# Brazilian E-Commerce Analysis

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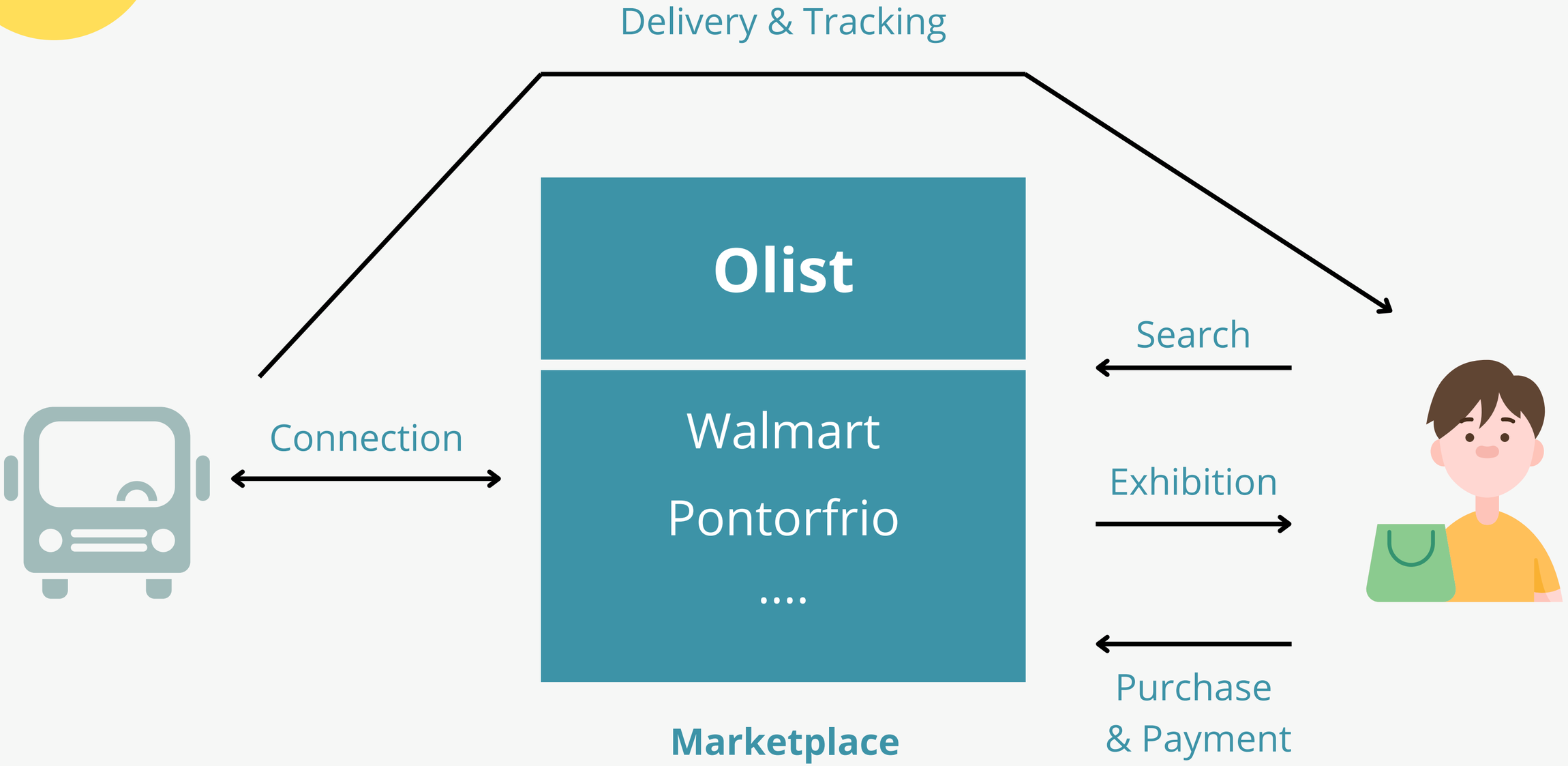
# Main Points

1. Overall
2. Data Exploring
3. Metrics for Analysis
4. Additional Information

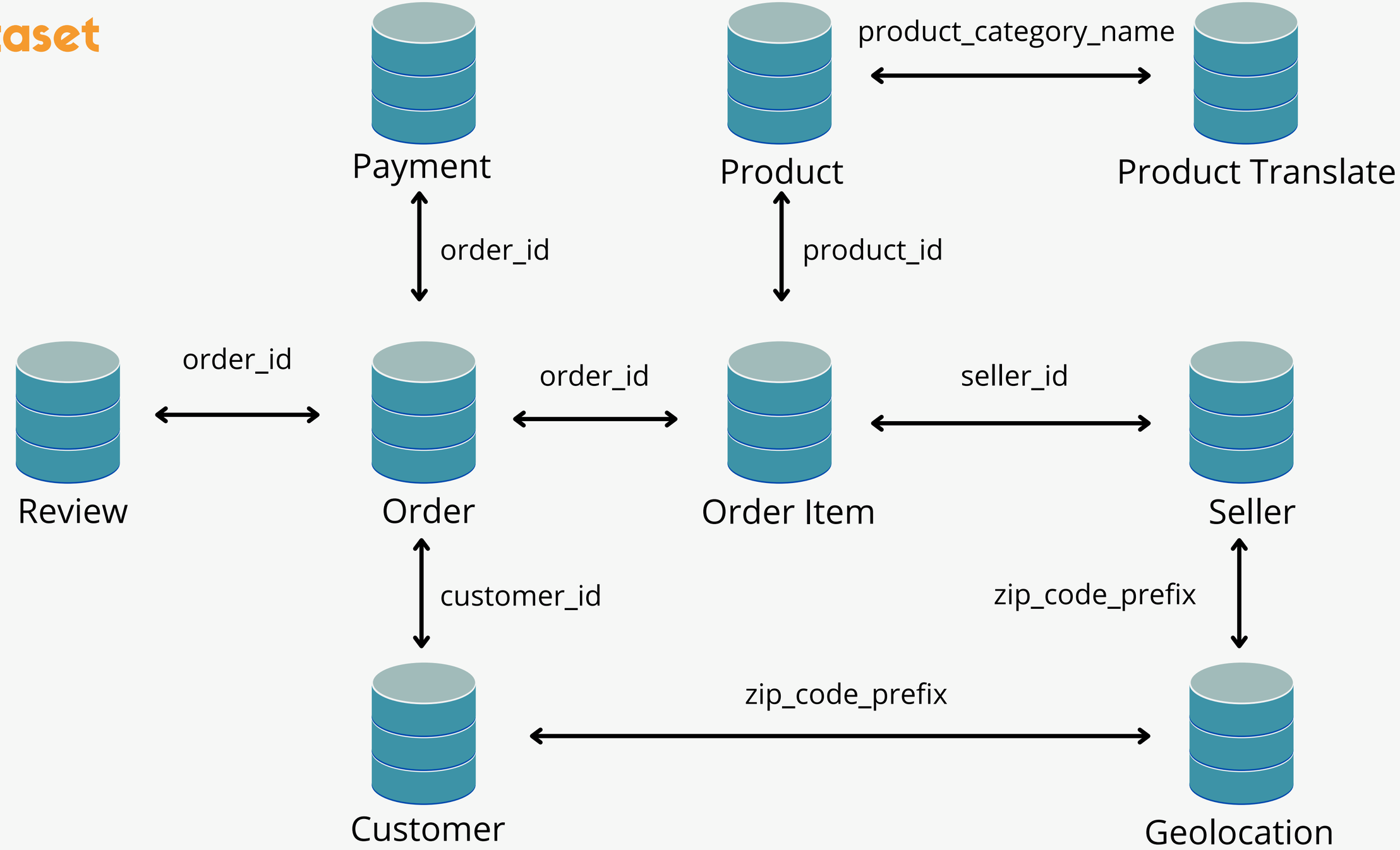
# 1. Overall

- Business Model
- Dataset

# Business Model



# Dataset


Payment
Product
product_category_name
Product Translate
order_id
product_id
Review
order_id
Order
order_id
Order Item
seller_id
Seller
customer_id
zip_code_prefix
Customer
zip_code_prefix
Geolocation

