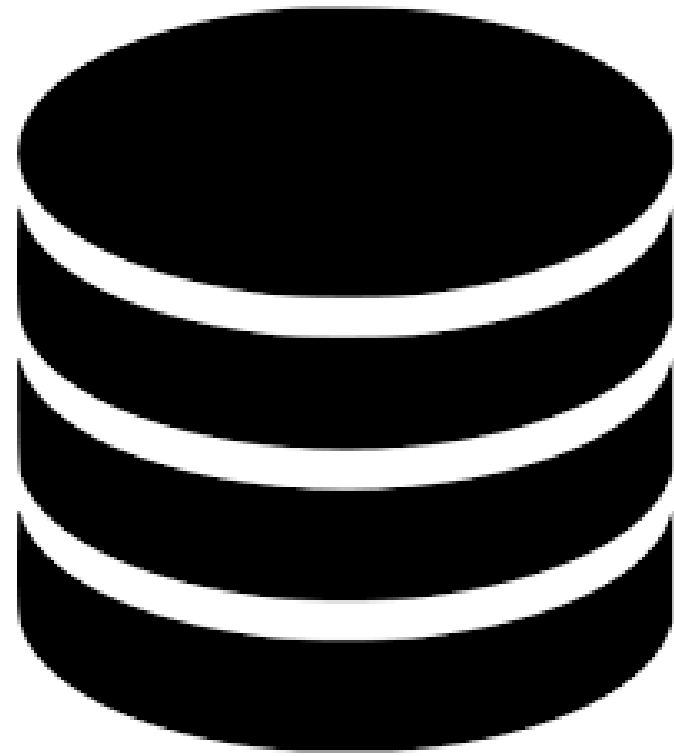# Data-driven Analysis on Olist's E-commerce Business

Objective:

To analyze the orders data of the Brazilian e-commerce company and provide actionable insights

Data:

Used the brazilian ecommerce public data by olist from Kaggle

ORDER_ITEM — The item details of every order placed

ORDERS — The details of the orders placed

CUSTOMER — The details of the customers

PRODUCT — The product details of order item placed

SELLER — The seller details of the order placed

PAYMENT — The payment details of every order placed

GEOLOCATION — The lat long data of the orders placed

Highest and Lowest ordered product categories

Product Categories	
Highest order	**Lowest ordered**
Bed, Table and Bath products	Kitchen
Beauty and Health care	Gaming PCs
Sport	Children clothing
Computer accessories	Insurance and Services

