Olist

Overview

Olist is an ecommerce company from Brazil. It provides an online platform for business-to-customer.

While the transaction to customer is done online. Olist has a sales team where they look for a potential seller to sell in their platform.

Total Seller
3,090

Total Customer
96,096

Total Order
96,561

State Served
29

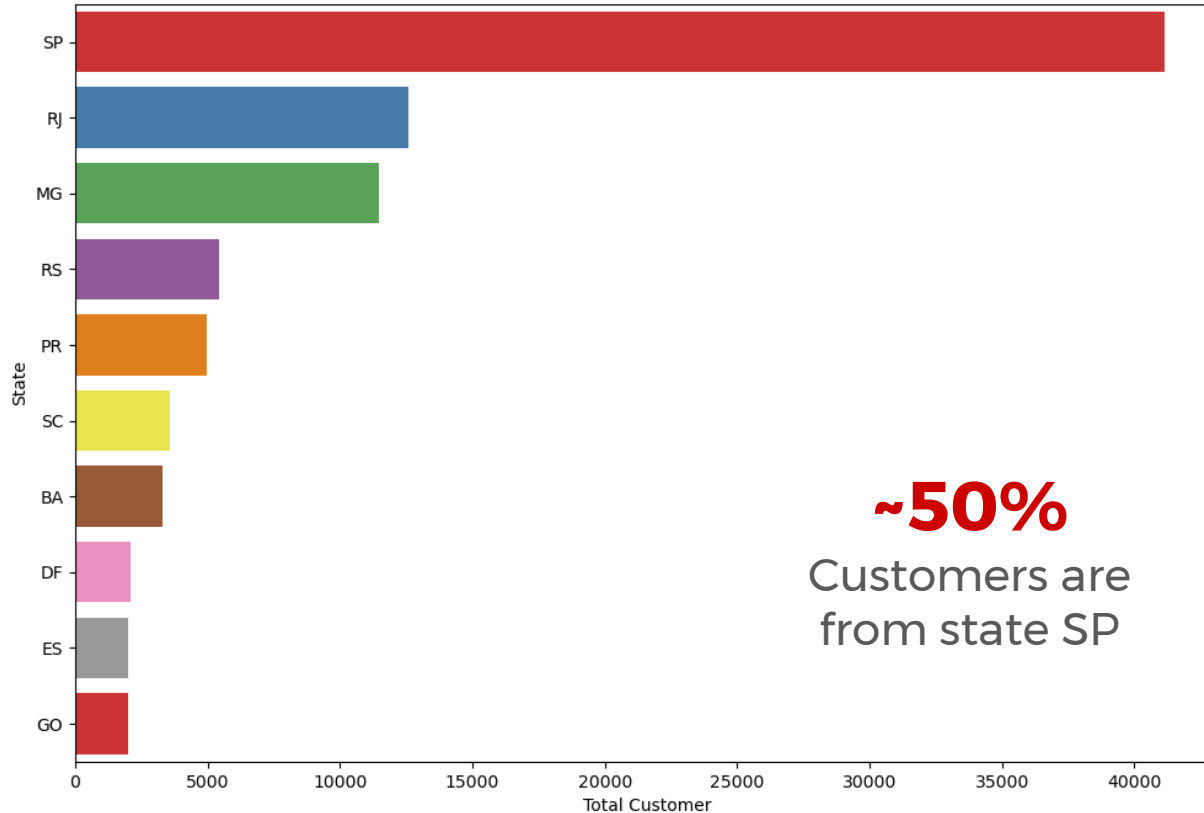**12 Days**
Avg Delivery Time

72
Total Product Category

Data Recorded From
Sept 2016

Objective

- Customer segmentation.
- Predicting future sales & total order (given that all the features, e.g: sellers' delivery duration stay the same).

Characteristic of Customer

~50%

Customers are
from state SP

Customer Segmentation in State SP

Cluster Delivered

- Customers with all order delivered.
- Average delivery time is 139 days.

Cluster Canceled

- Spent more.
- Customers with cancelled order.
- Average of delivery time 46 days.

The total order is the same for customer, but **2.06% customers** are more likely to have a cancelled order and give bad ratings.

For customer in state SP, the concern is more to the seller/buyer, due to the delivery time is smaller (which means the order got cancelled before it's delivered)..

