

# DATA ANALYTICS PROJECT 4: RETAIL SALES ANALYSIS

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DATA ANALYST INTERN

# AGENDA

- **Data exploration and preparation**
- **Sales by region**
- **Monthly sales trend**
- **Sales by product category**
- **Profit by state**
- **Sales vs profit**
- **Customer segment analysis**
- **Customer statistics**
- **Insights**

About me:

- Student at RWTH; currently a data analyst intern at Oeson.
- Certified in marketing data analysis

# 1. DATASET

Orders (1740208842752\_4a28313939 (2))

Filters  
5 | [Edit](#)

Orders

22 fields 9994 rows

100

rows



Name

Orders

Fields

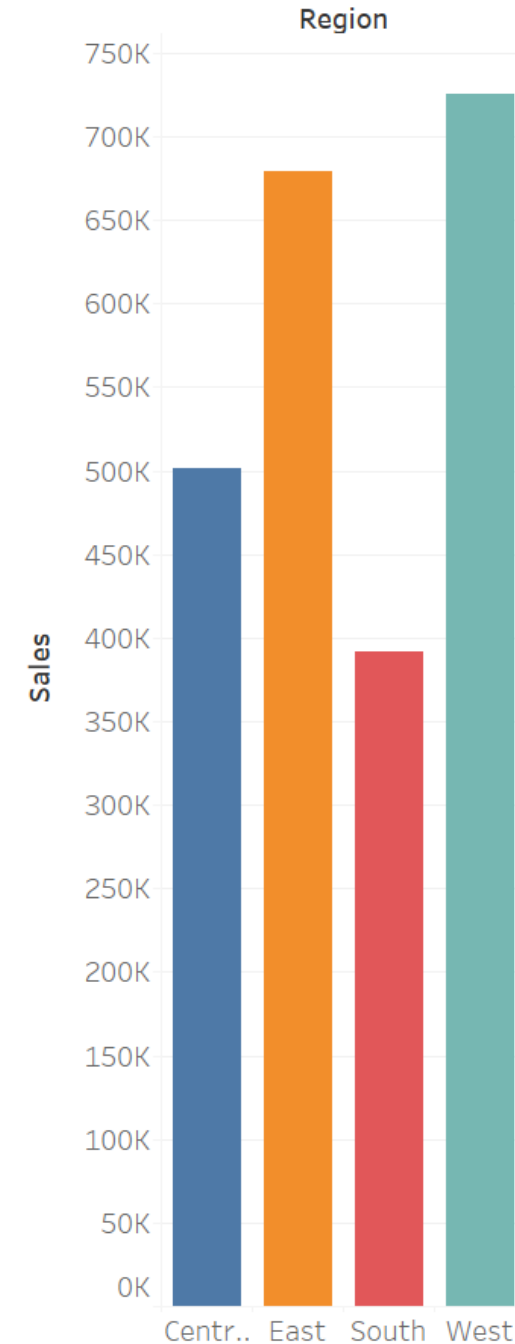
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Abc	Order ID	Orders	Order ID
📅	Order Date	Orders	Order Date
📅	Ship Date	Orders	Ship Date
Abc	Ship Mode	Orders	Ship Mode
Abc	Customer ID	Orders	Customer ID
Abc	Customer Name	Orders	Customer N...
Abc	Segment	Orders	Segment
🌐	Country	Orders	Country

# Orders Row ID	Abc Orders Order ID	📅 Orders Order Date	📅 Orders Ship Date	Abc Orders Ship Mode
1	CA-2016-152156	08.11.2016	11.11.2016	Second Class
2	CA-2016-152156	08.11.2016	11.11.2016	Second Class
3	CA-2016-138688	12.06.2016	16.06.2016	Second Class
4	US-2015-108966	11.10.2015	18.10.2015	Standard Class
5	US-2015-108966	11.10.2015	18.10.2015	Standard Class
6	CA-2014-115812	09.06.2014	14.06.2014	Standard Class
7	CA-2014-115812	09.06.2014	14.06.2014	Standard Class
8	CA-2014-115812	09.06.2014	14.06.2014	Standard Class
9	CA-2014-115812	09.06.2014	14.06.2014	Standard Class
10	CA-2014-115812	09.06.2014	14.06.2014	Standard Class
11	CA-2014-115812	09.06.2014	14.06.2014	Standard Class

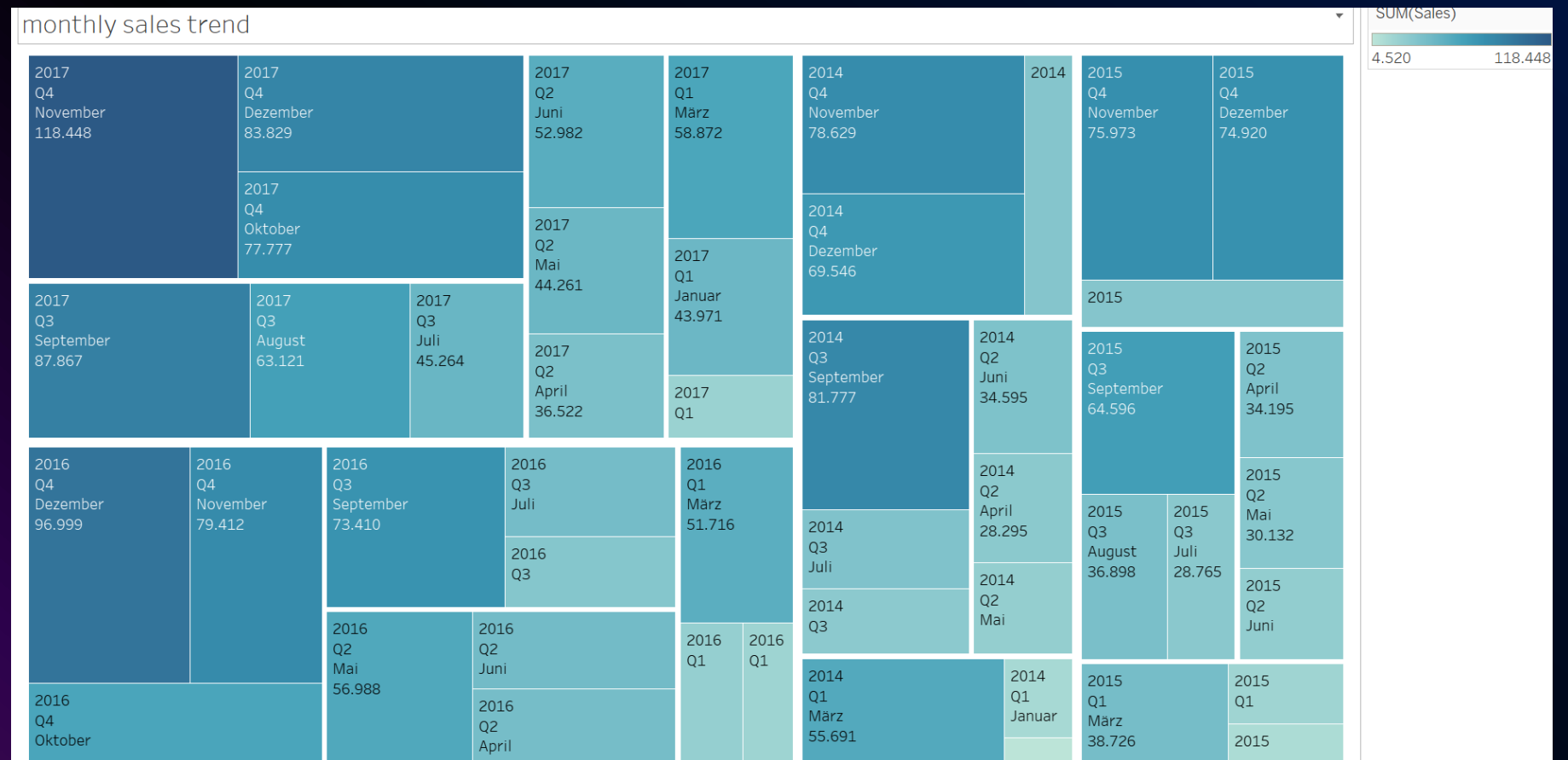
# SALES BY REGION

WEST AND THE  
EAST REGIONS  
TAKE THE LEAD.