Average order value and delivery price

Avg. order value

R$ 125.3

Avg. delivery price

R$ 20.6

Avg. delivery price is approximately one-sixth of the avg. order value

Orders distrn. based on value and volume

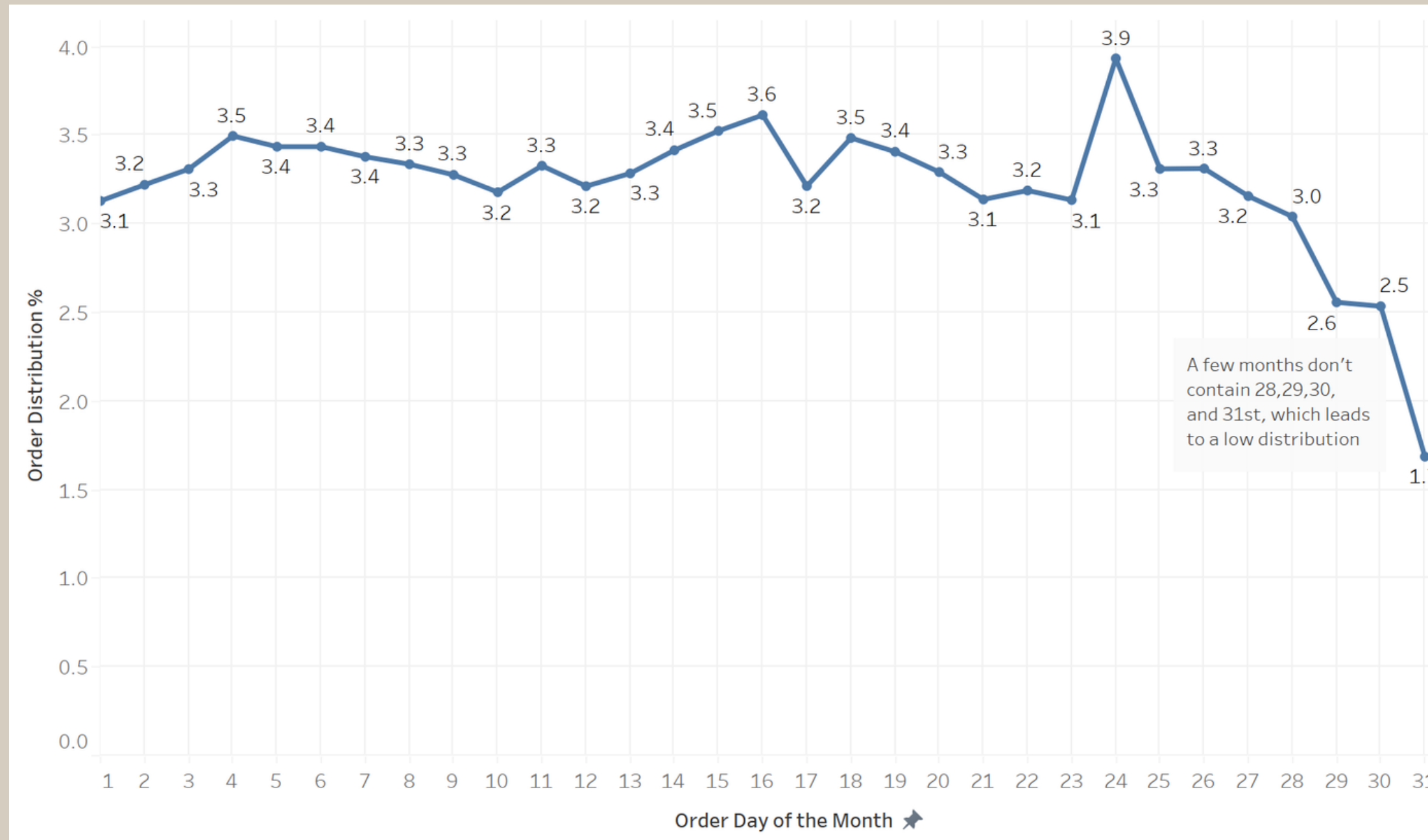| Value and Volume bands	# of Products	% Distribution
High value and High volume	30307	43.4
Low value and High volume	17243	16.6
Low value and Low volume	30307	23.4
High value and Low volume	17243	16.6

The distribution of High value and Low volume is quite less as compared to the counterparts

% of Inefficient sellers

6.8%

6.8% of the orders are dispatched late by the sellers but received on time by the customers

