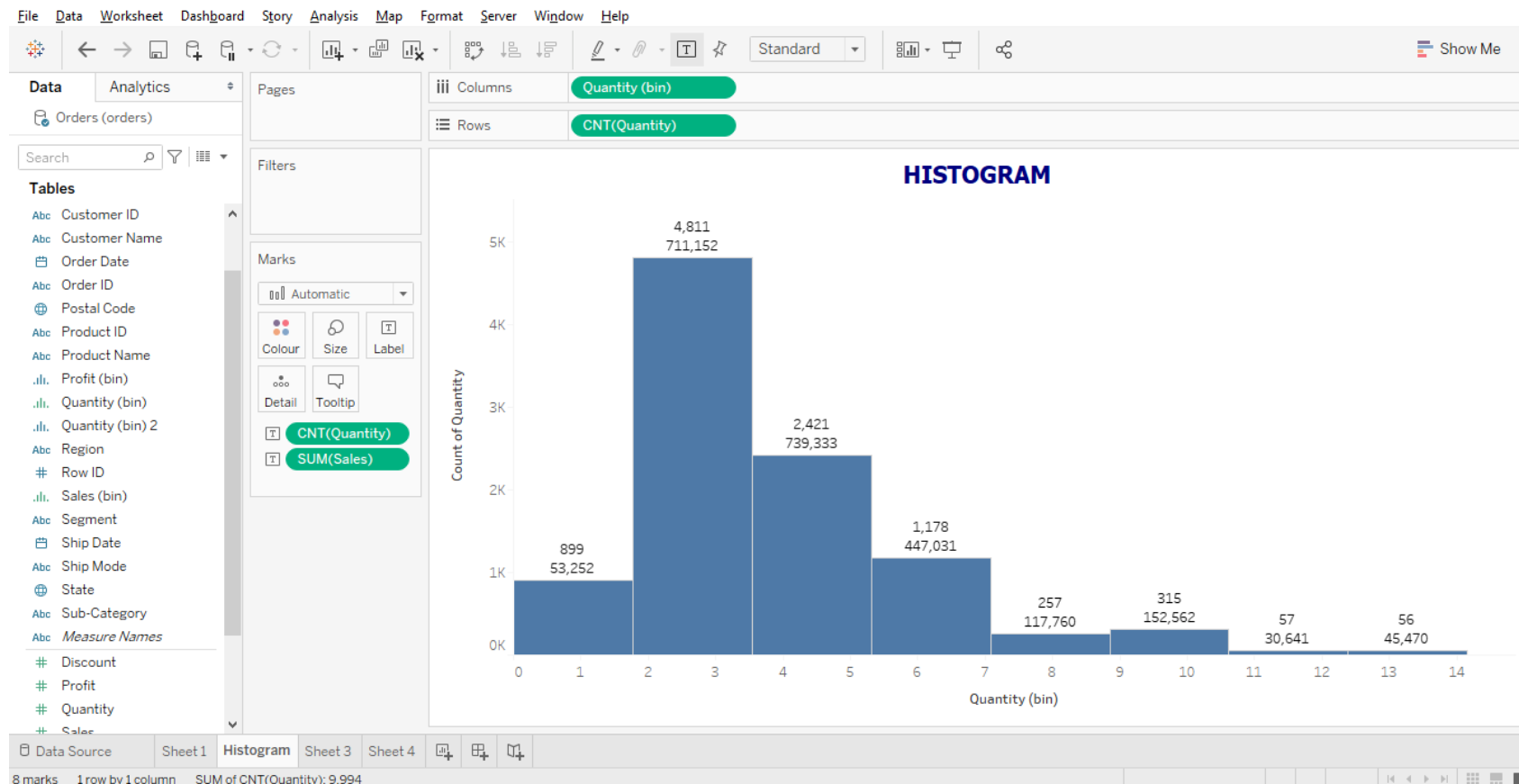
INCLUDE – Include the expression even if it is not included in the view