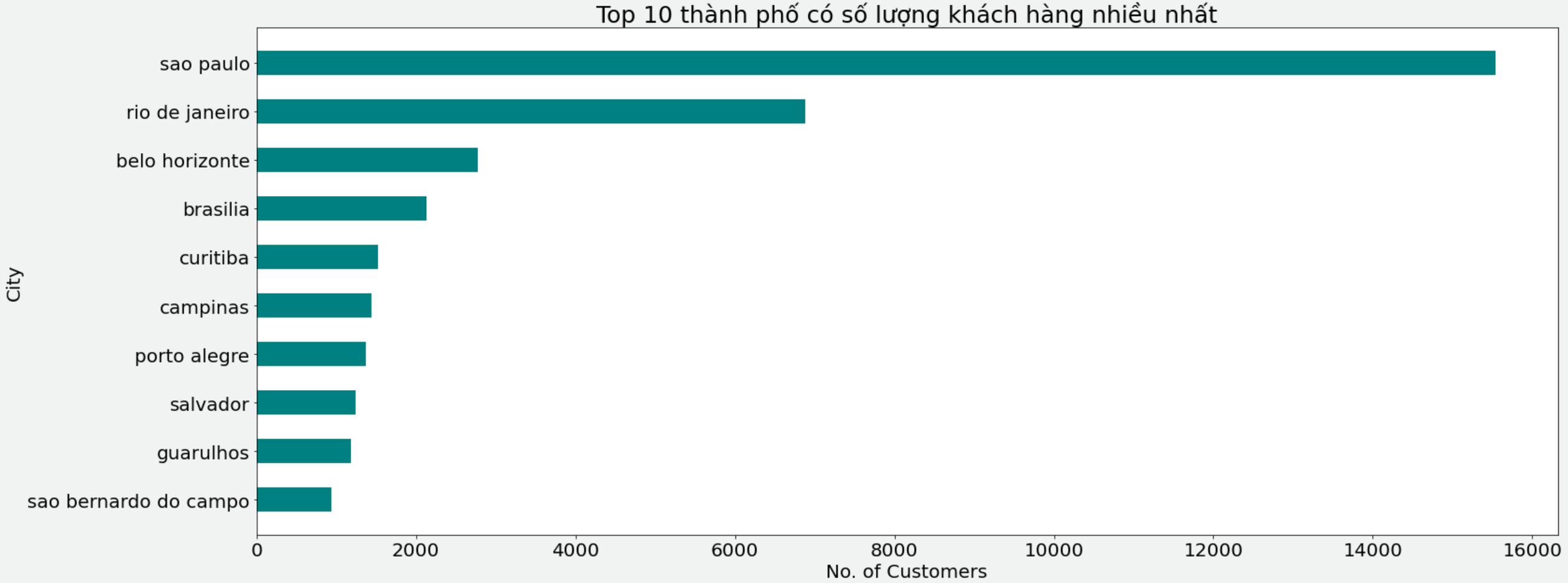
# 2. Data Exploring

01 Customers

02 Sellers

03 Orders

04 Payment

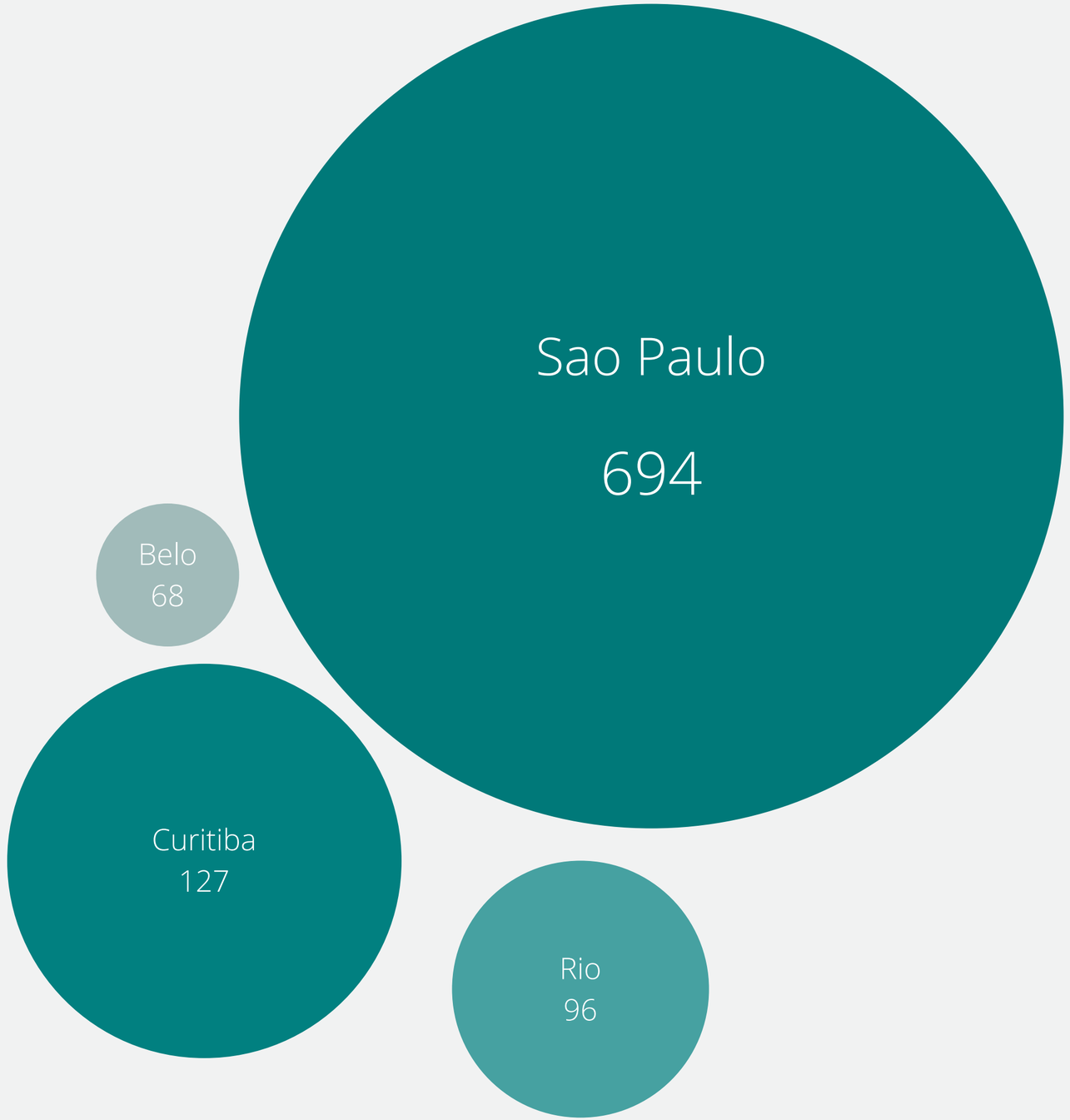



**Sao Paulo (15540), Rio de Janeiro (6882), and Belo Horizonte (2773) -** Top 3 the biggest number of customers.

Customer

# Seller

**Sao Paulo, Curitiba, Rio De Janeiro, Belo Horizonte** - Top 