Customer Segmentation in State non-SP

Cluster Canceled

- Customers with cancelled order.
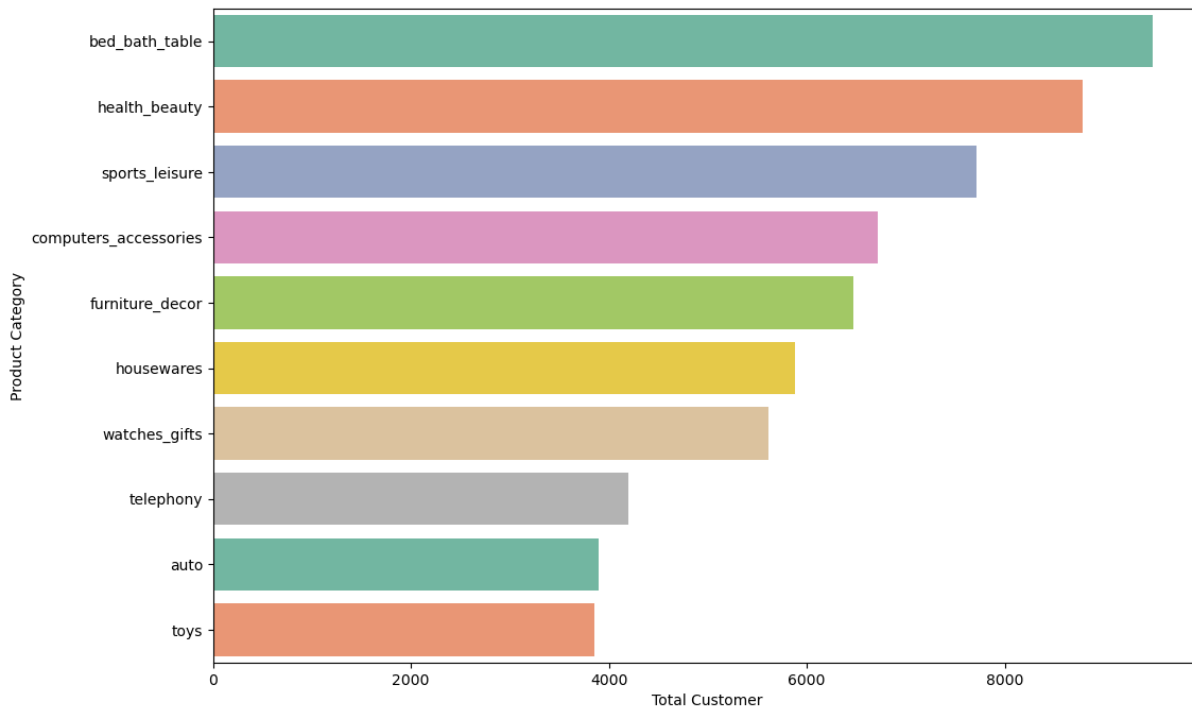- The delivery time reach 1800 days on average.

Cluster Delivered

- Customers with all order delivered.
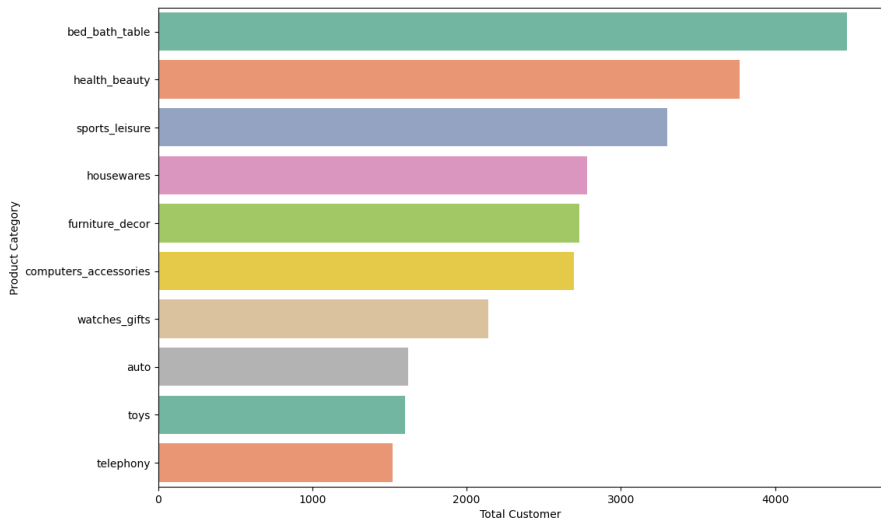- Average of delivery time 300 days.

The total order is the same for customer, but **2.8% customers** are more likely to cancel their order and give bad ratings.

For customer in state non-SP, the concern is the delivery time.

Product

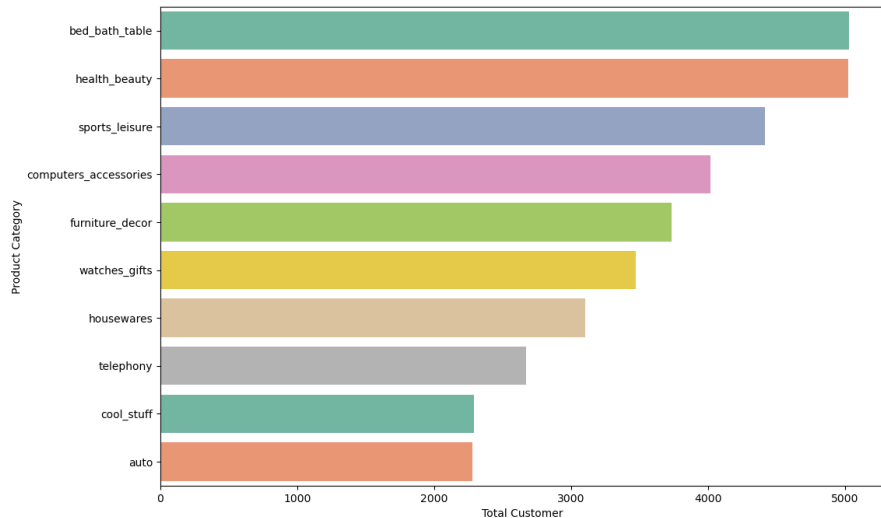**Top-ordered** product by its total order is **bed_bath_table**.