Histogram

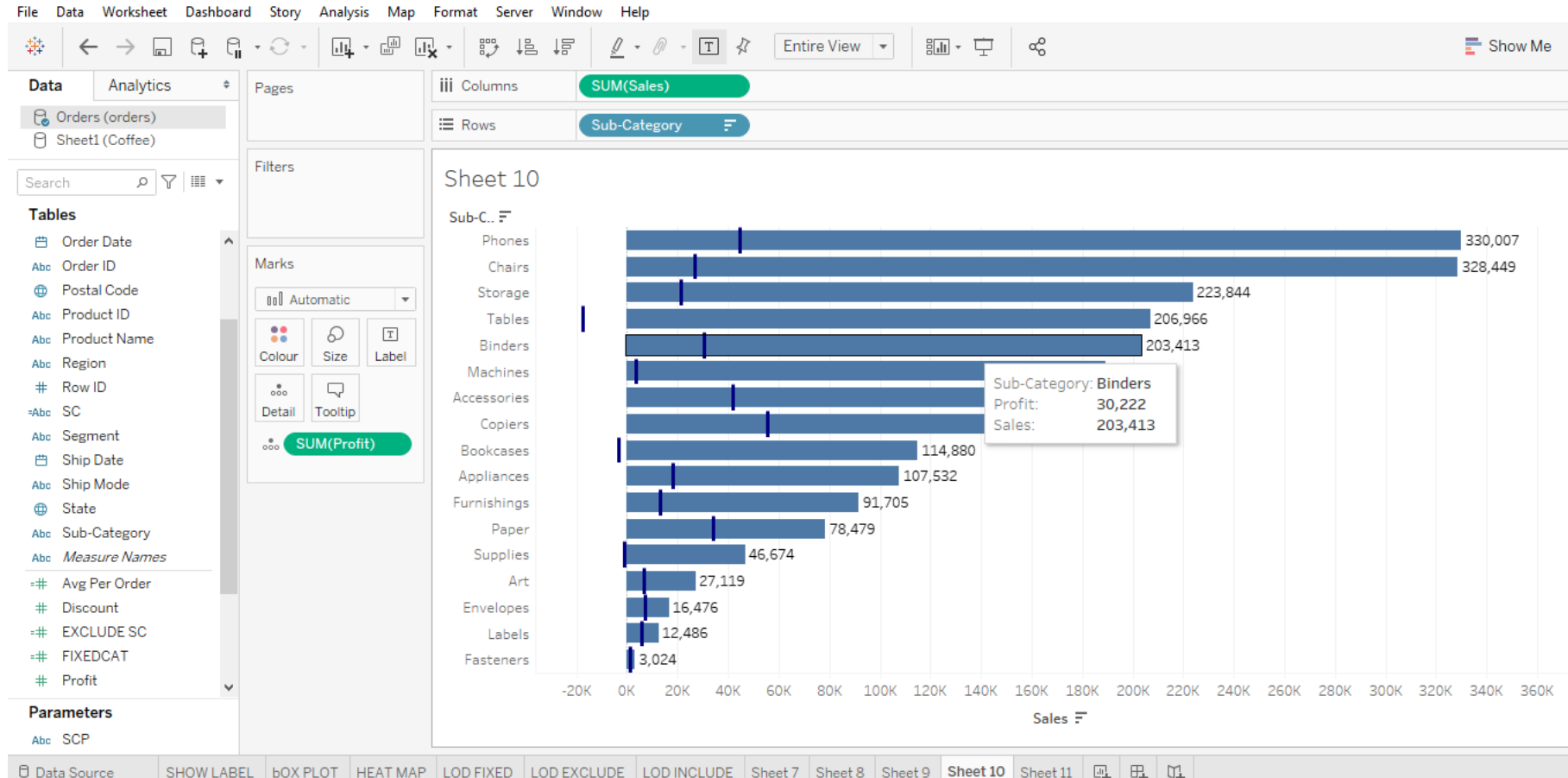
Histogram is same like bar chart however, it groups the values into range. Each bar in histogram represents the number of values present in that range.

Tableau creates a histogram by taking one measure. It creates an additional bin field for the measure used in creating a histogram.