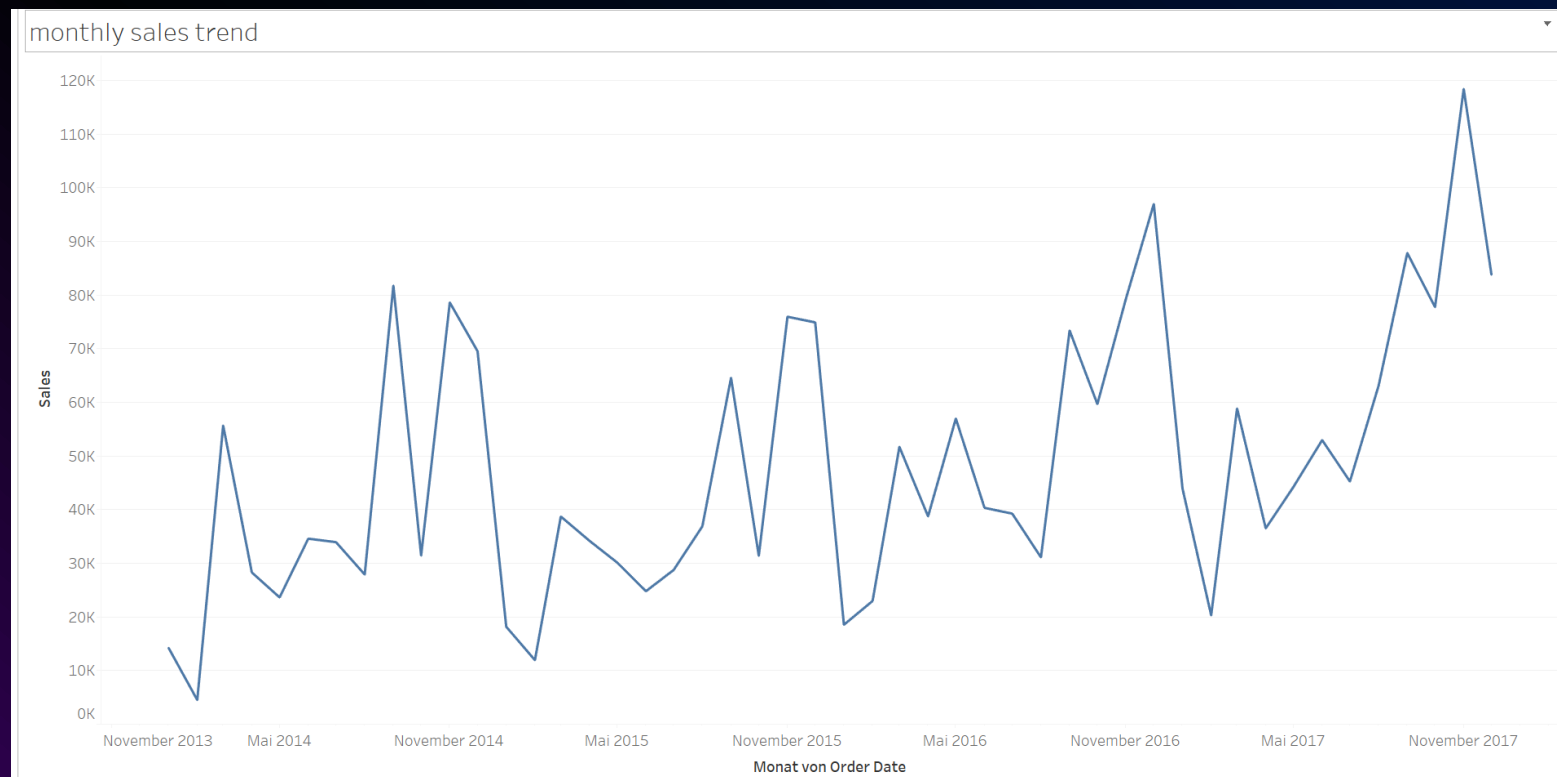
sales by region



# MONTHLY SALES TREND

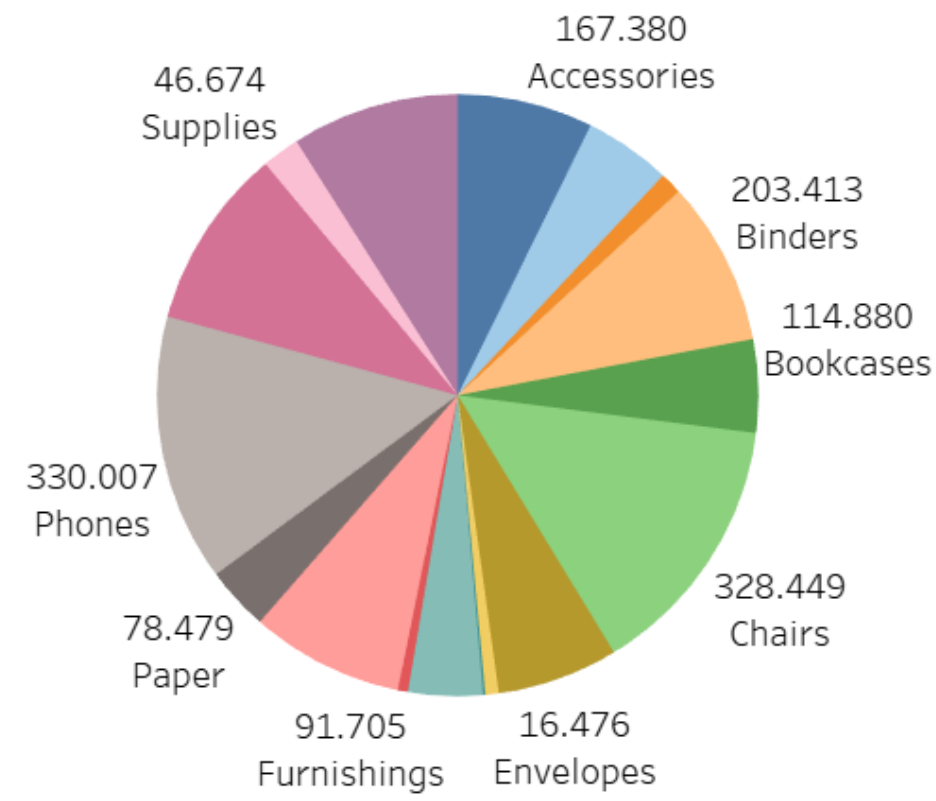


# MONTHLY SALES TREND



sales by product category

sales by product category



Sub-Category

- Accessories
- Appliances
- Art
- Binders
- Bookcases
- Chairs
- Copiers
- Envelopes
- Fasteners
- Furnishings
- Labels
- Machines
- Paper
- Phones
- Storage
- Supplies
- Tables

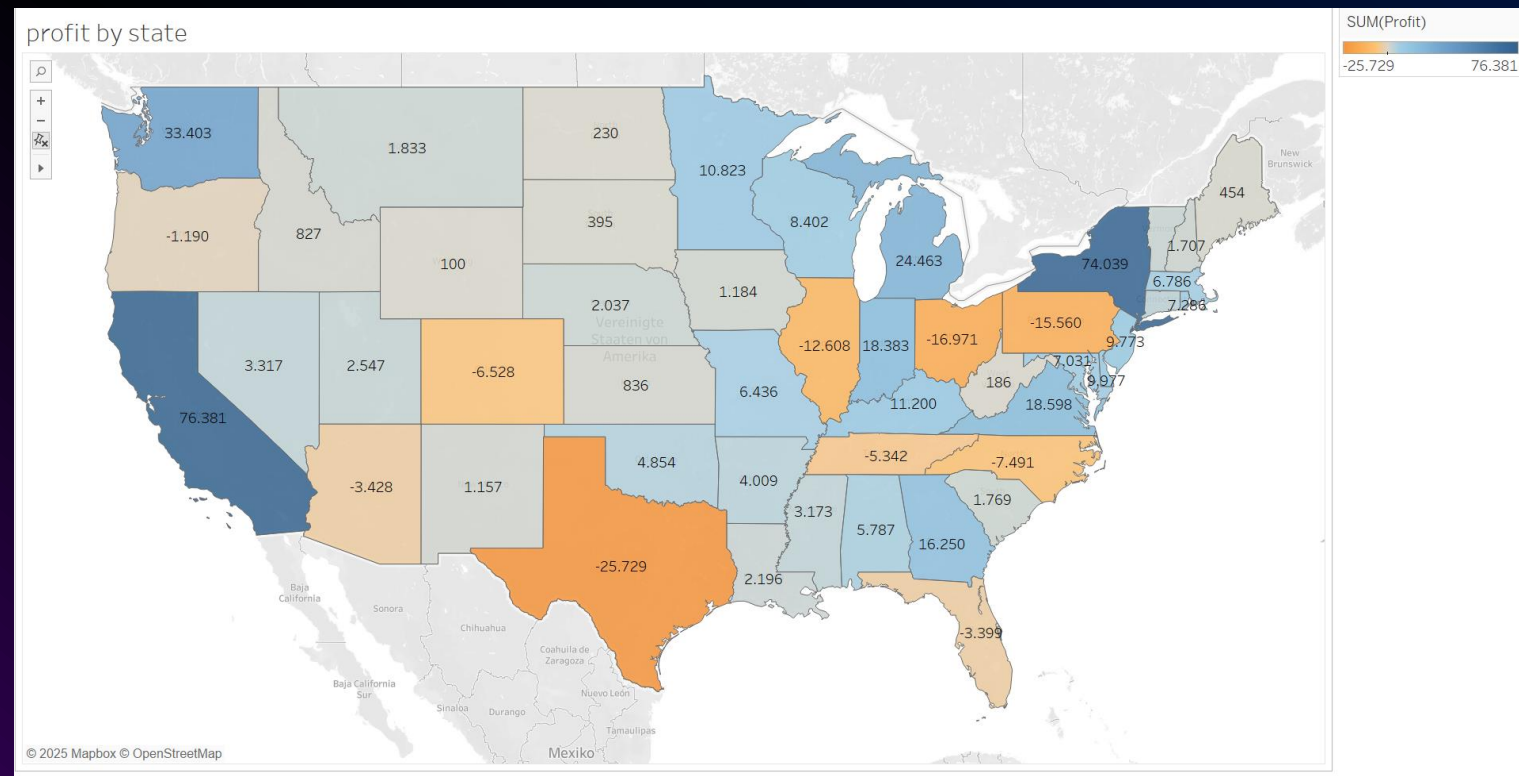
SUM(Sales)