Total Order by Product in State SP

There are **50% orders** of **bed_bath_table** is from state SP
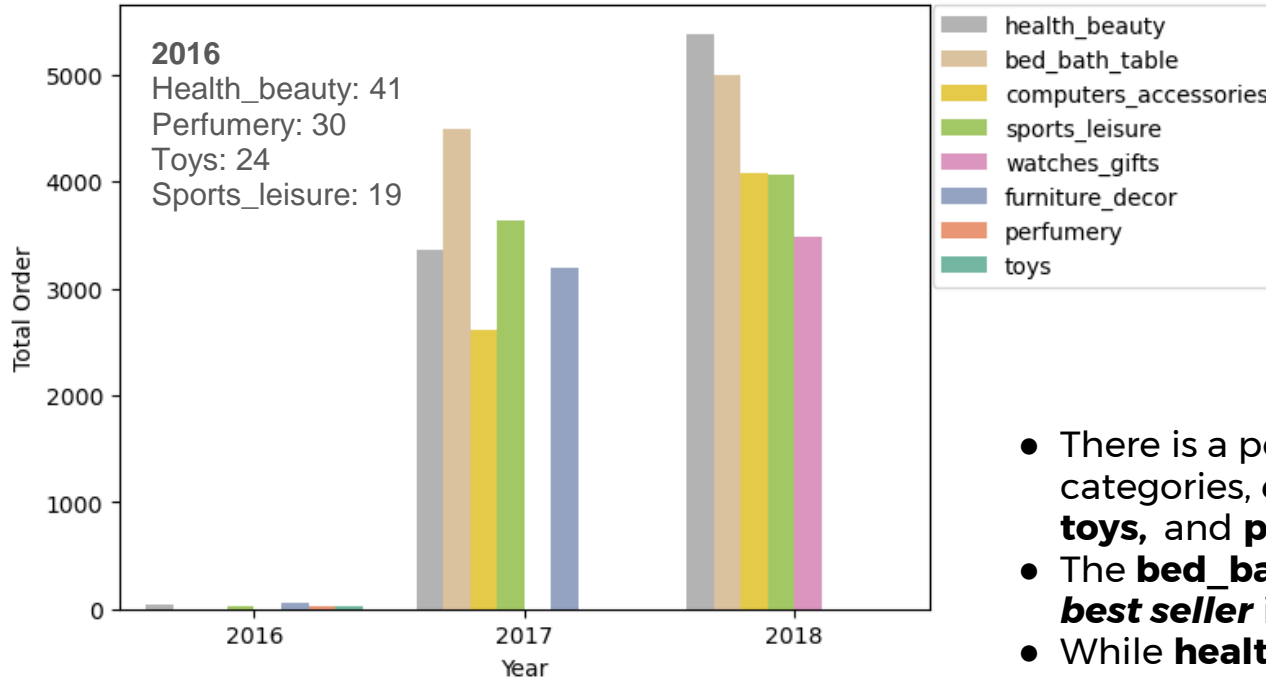
In state non-SP, there are more than **50% orders** forf **bed_bath_table** and **health_beauty**.

# Total Order by Product in State non-SP

Product Trend by Year

2016
Health_beauty: 41
Perfumery: 30
Toys: 24
Sports_leisure: 19

Legend:
- health_beauty
- bed_bath_table
- computers_accessories
- sports_leisure
- watches_gifts
- furniture_decor
- perfumery
- toys

- There is a positive trend from all categories, *except* for **furniture_decor, toys,** and **perfumery**.
- The **bed_bath_table** started to be a *best seller* in 2017.
- While **health_beauty** is a *best-seller* in 2016 & 2018.