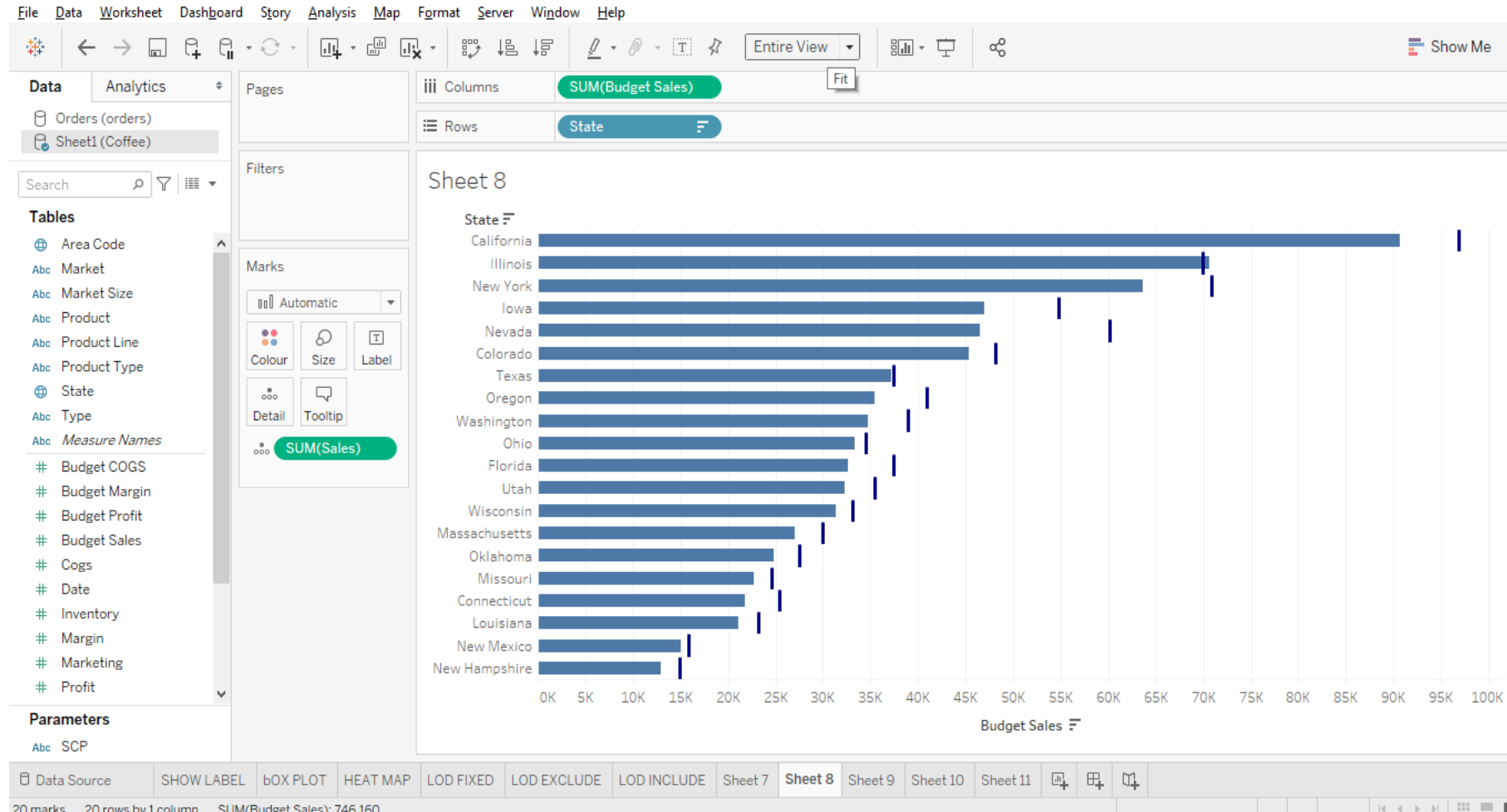
Bullet Chart

Bullet Chart is a variation of Bar graph, used to compare value of one measure with another measure in the context of finding the variation in the first measure within a range of variations in the second measure.