2.297.201

Bookcases	Chairs	Furnishings	Tables	Appliances	Art	Binders	Envelopes	Fasteners	Labels	Paper	Storage	Supplies	Accessories	Copiers	Machines	Phones
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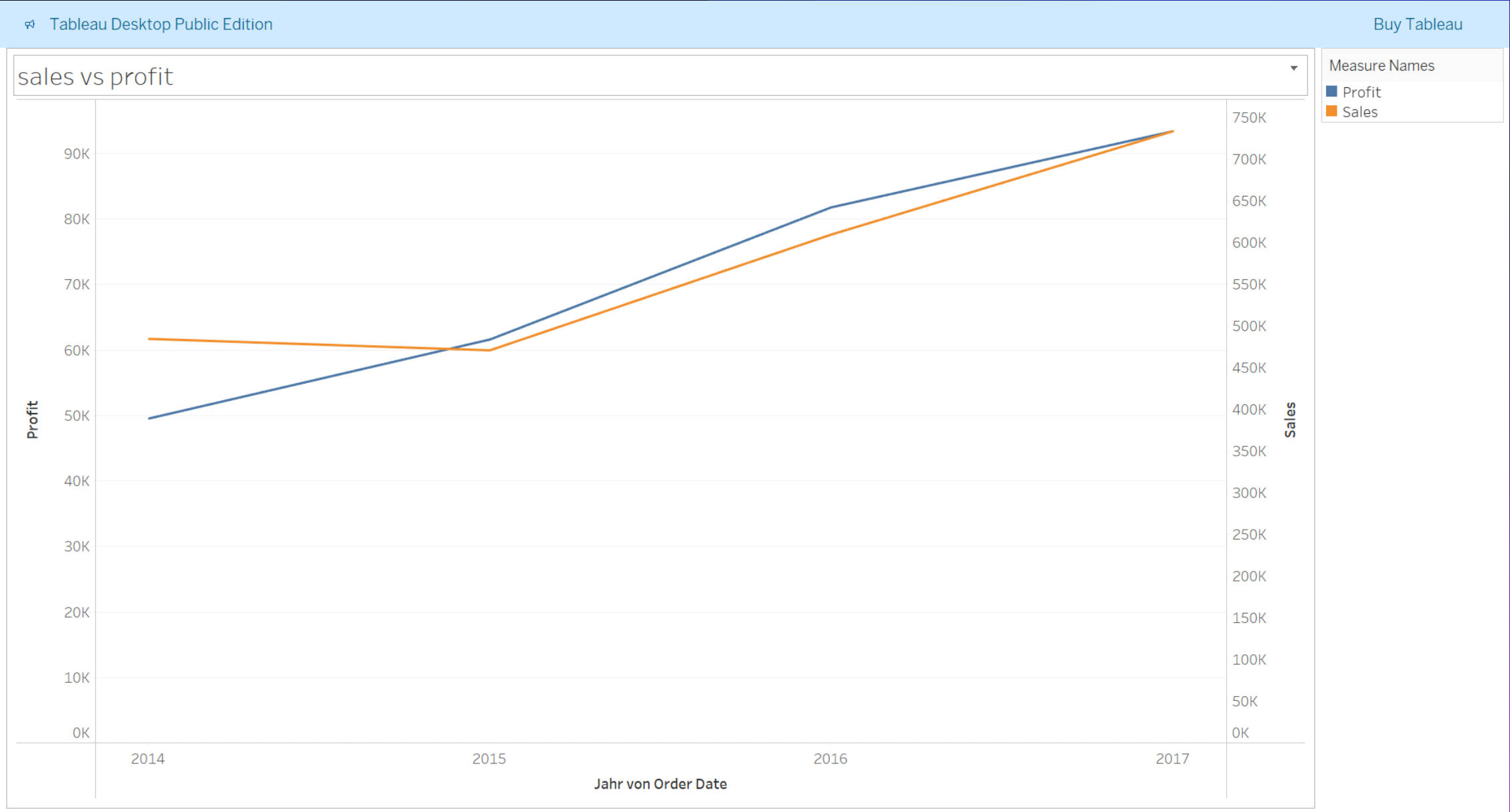
Orange = loss