4 the biggest number of sellers

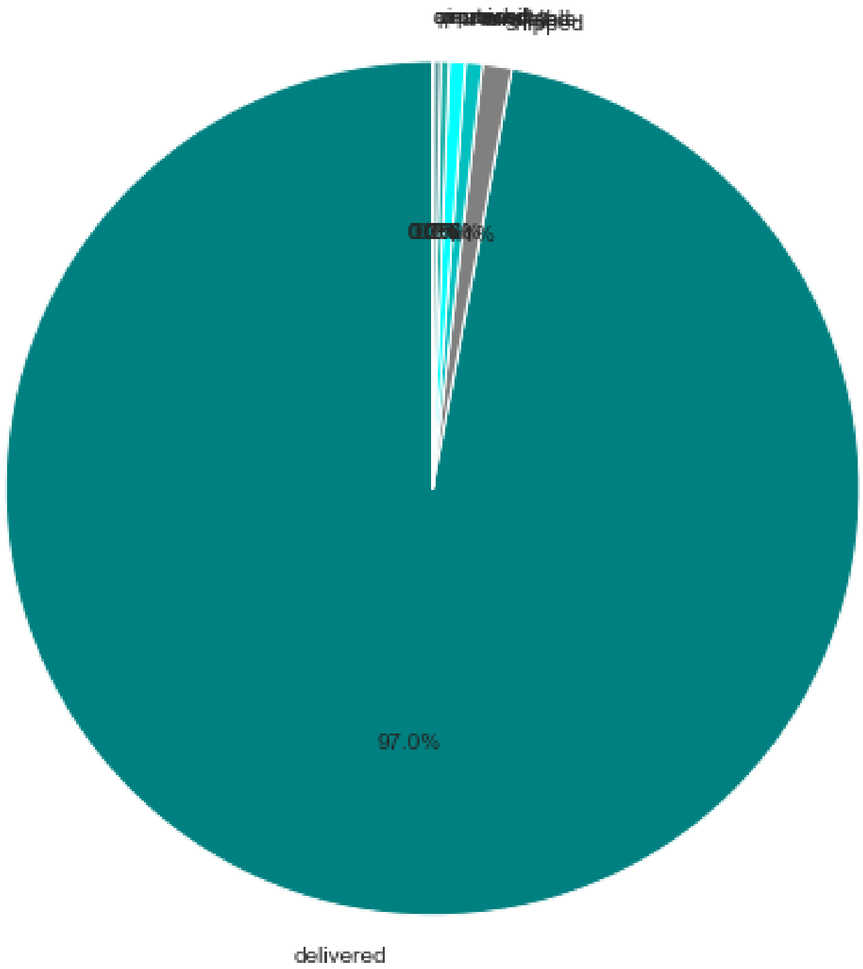


# Order

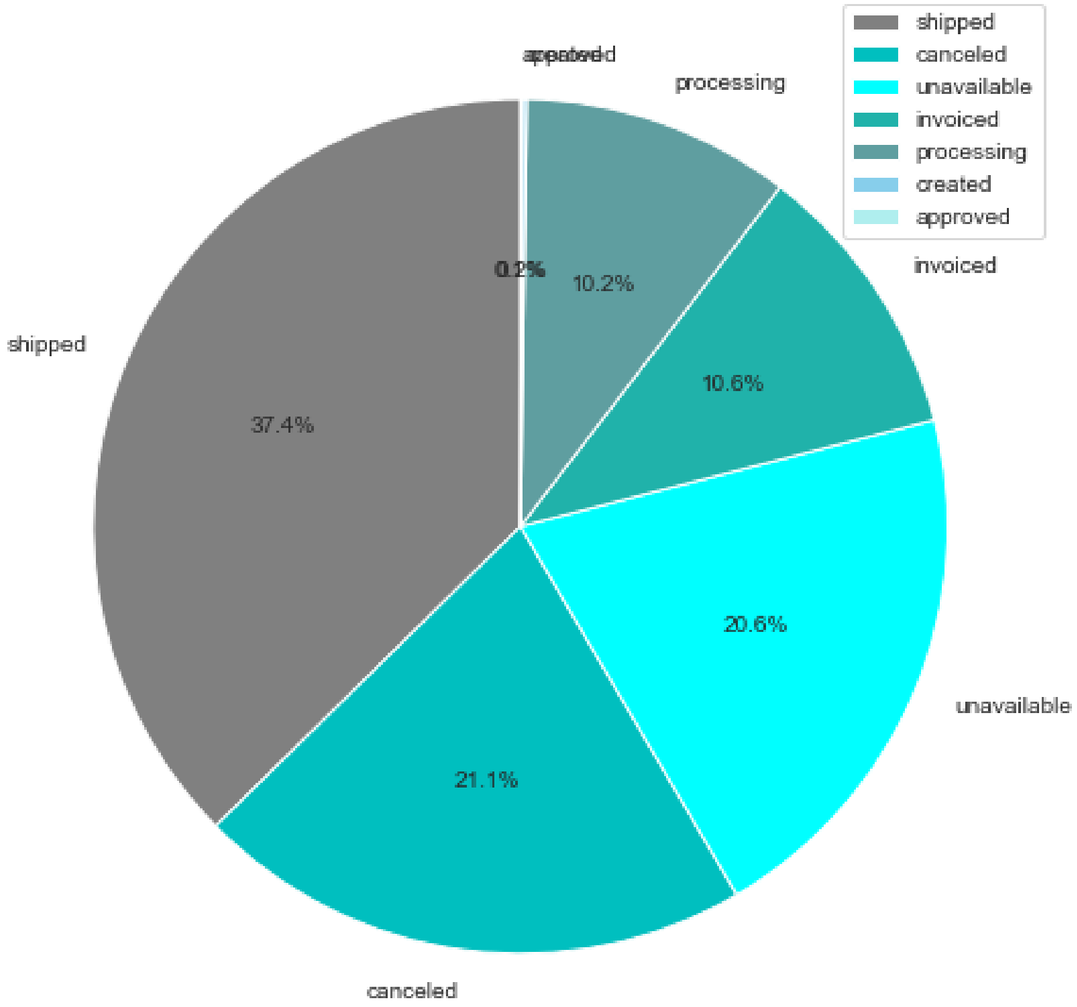
The **unavailable rate and canceled rates** are both **high (> 20%).** The reason may be due to the seller's poor responsiveness, long shipping time, etc.

==> It is necessary to find the exact cause to solve it.