Characteristic of Seller

~**50%**
Sellers are from state SP
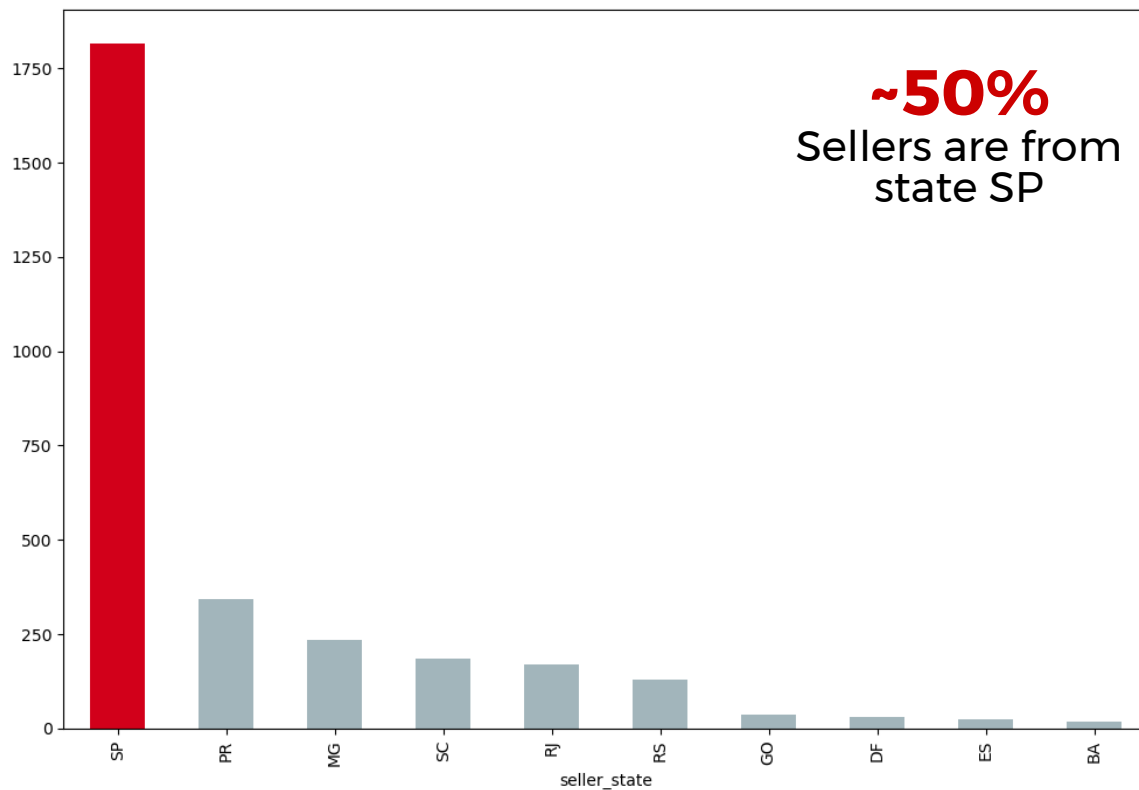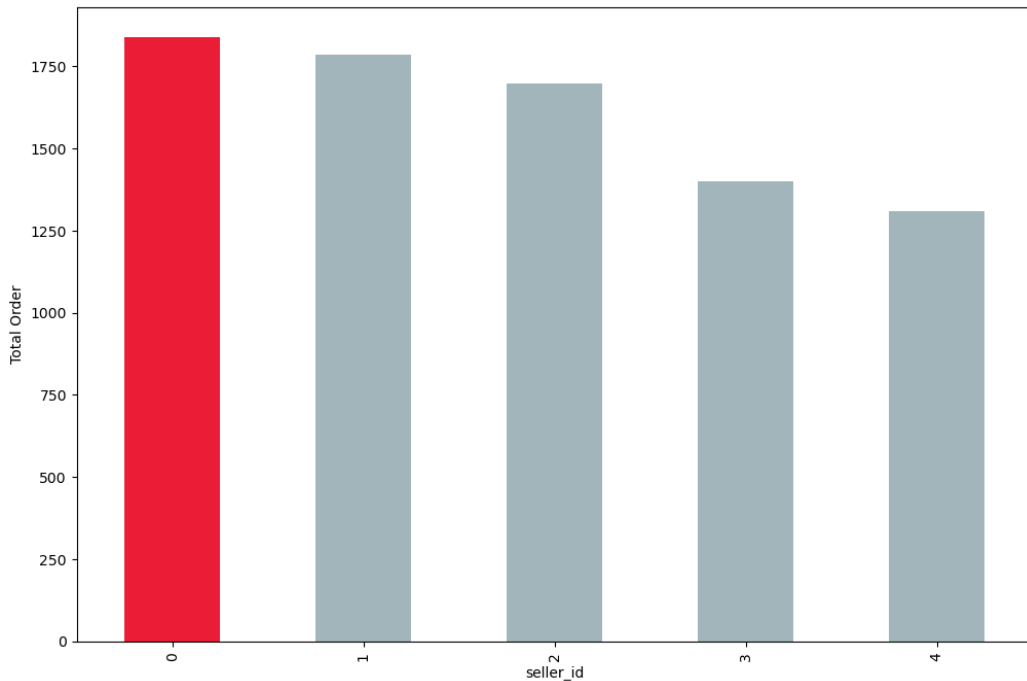
Total Seller by Product Category