# PROFIT BY STATE

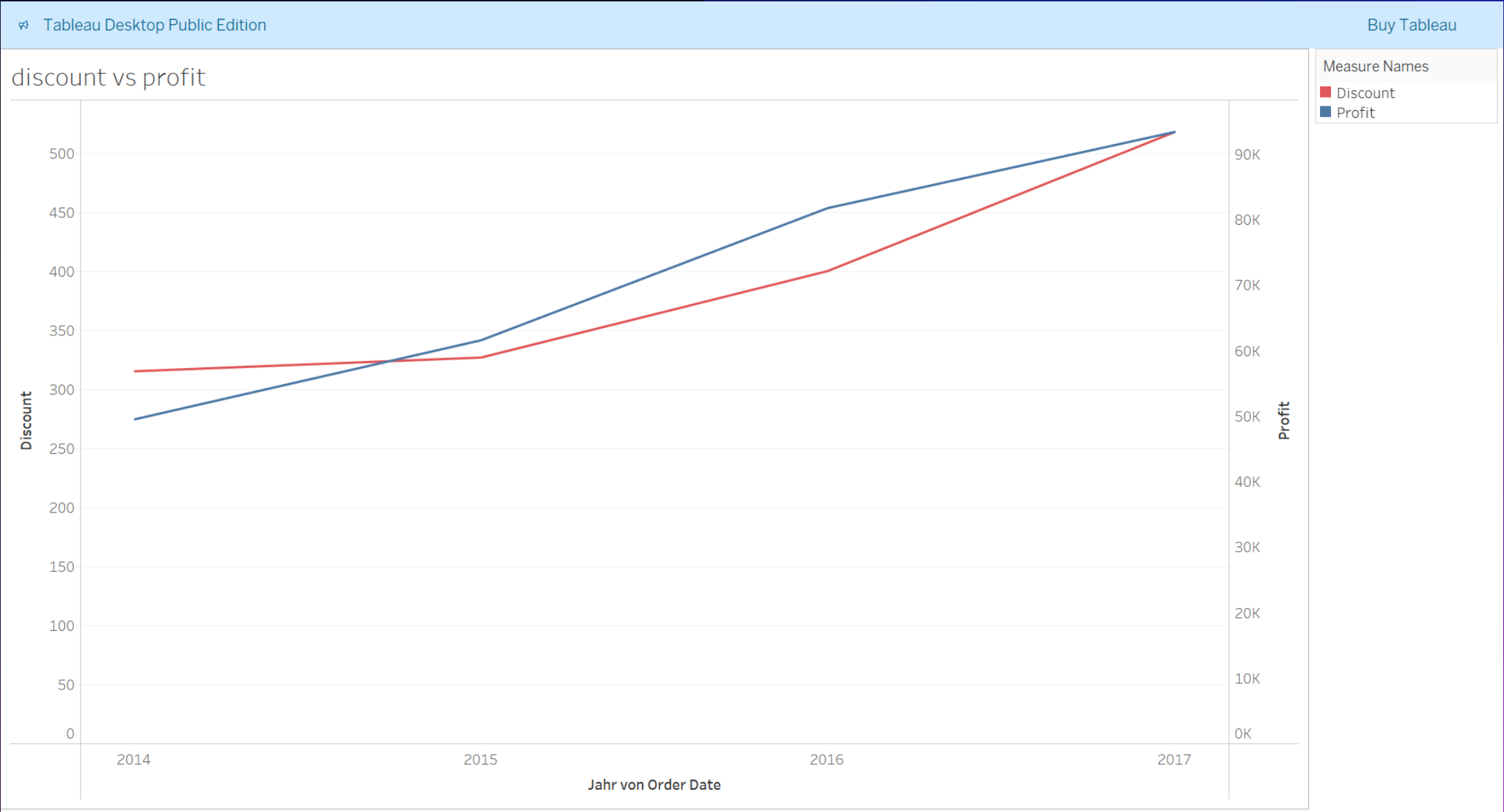




# Here is shown the relationship between the sales and profit.

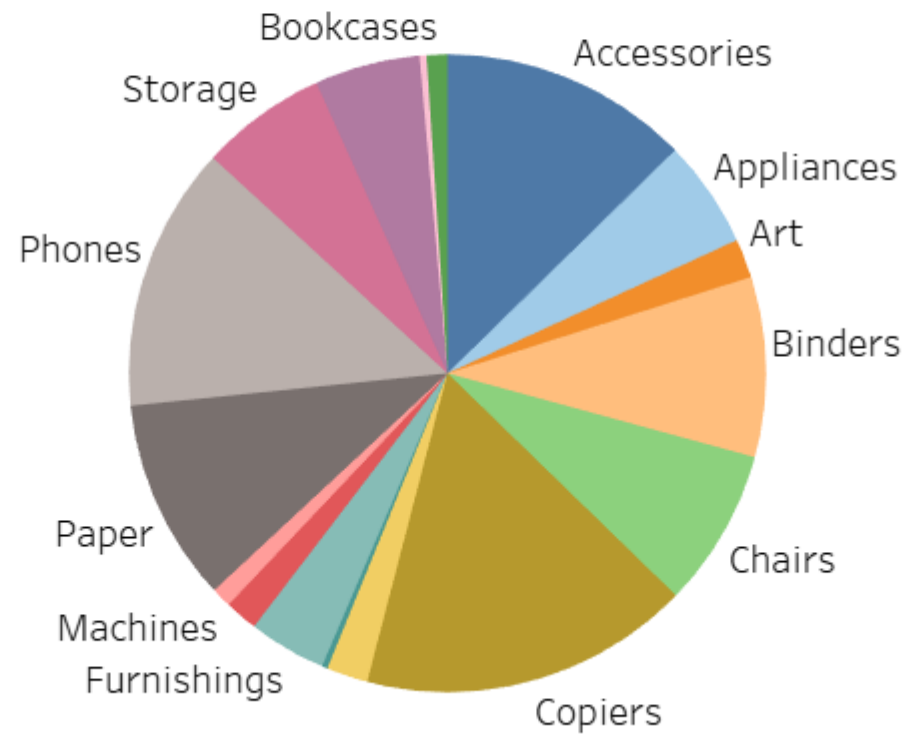


Here it can be seen the negative correlation between discounts and profit. The more discount, the more loss

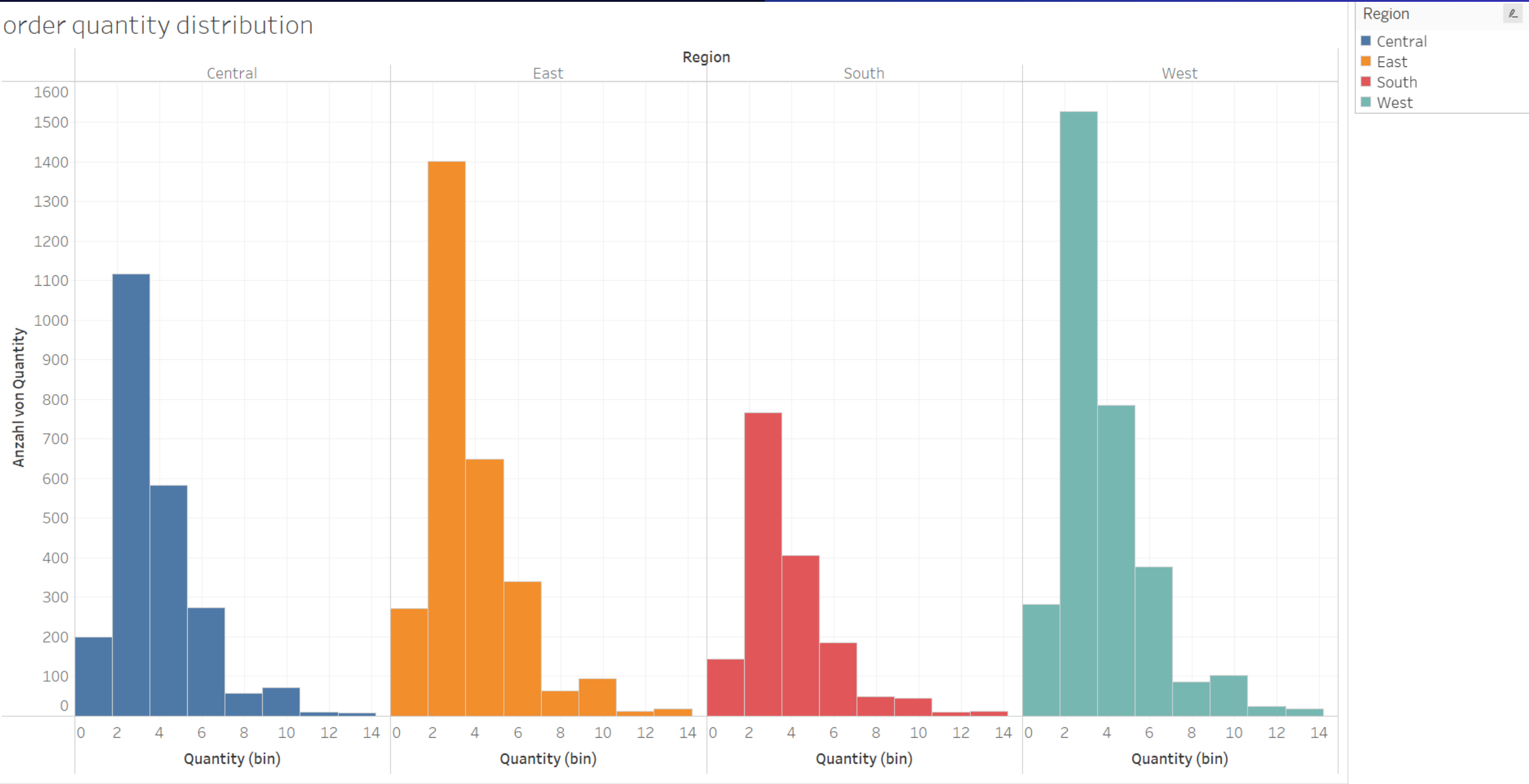


Here it is shown the profit by subcategory, the copiers play a huge role in the profits.


profit and subcategories



order quantity distribution



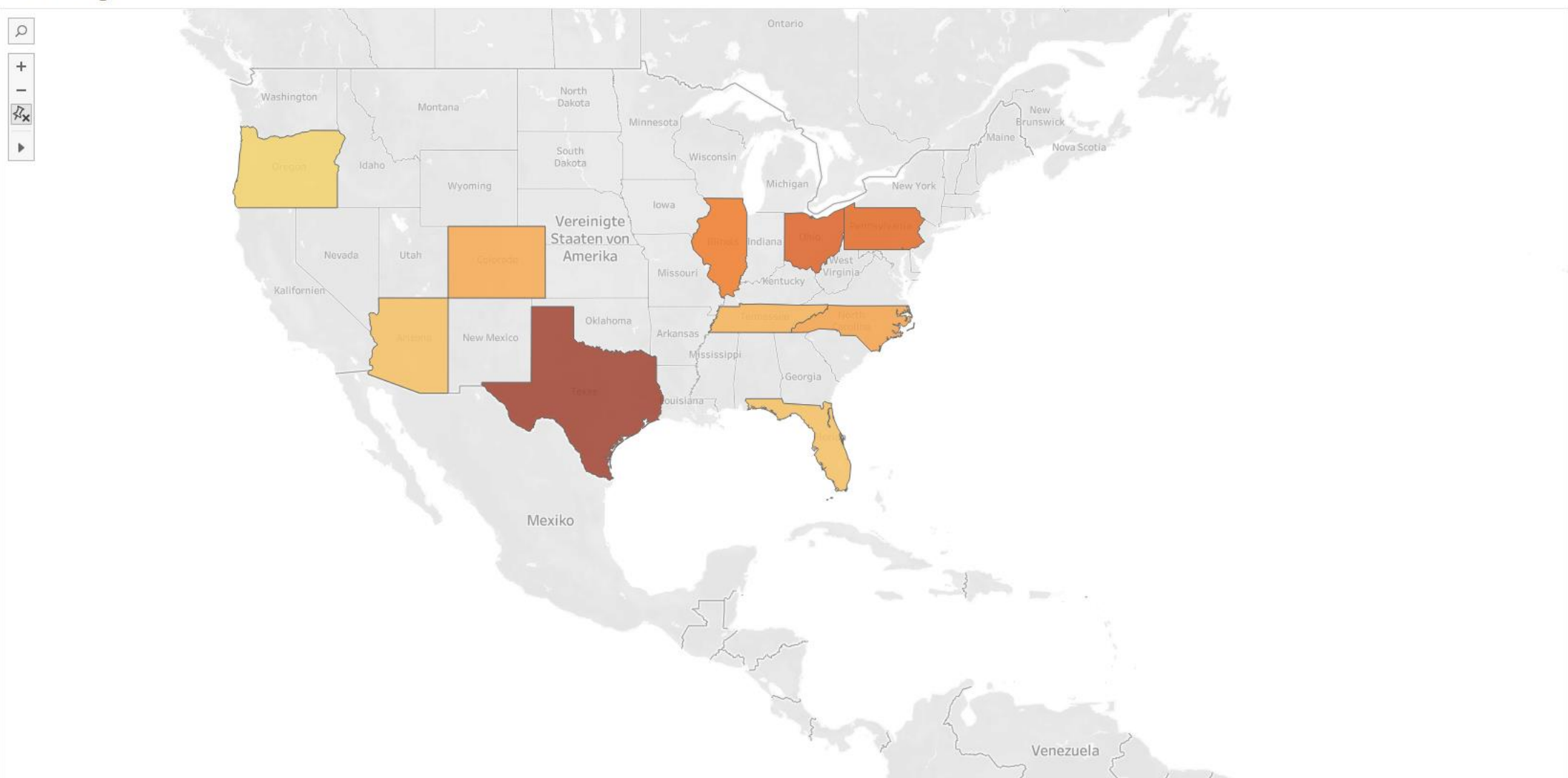
SUM(Sales)