Đơn hàng phân theo tất cả trạng thái

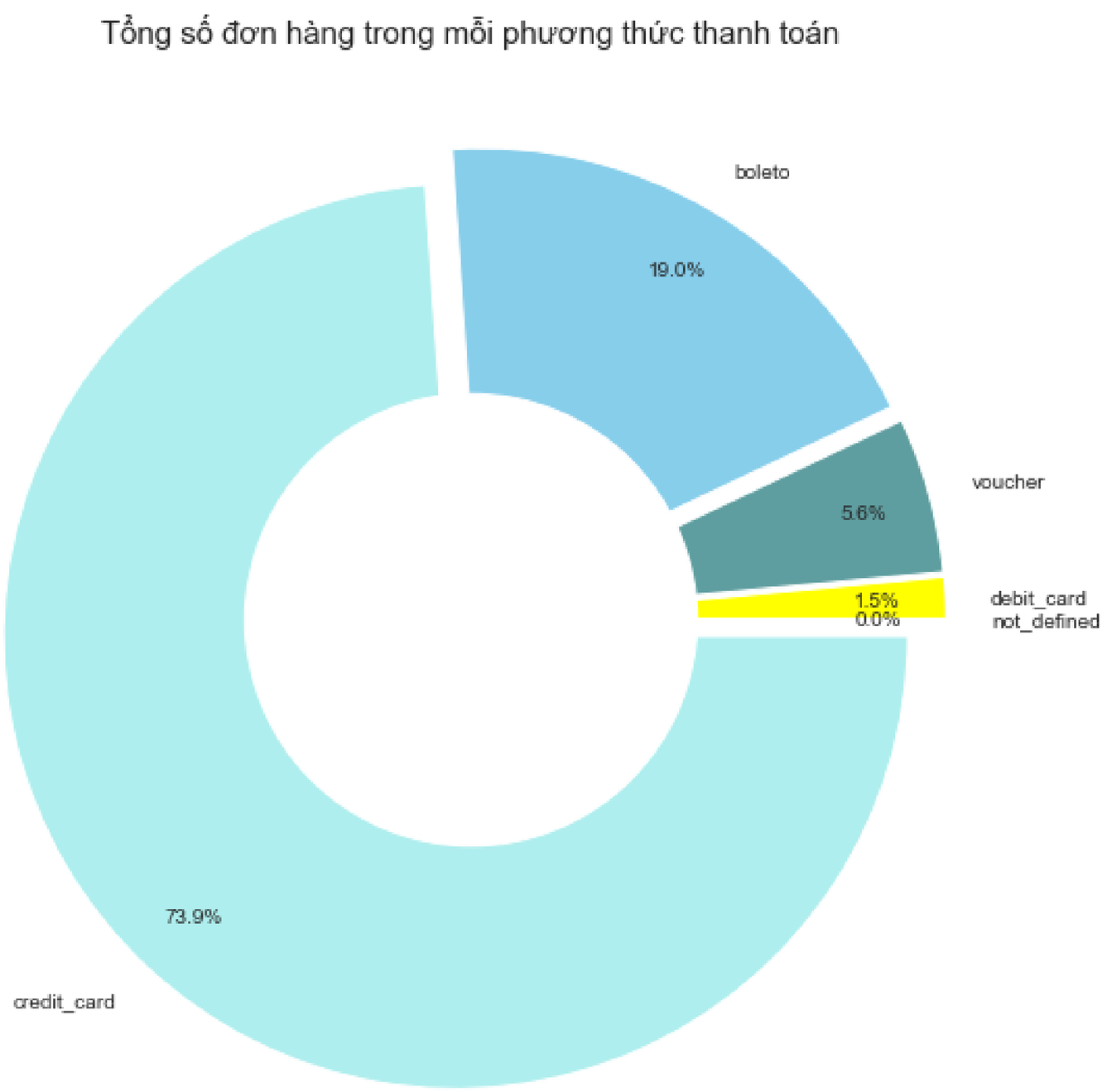



Đơn hàng phân theo các trạng thái còn lại ngoại trừ Delivered



# Status order

Explaination:
- **created**: The order has just been created (right after the customer clicks buy).)
- **unavailable**: The seller has no inventory to fulfill the order.
- **invoiced**: A purchase invoice has been established.
- **approved**: The order has been approved.
- **processing**: The order is being processed (it has been forwarded to the shipping partner).
- **shipped**: Partners begin shipping orders to customers.
- **delivered**: Successful delivery




# Payment

**Credit card và Boleto** là 2 phương thức thanh toán được **sử dụng nhiều nhất** trong các giao dịch, cụ thể **73.9%** giao dịch thanh toán bằng **Credit card** và **19%** thanh toán bằng **Boleto**, khoảng **7%** giao dịch là các **phương thức khác**.

(**Boleto** là một phương thức thanh toán trả sau **rất phổ biến tại Brazil** nói chung)

# 3. Metrics for Analysis

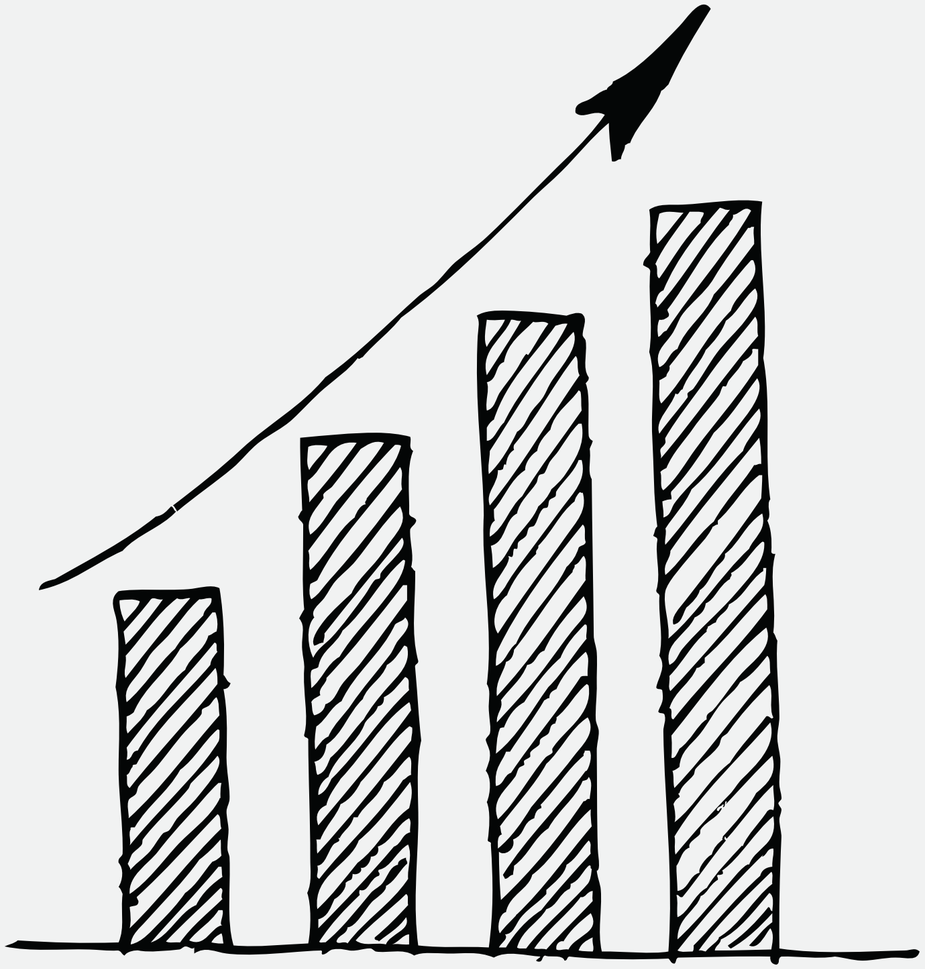
Total number of Order

GMV

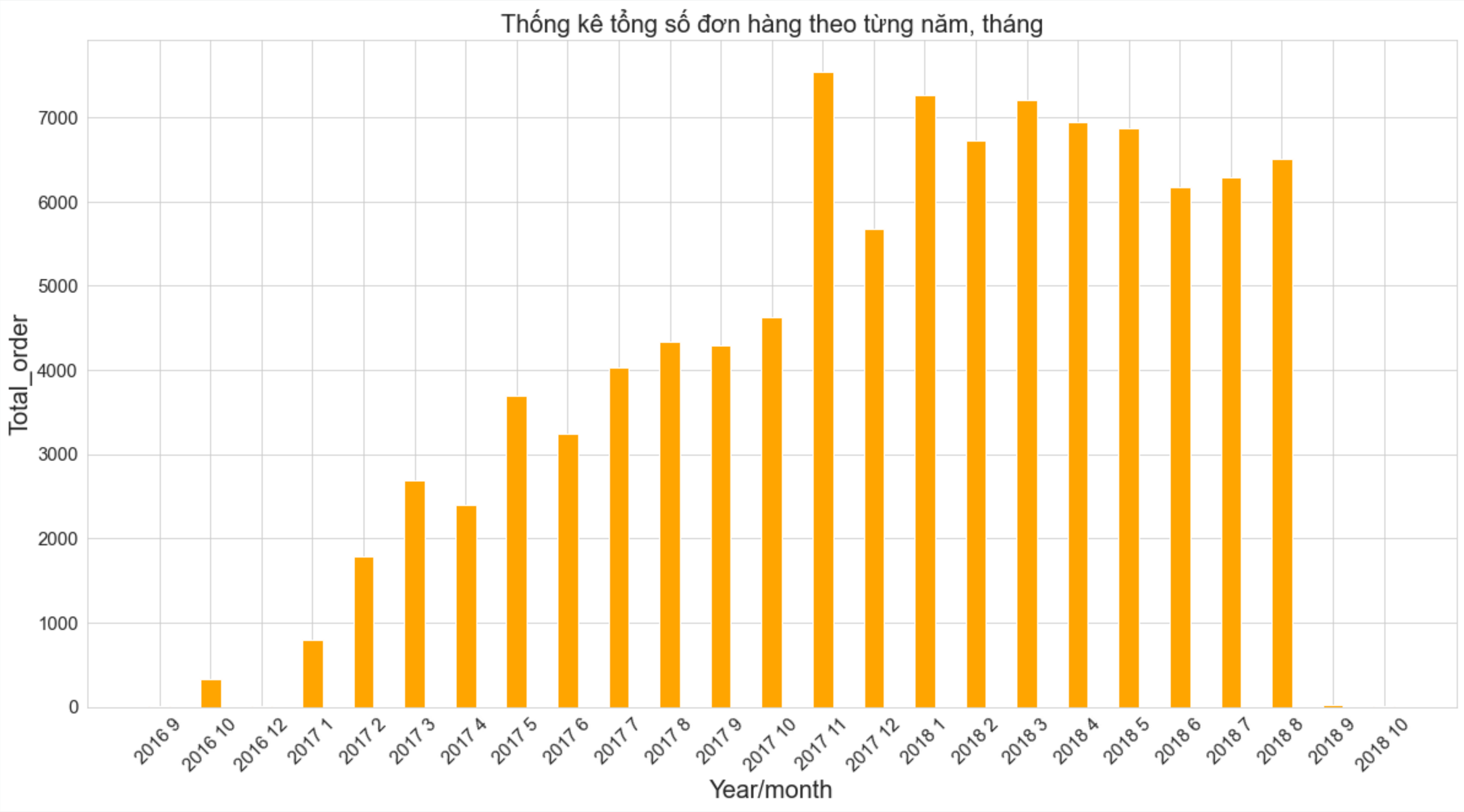
Freight Ratio

# Metric 1 - Total of Order

The total number of orders indicates **the scale of the market**.
It is also an indicator used to **measure the growth rate**.