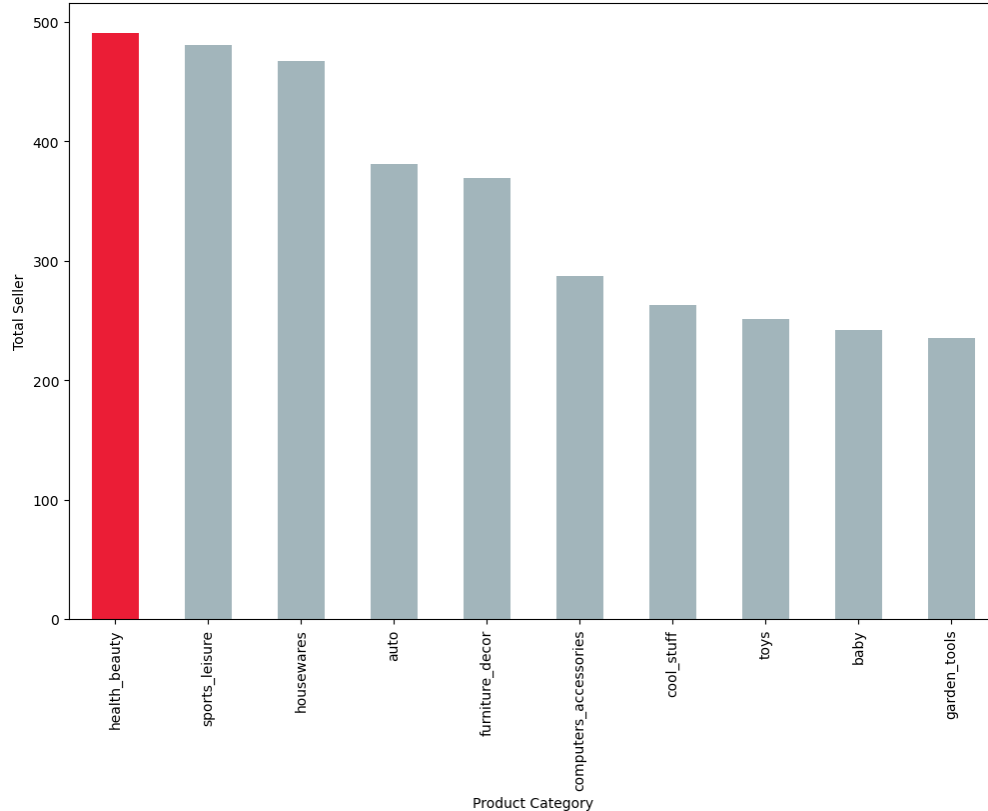
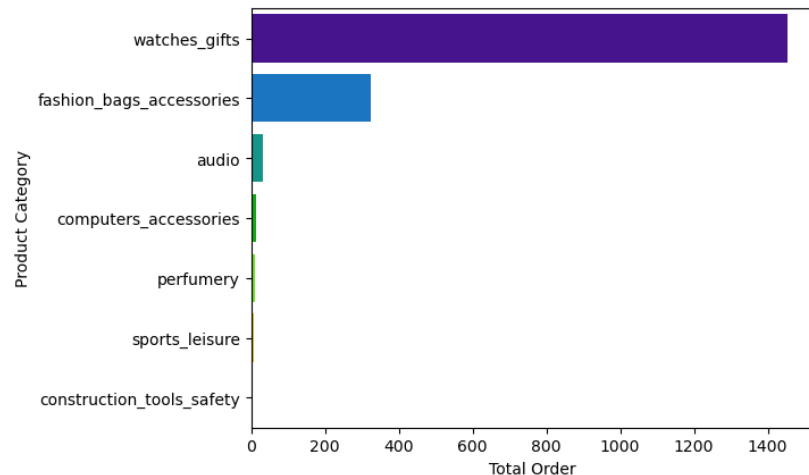There are **15.85% sellers** that are selling **health_beauty product**.