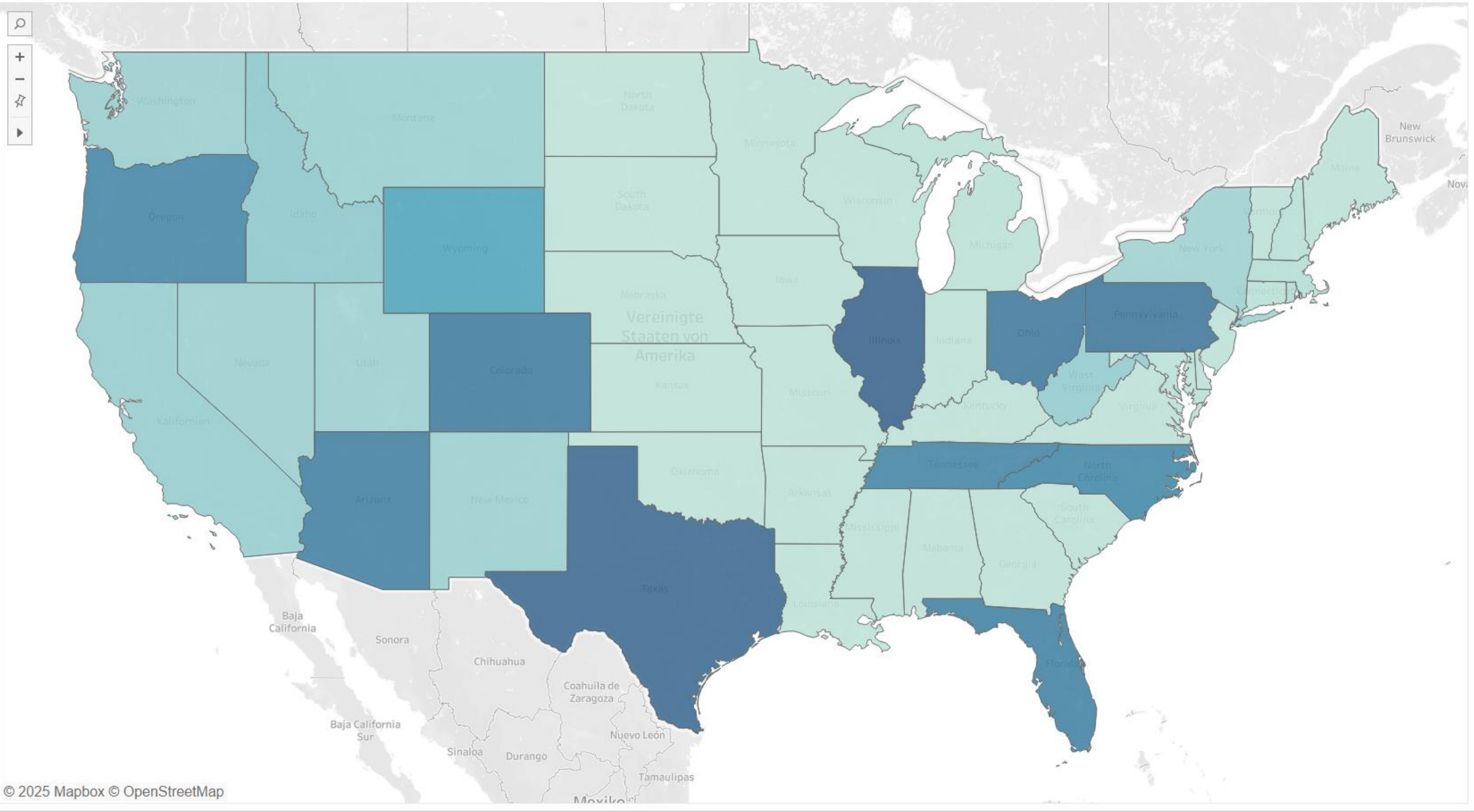
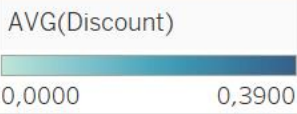
Category	SUM(Sales)
Category 1	920
Category 2	457.688



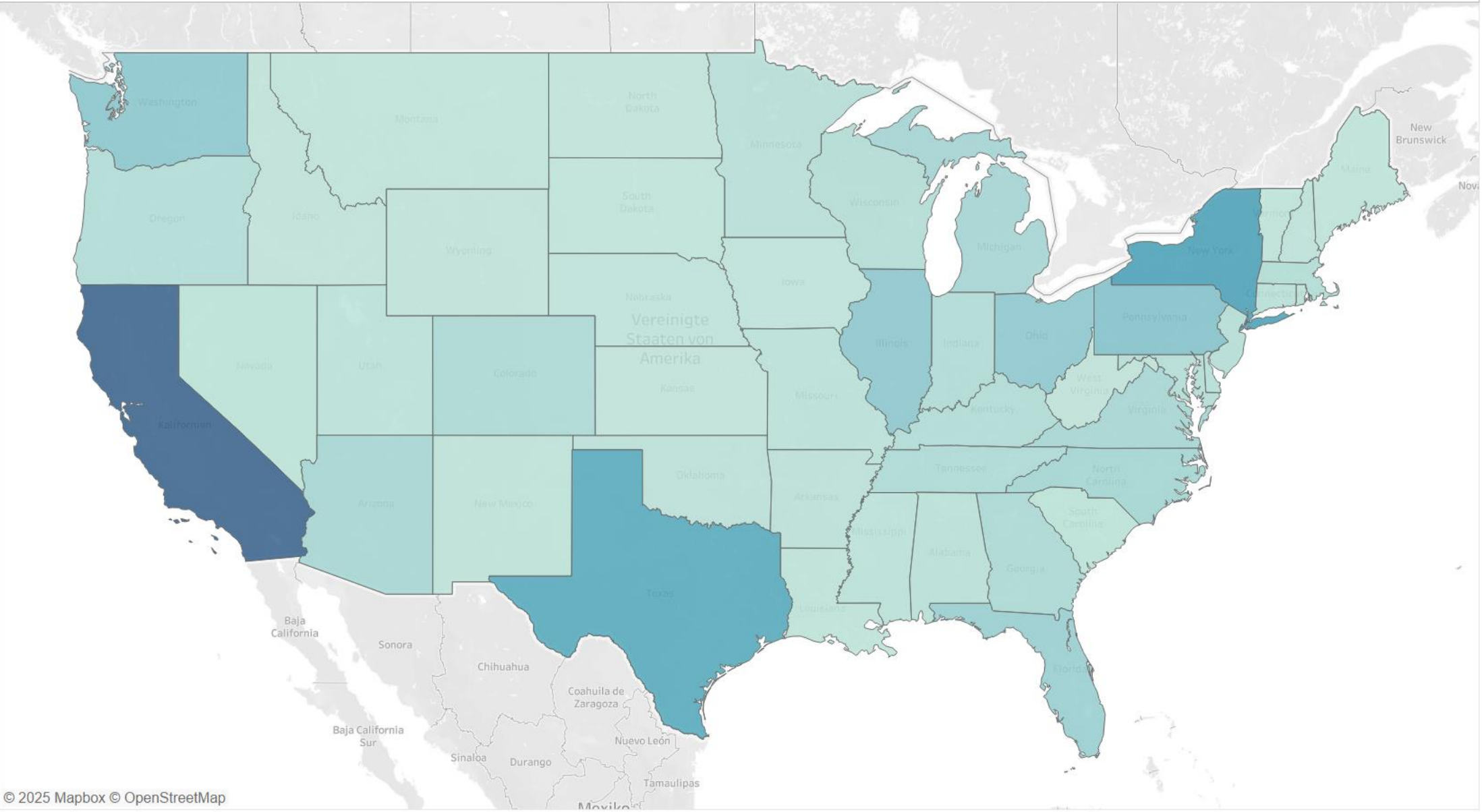
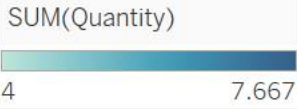
loss avg