# Total number of orders by year, month

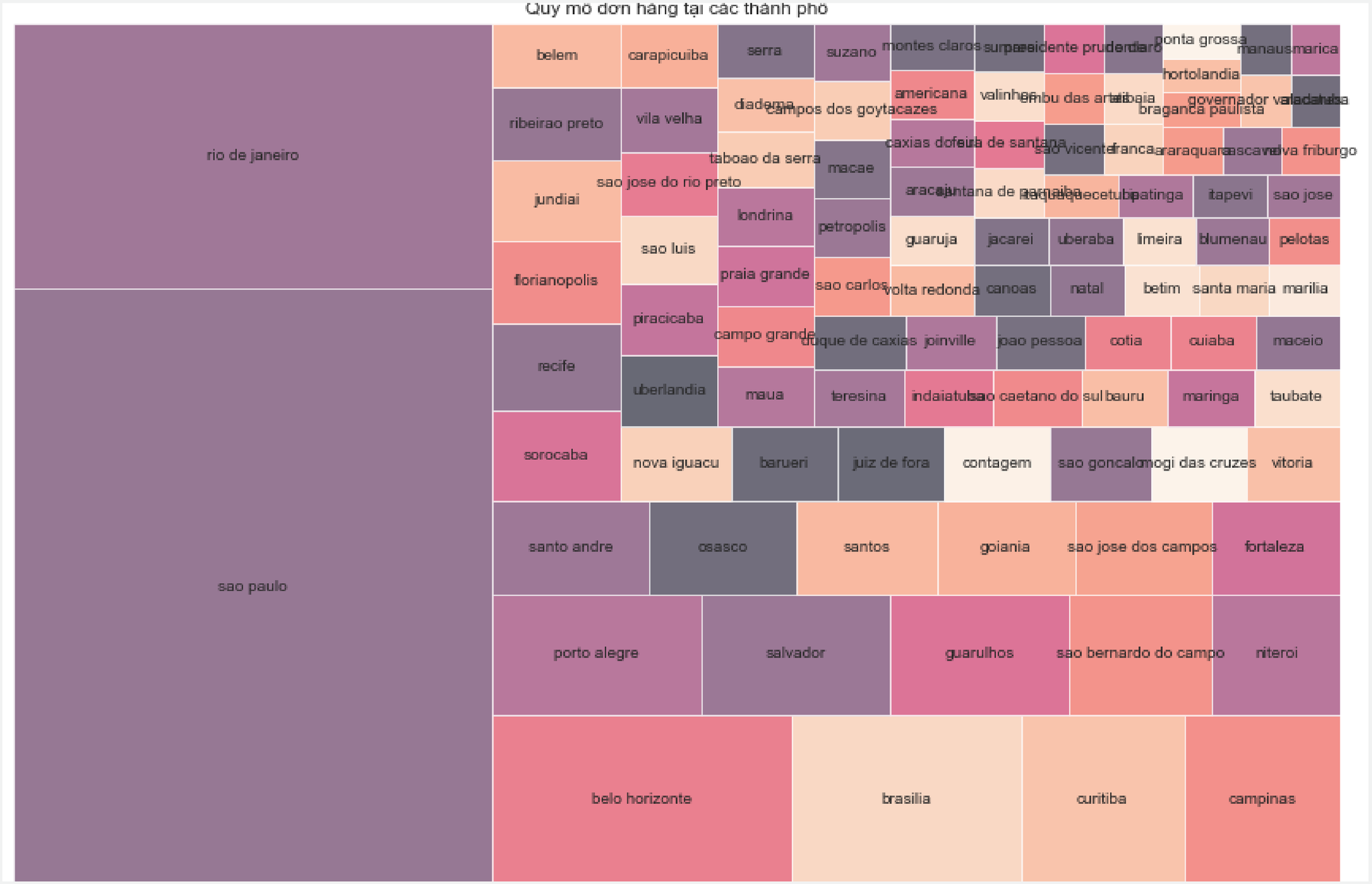


# Total number of orders by year, month

The total number of orders has a **large difference between years**. On the chart, **2018 has more than other years**.

In a year, **the number of orders increases at the end and at the beginning of the year**, overlapping with **the major holidays of the year such as Christmas and New Year**. The volume this year ranges from **6–7000 orders/month** and is most concentrated in **November, December, and January.**

**==>** We need to pay attention to additional **sources** and focus on **buying high points** to be able to handle such **large orders**.




# Total number of orders by city

# Total number of orders by city

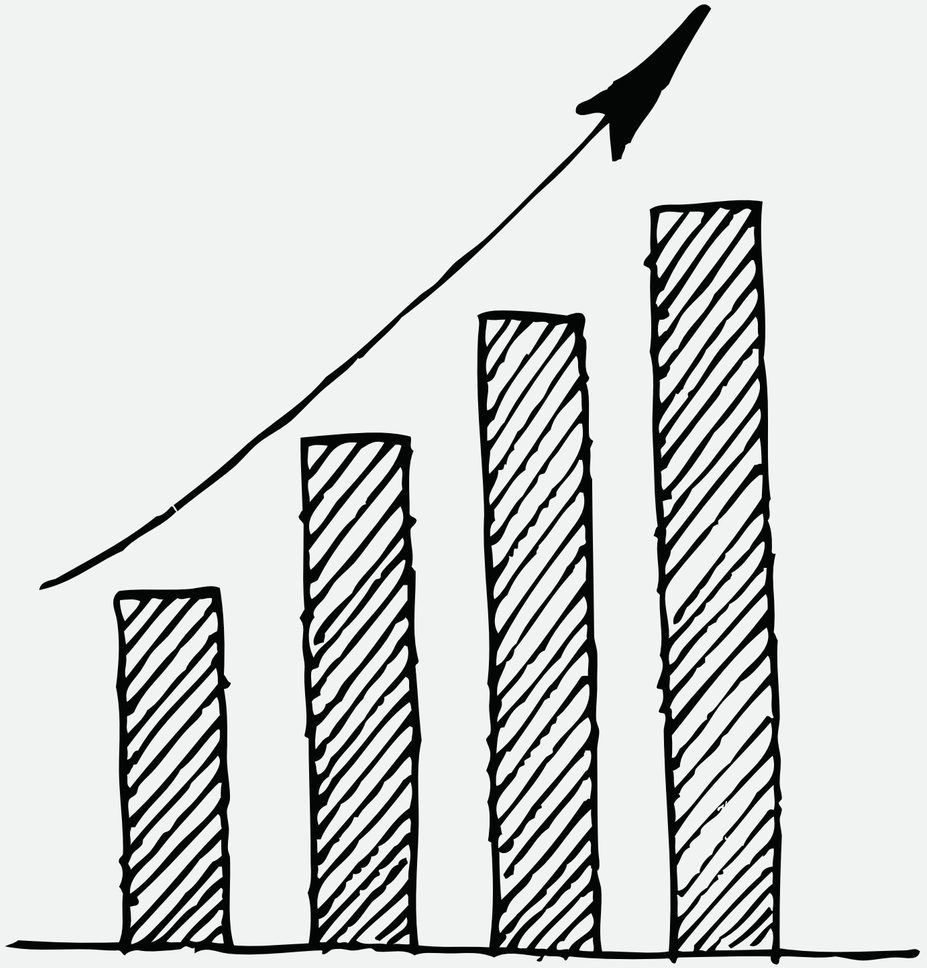
**Sao Paulo, Rio de Janeiro, and Belo Horizonte** are the cities with the **largest number of orders**. These are **3 big cities in Brazil**, densely populated with developed network infrastructure, technology, and transportation, which are also conditions promoting development in ecommerce.