Order distribution across the month

Order Distribution %

A few months don't contain 28,29,30, and 31st, which leads to a low distribution
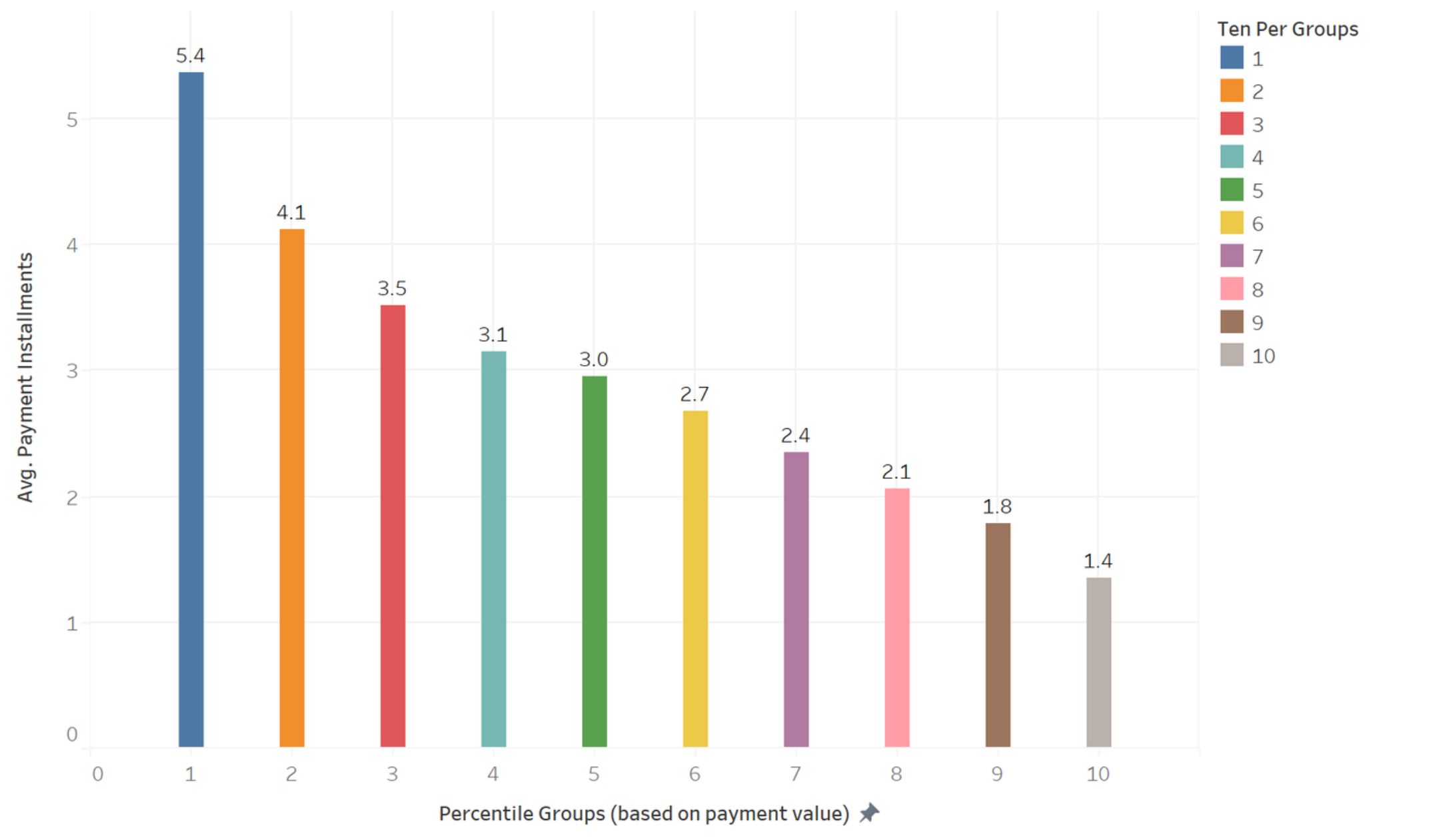
Order Day of the Month 📌

 The number of orders are peak on 16th and 24th dates of the month, while 1st, 21st, 23rd and 28th record low orders.