std discount

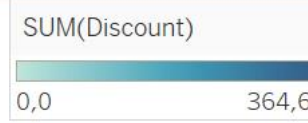
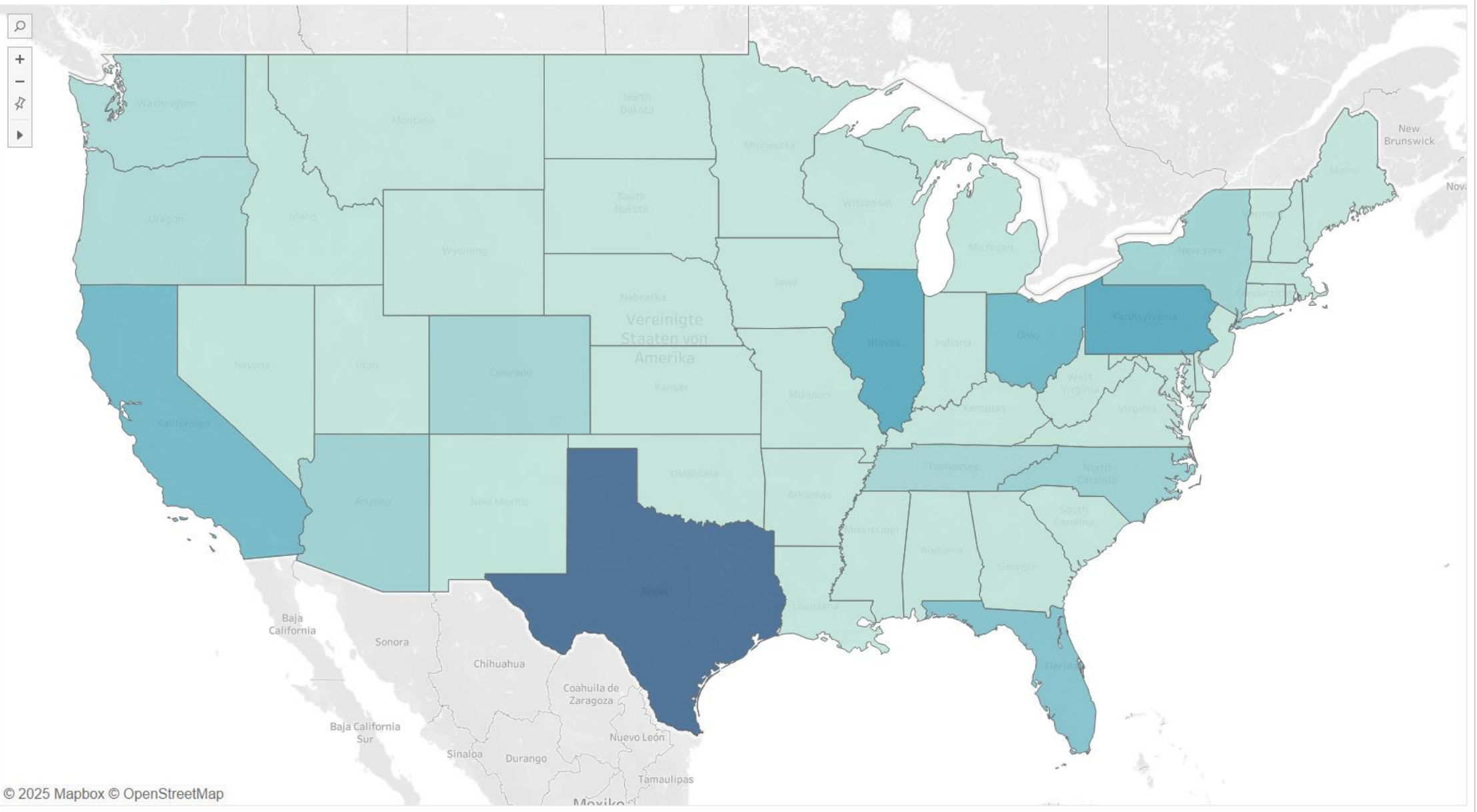


quantity avg

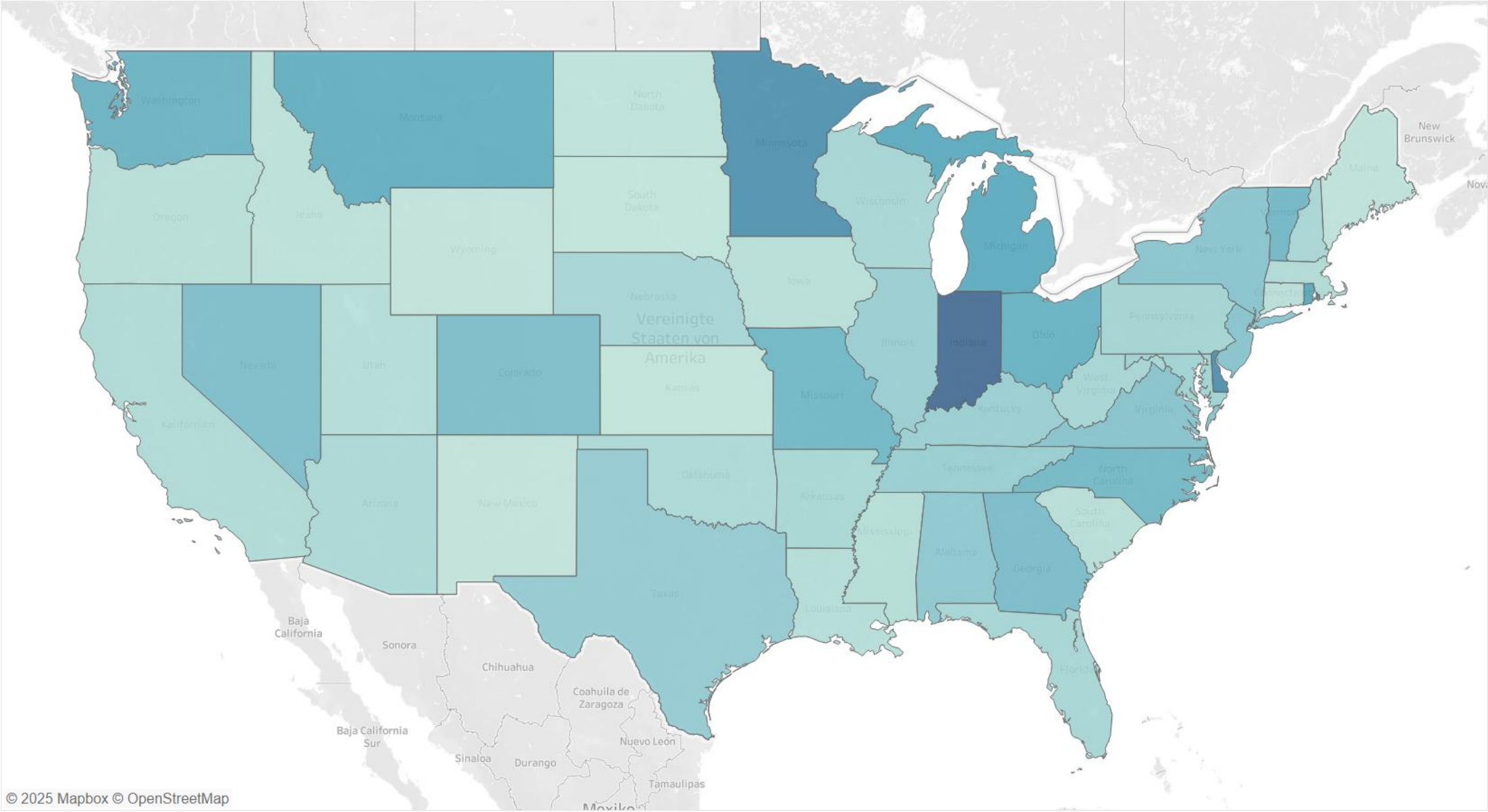
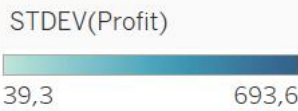