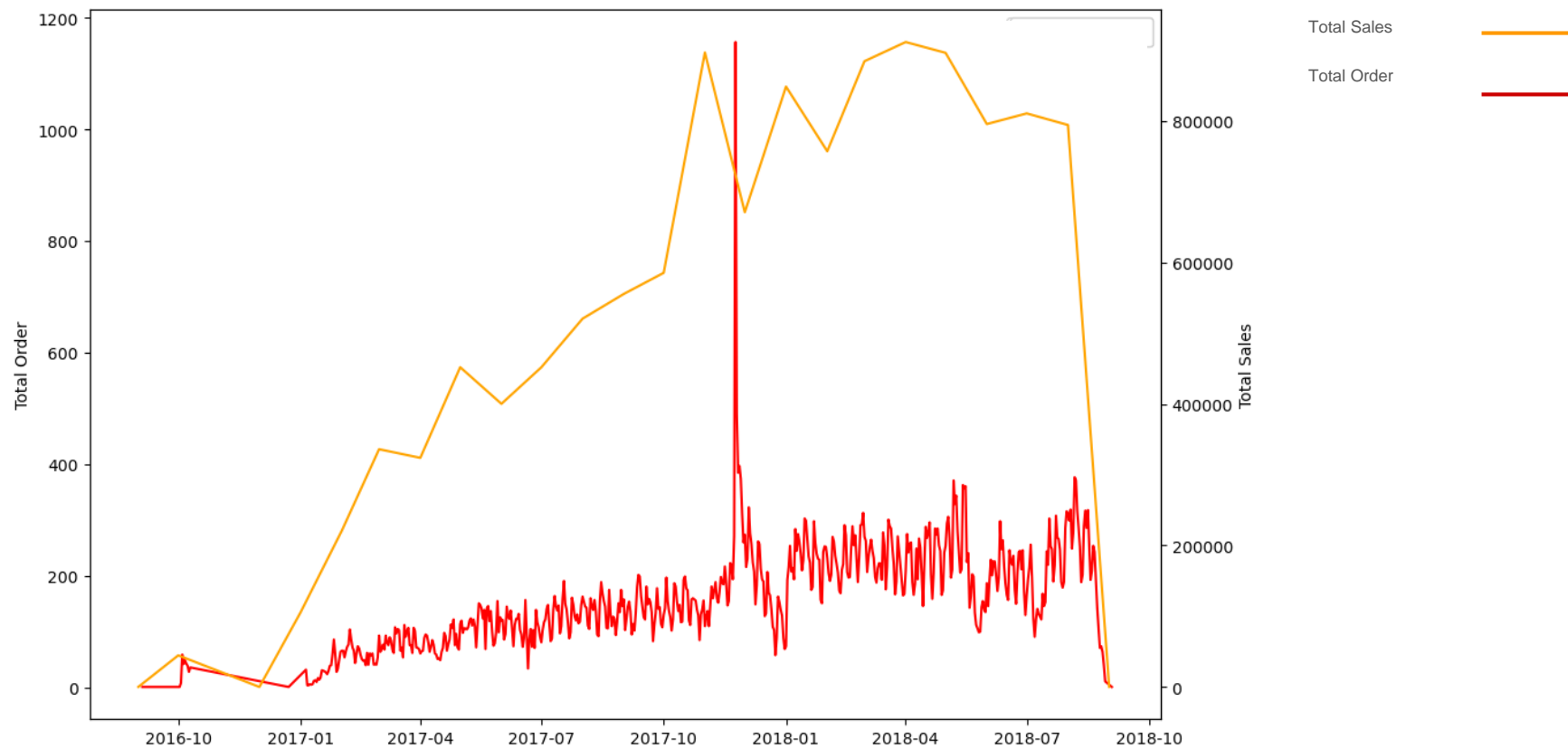While bed_bath_table has the highest total order, *but* the sellers are not on top 10.