**Aracatuba, Manaus, and Marica** are the cities with **the smallest number of orders**, just **over 100 orders/month**.
Other cities like **Salvador, Jundiai, and Campinas** have a **relatively large number of orders**.

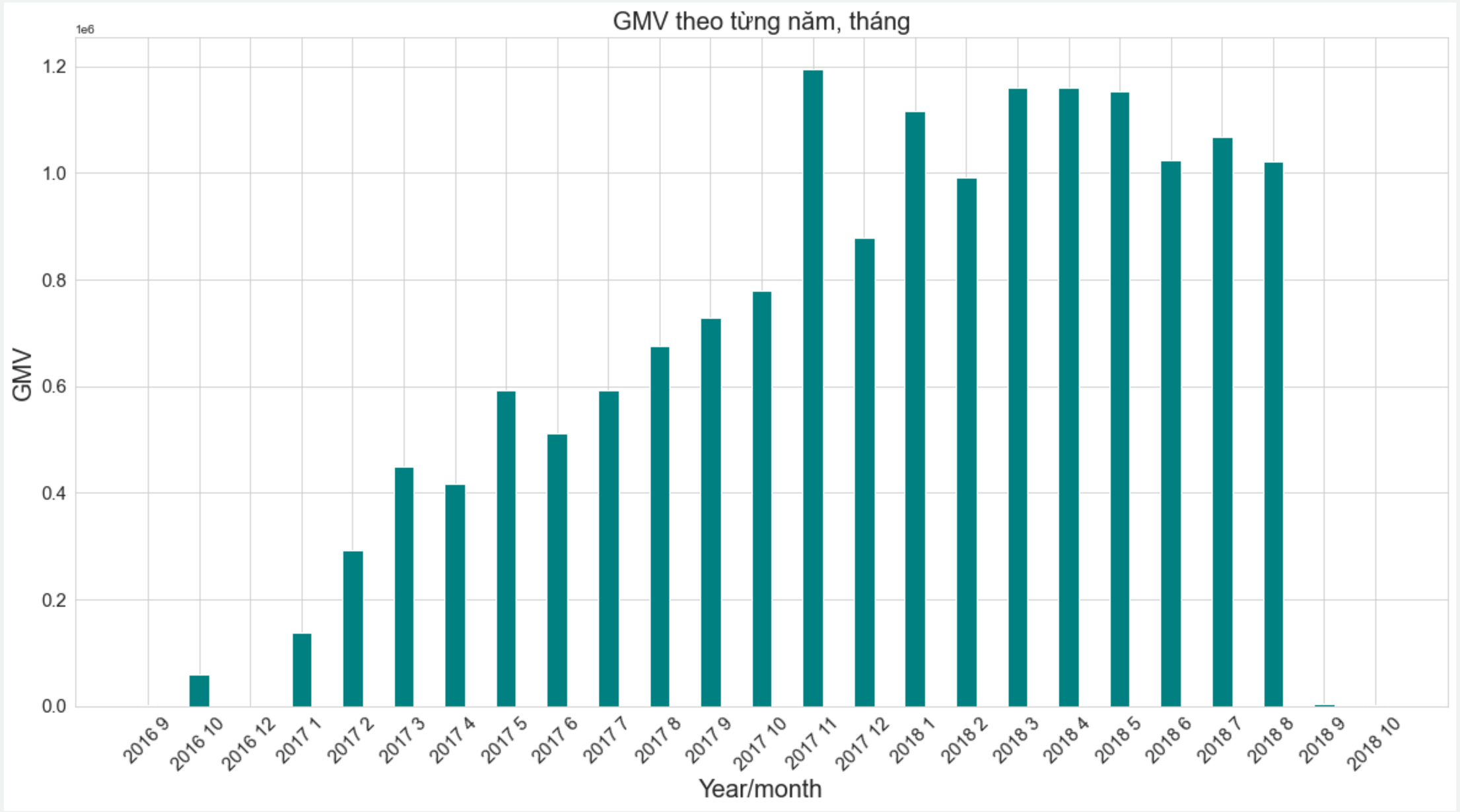
==> Continue to **develop a strategy to increase the number of orders in big cities** through **promotions, expand and connect more sellers in these areas.** For other cities, focus on **implementing media campaigns** to **increase awareness of the platform**, **increase reach to the platform**, and potentially **improve conversion rates**.

# Metric 2 - GMV (Gross Merchandise Volume)

GMV can be used to determine the overall **health of an eCommerce business**, and a **good indicator of growth**. This is because it measures the volume and value of merchandise sold or the number of transactions handled. So if your GMV is up, business should be good!



# GMV by year, month



## GMV by year, month city

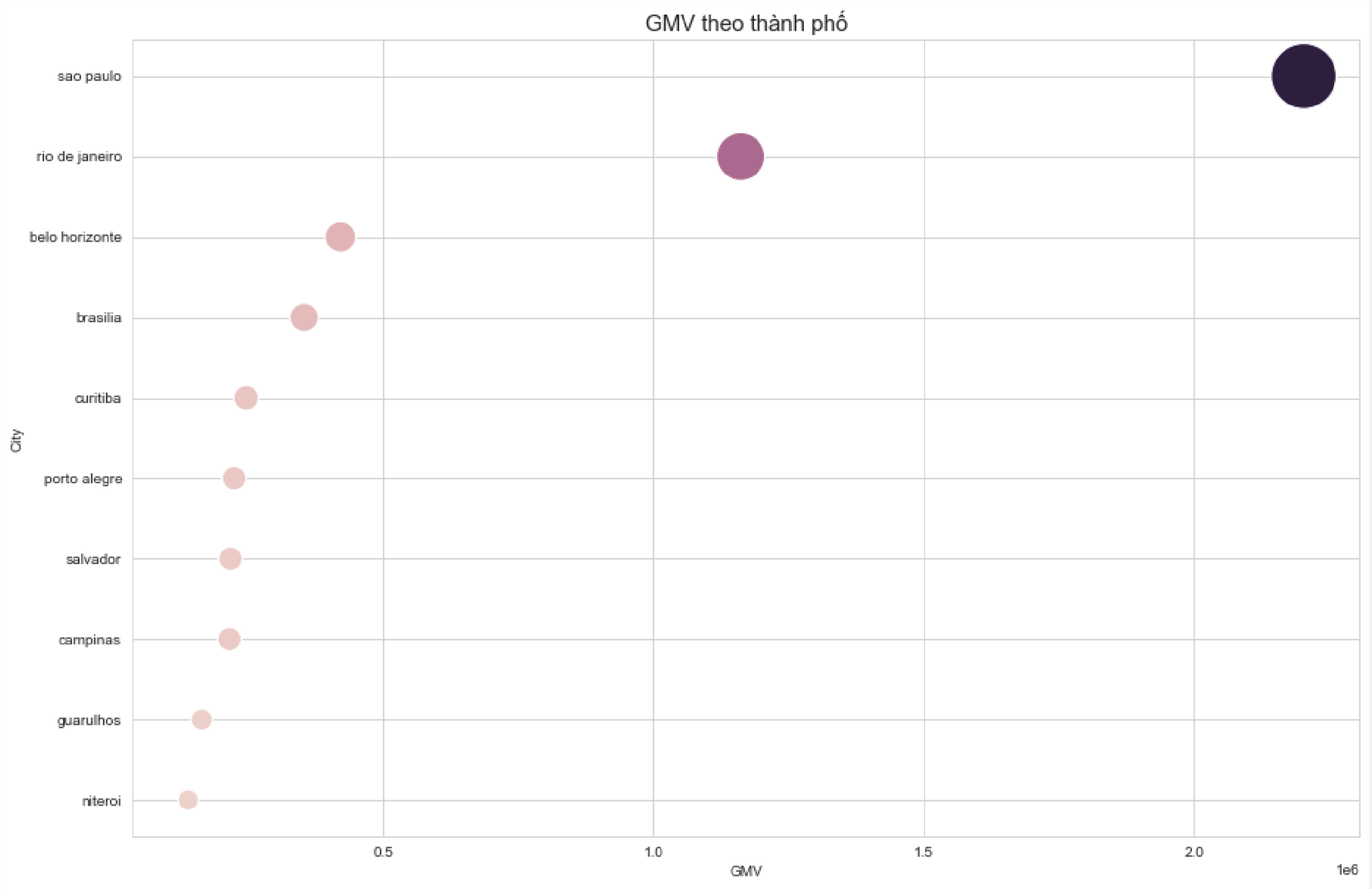
The results show that the monthly **GMV depends and is proportional to the number of orders** in the month.