discount avg

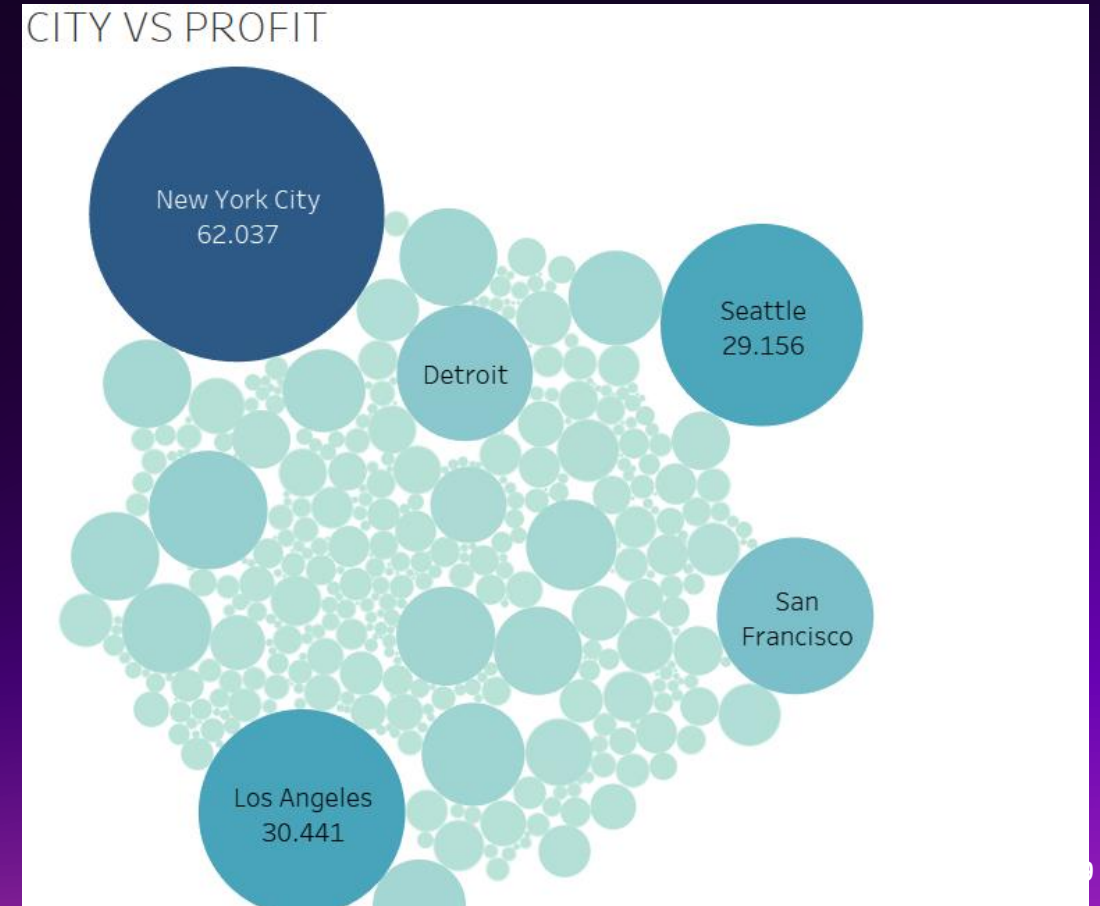
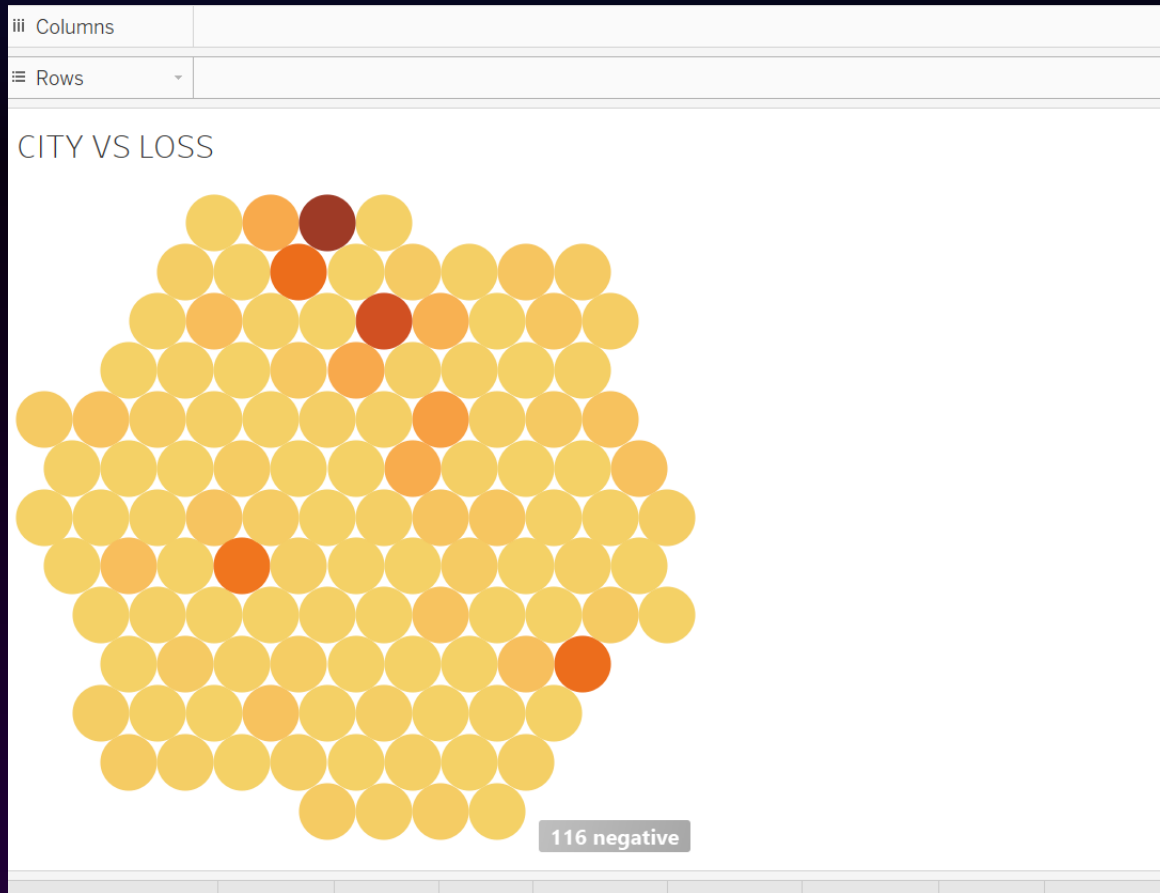


std profit



According to this bubble chart; Dallas, Chicago, San Antonio, Philadelphia and Phoenix are among the worst performing cities.

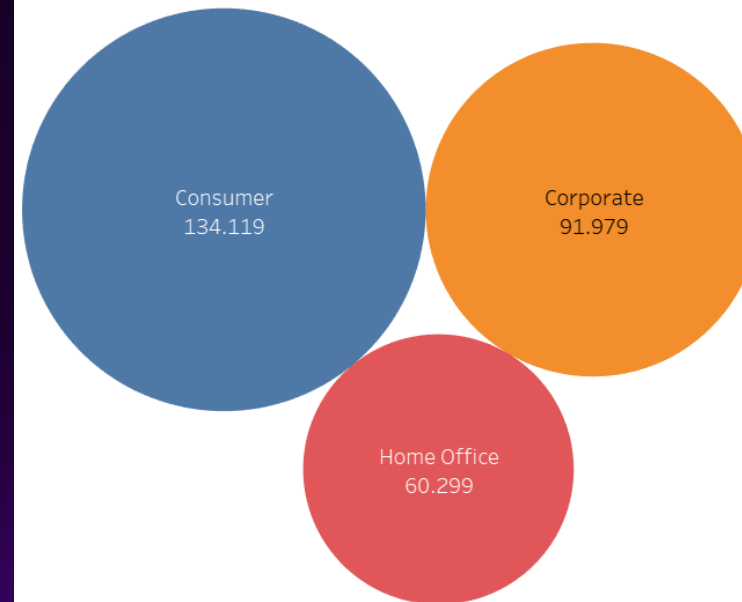
While NYC, Seattle, LA, SF, Detroit perform the best in nation



# SEGMENT ANALYSIS

CONSUMERS >  
CORPORATE > HOME  
OFFICE RELATIONSHIP  
CAN BE SEEN

customer seg.