Total Order by Seller

The top-seller has **finished 1,838 orders** with average of **9 days delivery time**.
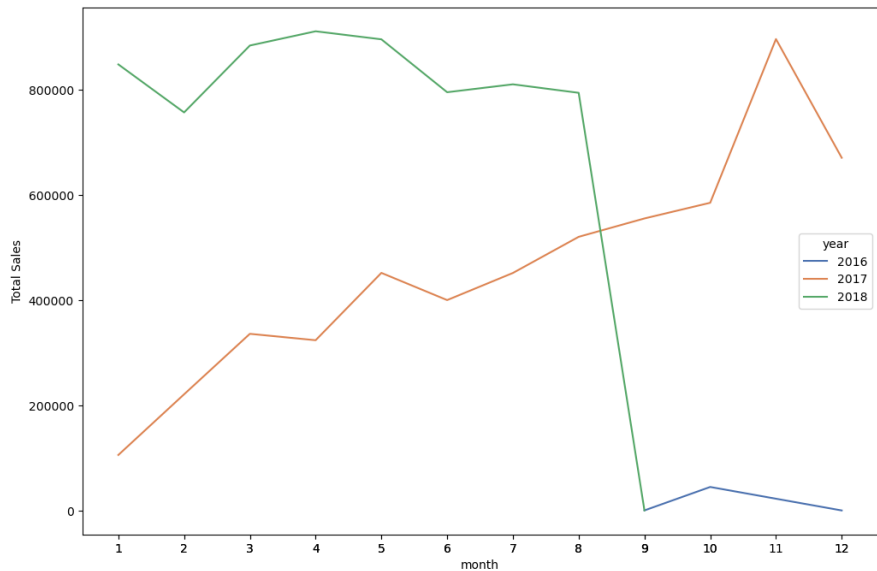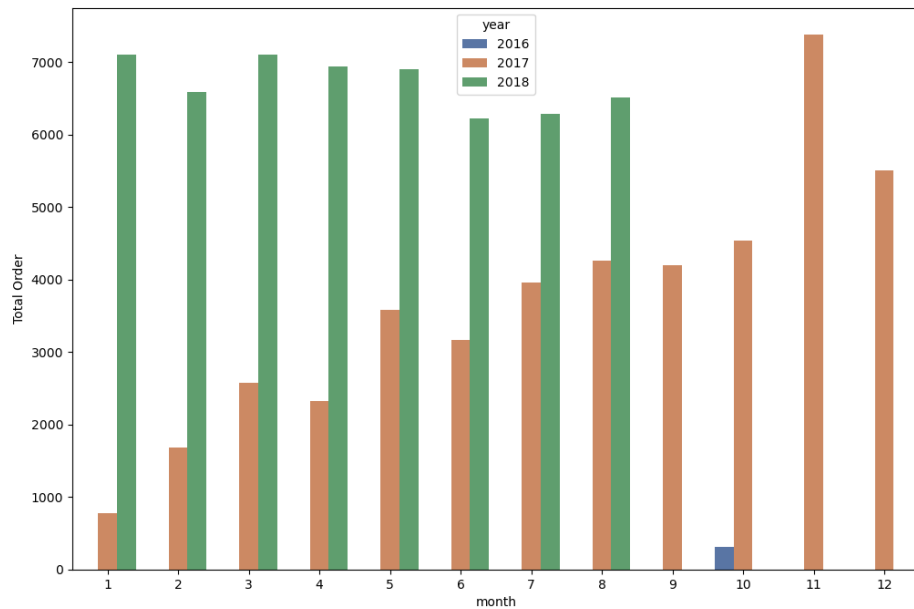
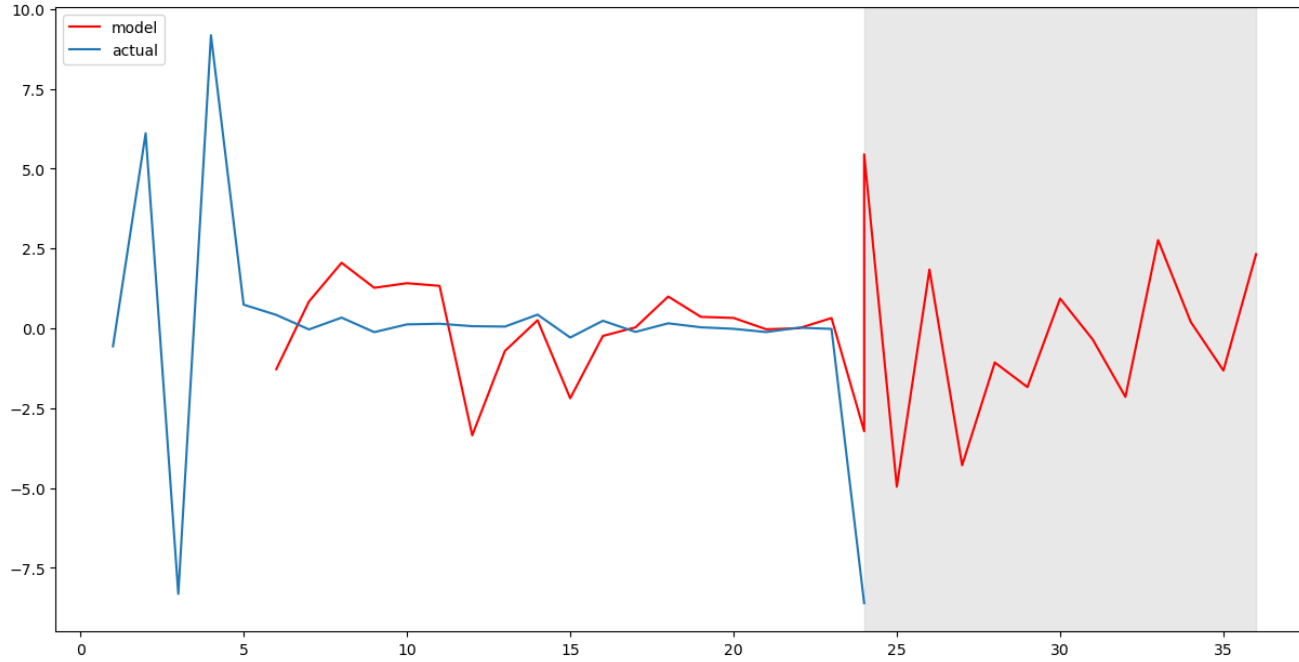The **best-selling product** is watches_gifts.