At the end of **2017**, **GMV in November increased sharply**, reaching about **1.2 M USD**, then **dropped in December** for some unknown reason.

The **average GMV in 2018 is relatively high**. It can be seen on the chart that the first 8 months of the year are over **1 M USD**.

==> It is necessary to find out the **cause of the months with low GMV** and come up with **solutions** to handle it.

# GMV by city


GMV theo thành phố
sao paulo
rio de janeiro
belo horizonte
brasilia
curitiba
porto alegre
salvador
campinas
guarulhos
niteroi
City
0.5
1.0
1.5
2.0
GMV
1e6

## GMV by year, month city

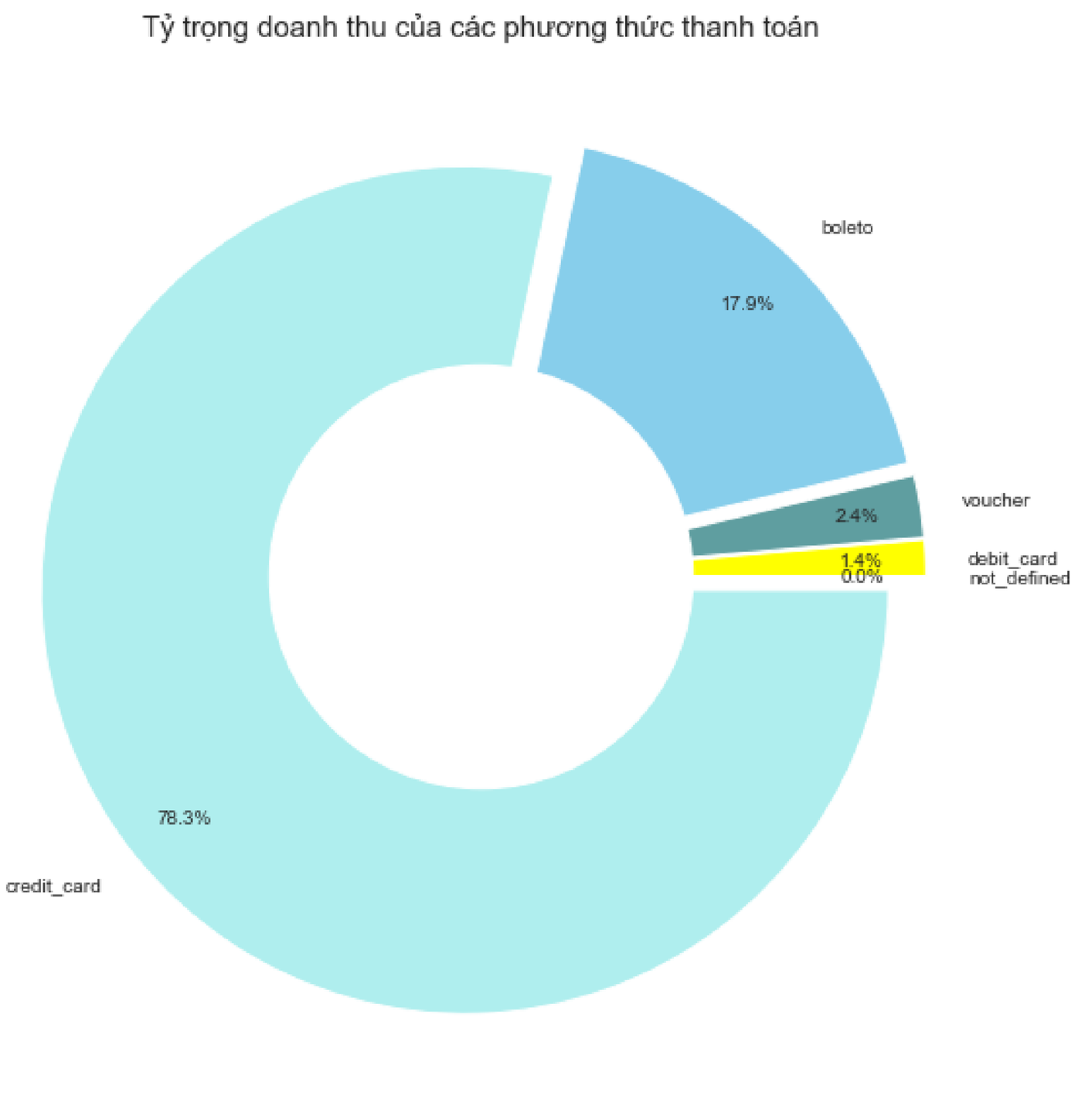
Similar to the size of orders in the cities analyzed above, **Sao Paulo and Rio de Janeiro** are the **2 cities with the largest GMV** of more than **1 M USD**. **Sao Paulo** alone is worth **more than 2 M USD**.

In other cities in the top 10 cities with the largest GMV, most of them are **less than 0.5M** USD.

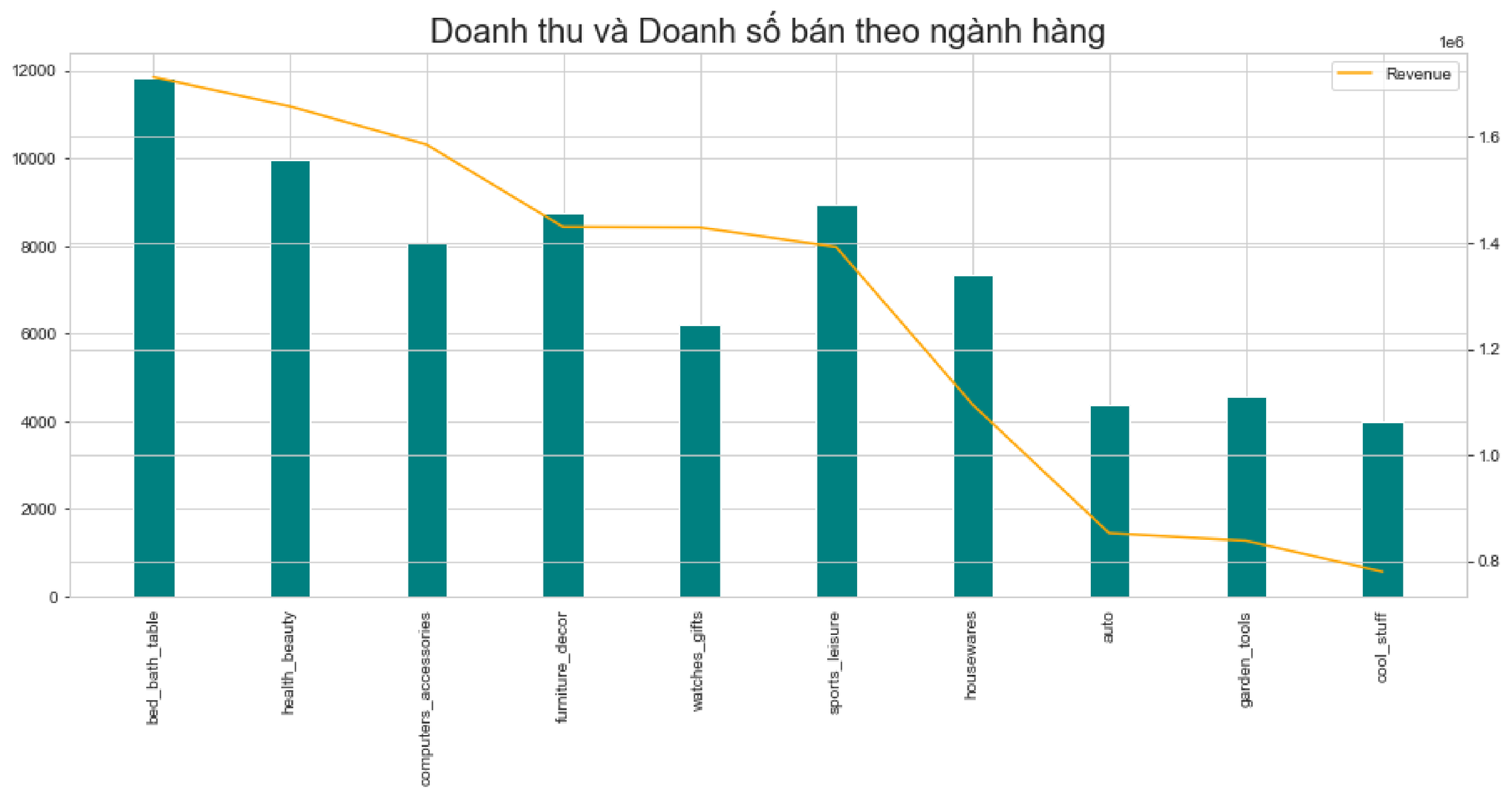
==> Plan to **increase GMV in other cities**.