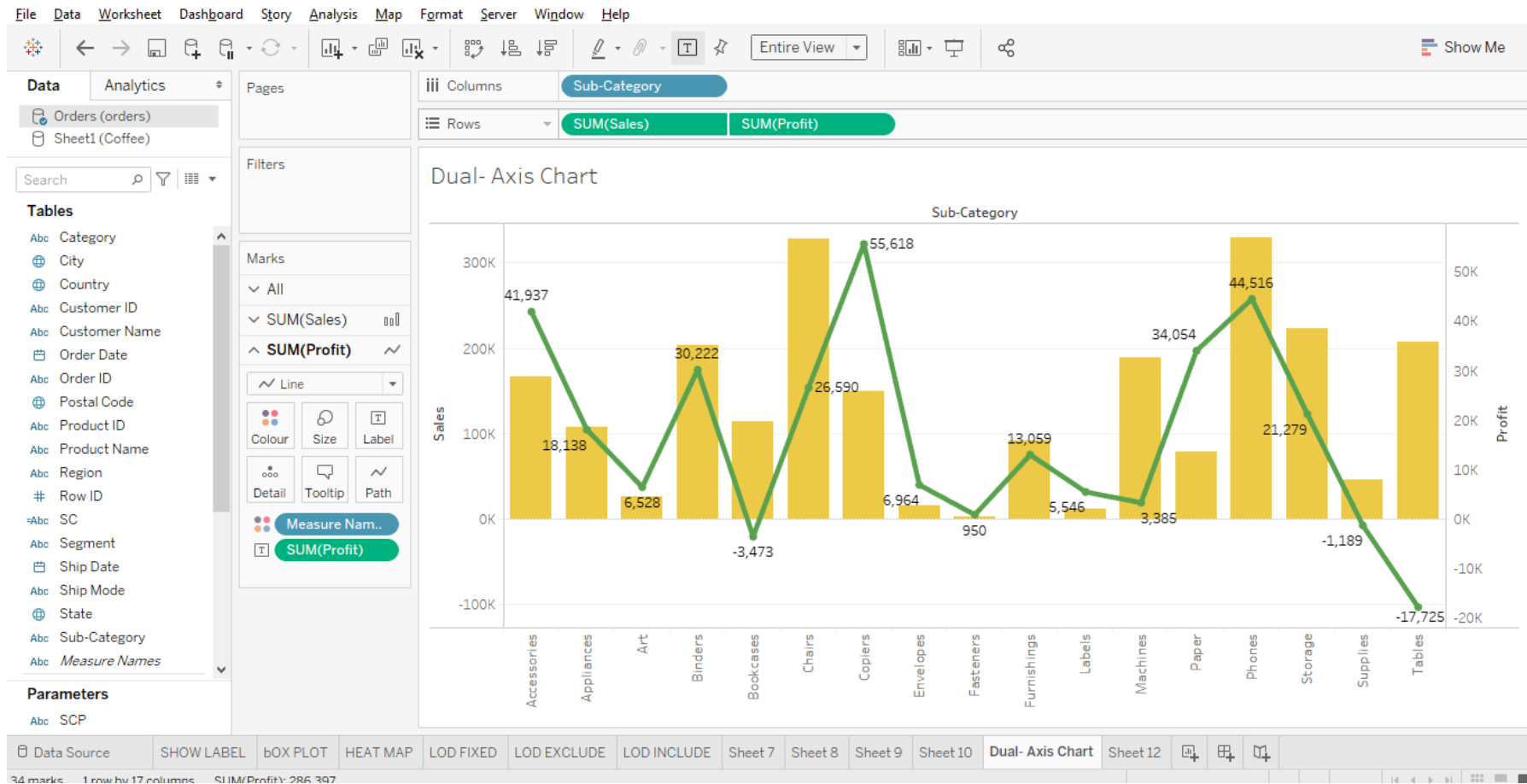
Bullet Chart

Comparison of Sales target and Actual sales (Coffee Data Source)



Dual- Axis Chart

In Dual Axis chart we have two Y – Axis. These are helpful when we want to see the relationship between two or more variables in a limited space and in one view.



Combined Chart

In Combined Chart two or more measures are plotted on same Y-Axis