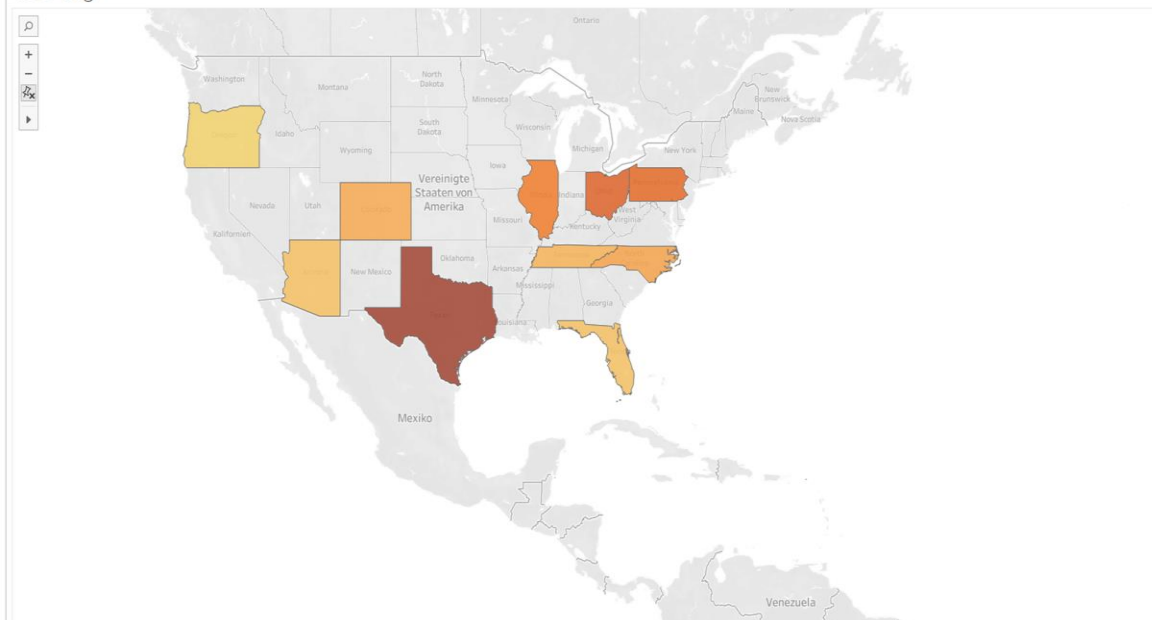
# SALES SUMMARY, DATA PATTERNS, INSIGHTS

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- There is a negative correlation between discounts and profit, the more discount the more loss. We can see that in major states like TX and IL there are also problems in Ohio, N.Carolina and Penn
- The more deviated the results from the average, the more relevant the issue gets. For example in discount rates, the more statistically deviated from the average, the more losses it brings.
- Sales are focused mainly on the west and east coasts. While major cities like Houston, Dallas, Austin and Chicago also have huge amount of sales.
- Copiers seems to have a competitive advantage for the company seen from the quantity profit discount relationships.
- Customers are mostly segmented at the coastal regions, and major cities.



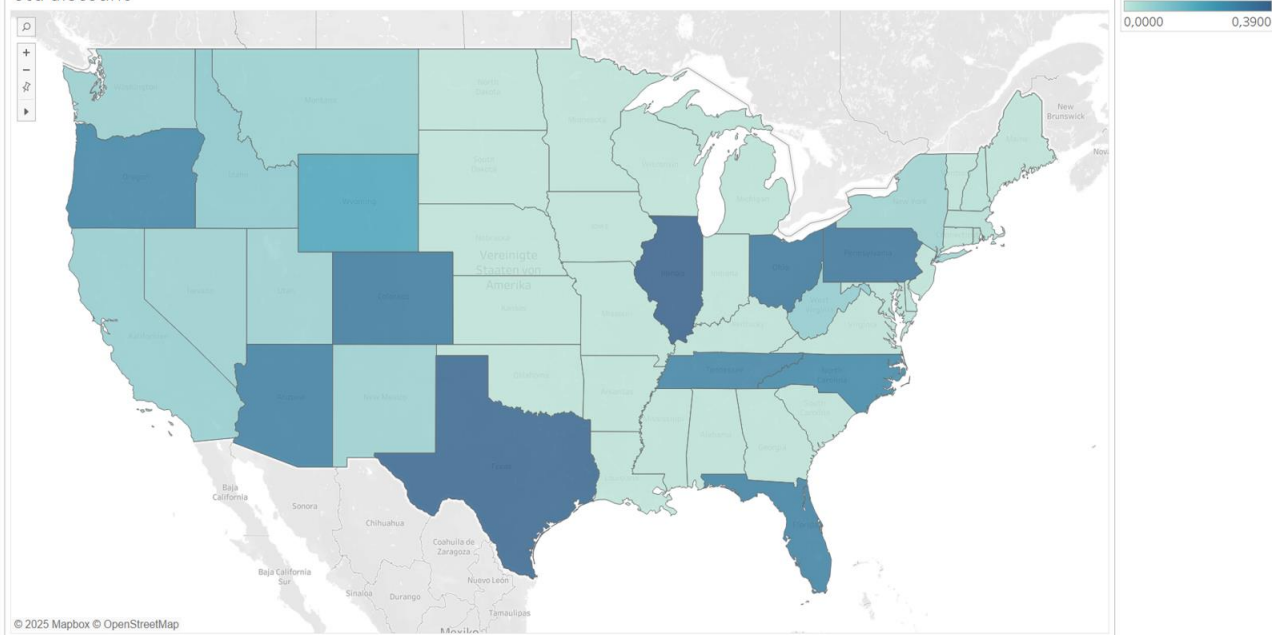
loss avg



SUM(Profit)

-25.729

std discount



AVG(Discount)

0.0000 0.3900

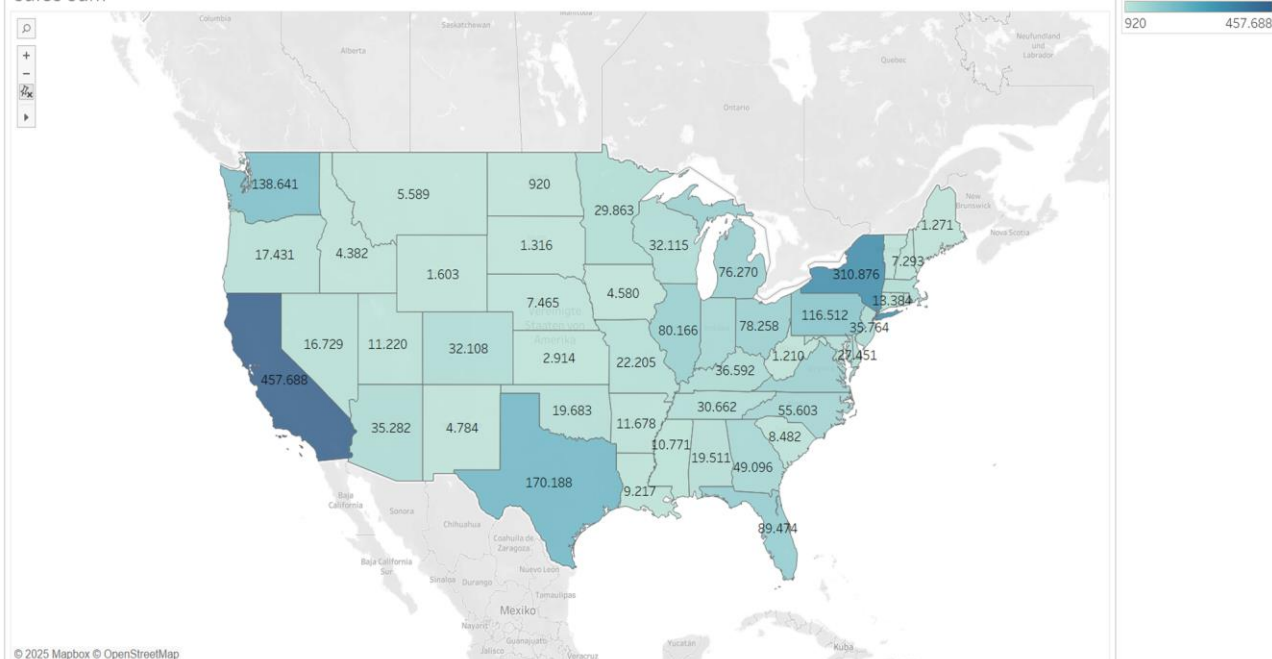
AVG LOSS + STD DISCOUNT +  
SALES SUM:

- THIS DASHBOARD WOULD  
HELP BUSINESSES TO  
ANALYSE THEIR DATA  
REGION WISE AND MAKE  
DATA DRIVEN DECISIONS  
BASED ON THAT.

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Buy Tableau

sales sum



SUM(Sales)

920 457.688

THANK YOU

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