Order distribution across the week
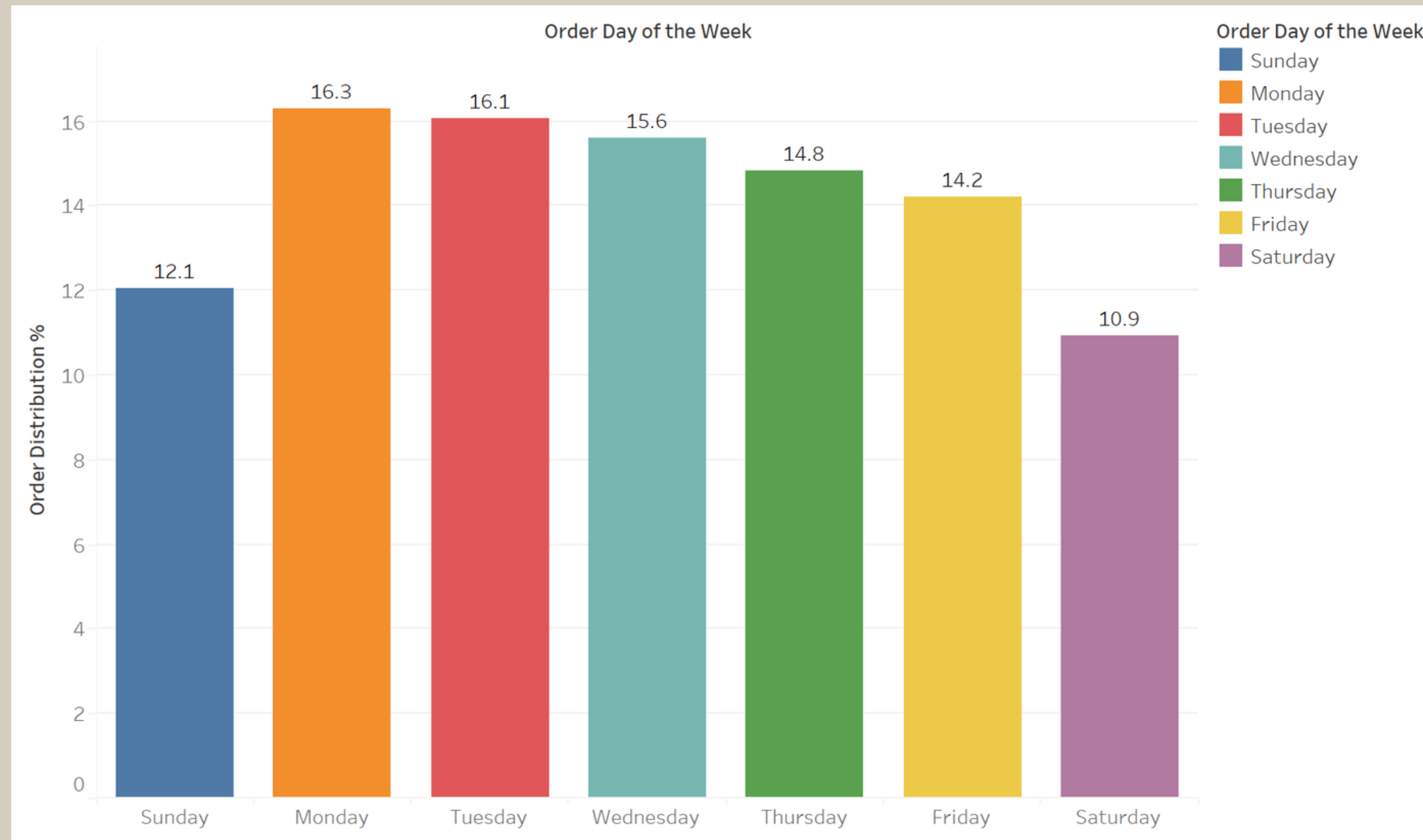
Mondays and Tuesdays have higher % of orders, while Saturdays and Sundays have a significantly lower % of orders

Avg. payment installments distrn. based on the order value

Deciles	Min payment value (R$)	Max payment value (R$)
1	307	13664
2	203	307
3	159	203
4	128	159
5	105	128
6	85	105
7	69	85
8	54	69
9	40	54
10	10	40