Order & Sales

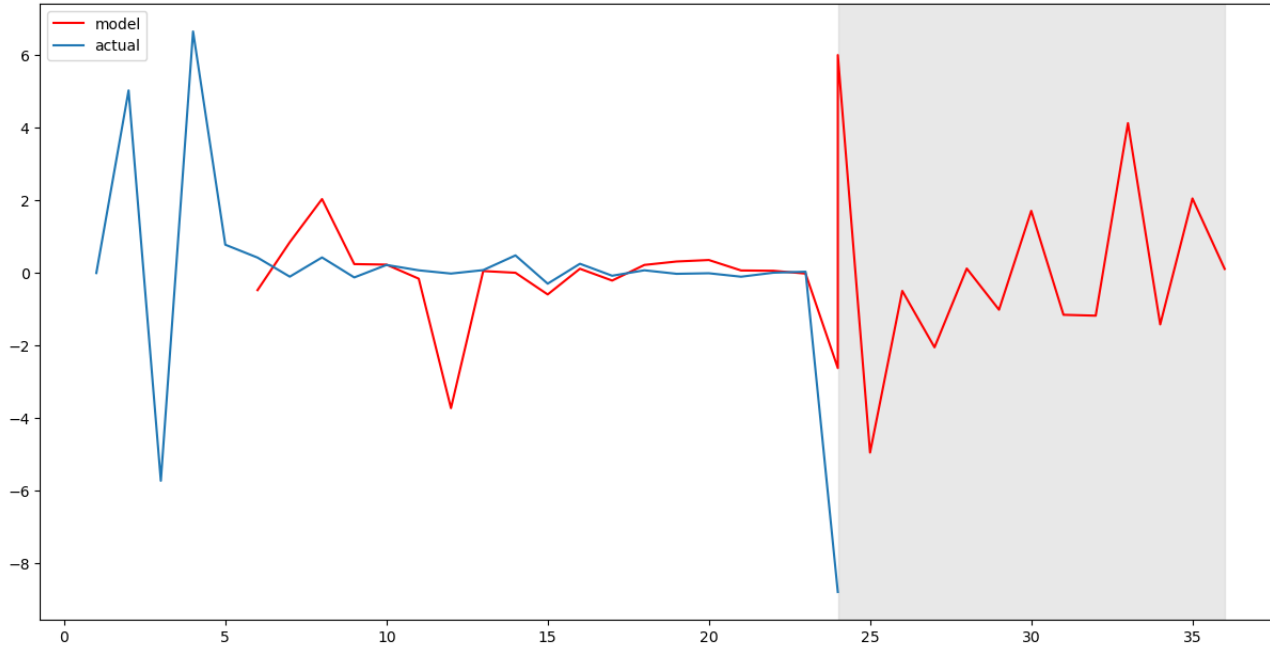**Total Sales by Month**

Total Order by Month

Monthly Sales Prediction

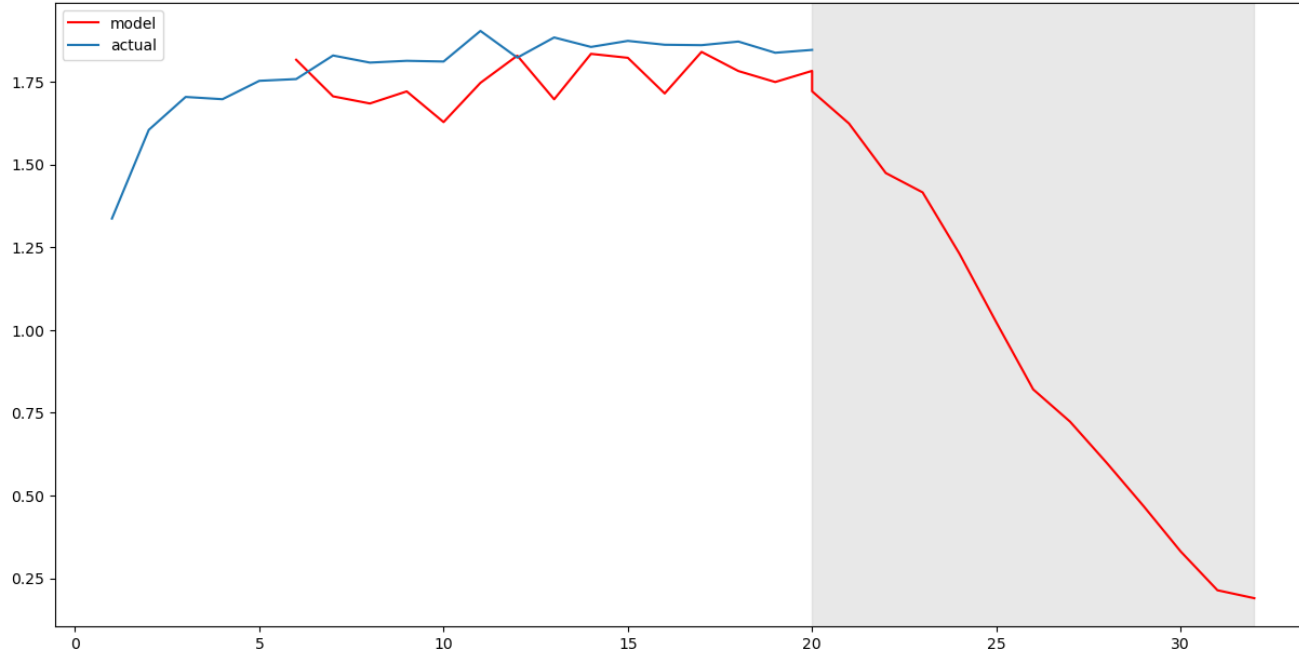There's around **0.89 points difference** between prediction and the actual forecast value of monthly sales.

Monthly Order Prediction

There's around **0.69 points difference** between prediction and the actual forecast value of monthly sales.

Prediction of Monthly Order for Bed_Bath_Table

There is a **difference around 4.9% (0.09 points)** between the prediction and the actual forecasted values.

The order is most likely to be decreased to almost 0 in 12 months.

Business Recommendations

- Olist could assist seller in giving a shorter delivery time, e.g: building drop-point outside state SP and also near seller.
- Regarding the cancelled order, Olist could have reward system for those who finished order (both sellers & customers).
- Given that Olist has 72 product categories, but the top-4 best sellers have not changed in 2 years. Olist could focus on product in top-4 and specialized in health, beauty, and hobbies.
- Given that the order for bed_bath_table will be decreased in a year, Olist could cooperate with sellers to give promotion.

Technical Recommendation

Even though the MAE score is tolerable, the timeseries models for total order & sales both have **>50% MAPE** and a **minus R2-score** which means the models have bad performance.

It is better to use other models or trained with different timeframe or add more data.