The average payment installments decreases as the order value increases

Order distribution across the states
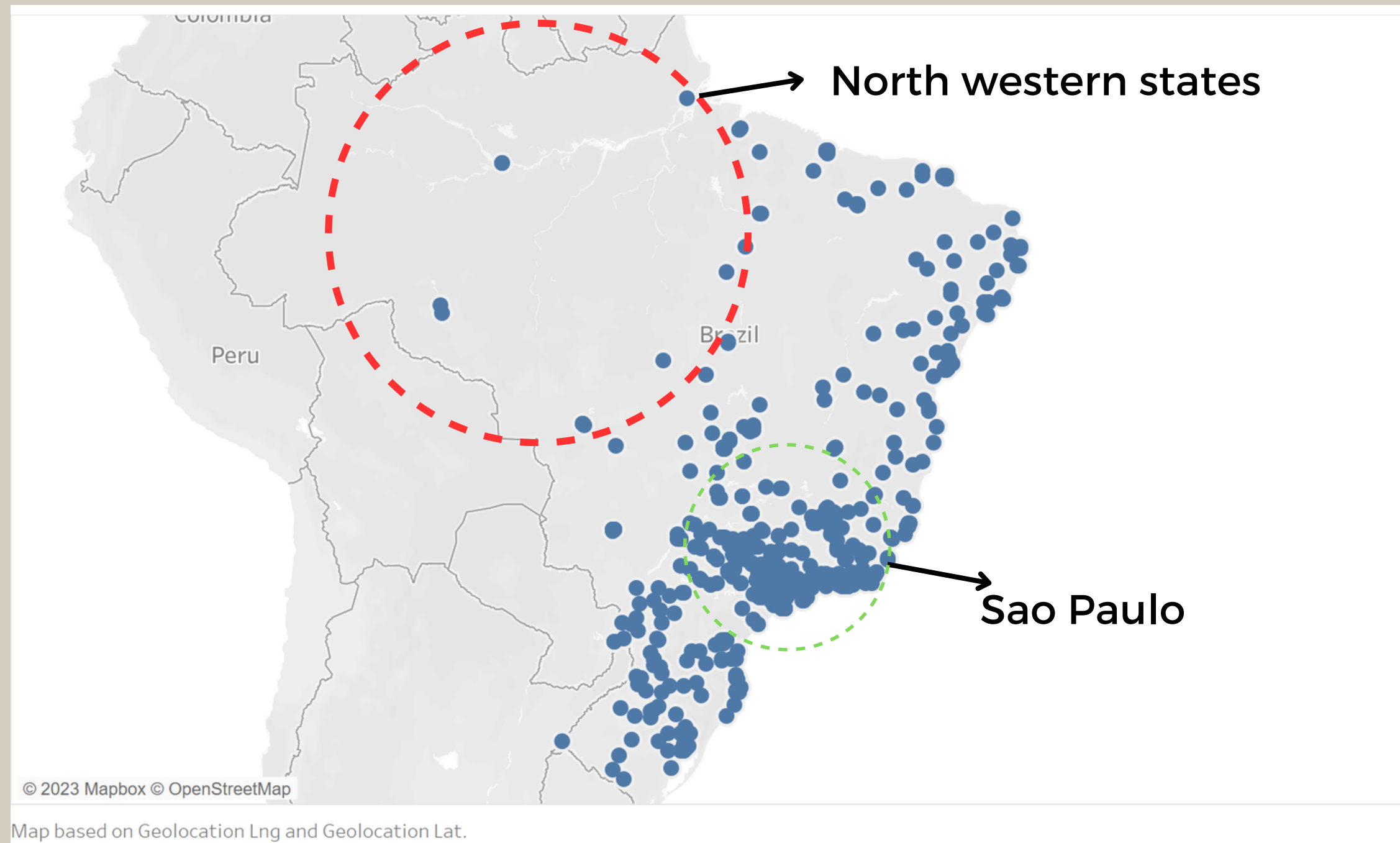
Sao Paulo state has the highest frequency of orders, while most of the north western regions have no orders

Seller/Customer Ratio

Seller/Customer ratio for state X = $\dfrac{\text{\# of orders delivered by the sellers from state X}}{\text{\# of orders delivered to customers in state X}}$

Para

Sao paulo

Orders with high vouchers

124

The number of orders with more than 5 vouchers are quite less

% orders using credit card

77%

The % of orders using credit cards for partial/complete payment are quite high

Recommendations

- Increase the product variety to drive sales in product categories like kitchen, gaming PCs, Children clothing, Insurance, and services.

- Optimize the delivery costs to reduce the Order value/Delivery price ratio

- Lift sales in high-value and low-volume products

- Test special offers during the weekends to increase order rates

- Run marketing campaigns in the northwest regions to acquire more orders

- Onboard sellers from regions outside Sao paulo to maintain a balanced seller/customer ratio, thus reducing the delivery costs

- Do not run campaigns based on vouchers

- Run a credit card marketing campaign