# GMV by payment method

Proportional to the popularity of payment methods, **credit cards and Boleto** are the **2 methods with the largest revenue.**



# GMV by categories



## GMV by year, month city

The categories with the **highest sales** are **home appliances, health and beauty, and electronics**.

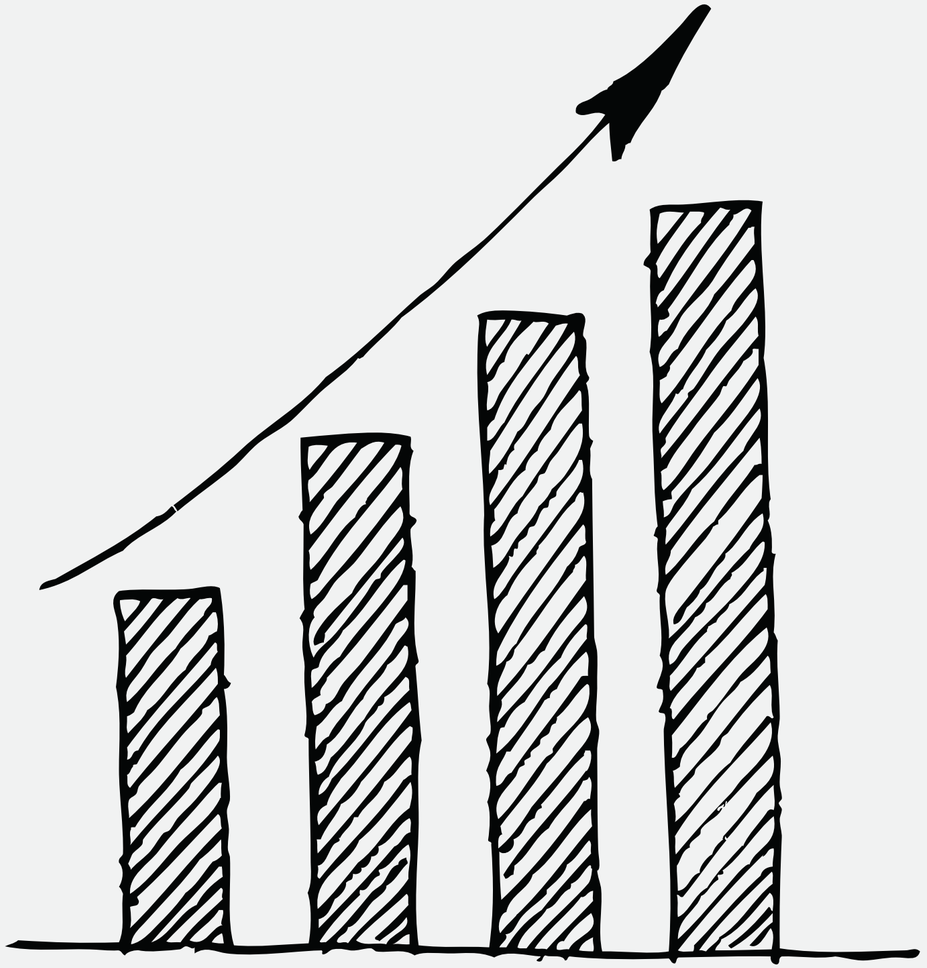
Some categories have **low sales but very high revenue**, such as **electronics and watches**. **Some categories are reverse**, such as **gardening products and cooling products.**

# Metric 3 - Freight Ratio

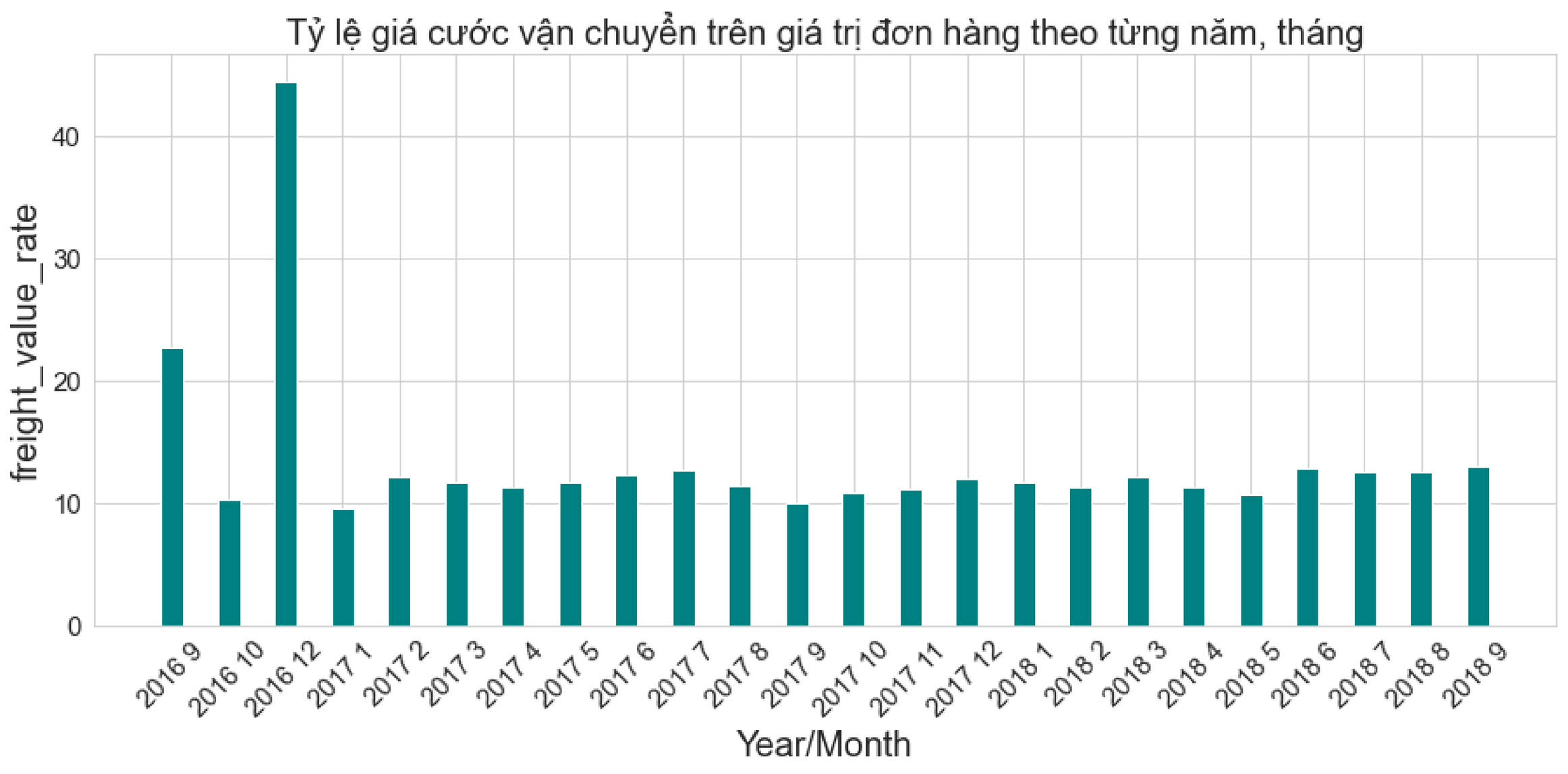
It's the **ratio between freight and order value.** This ratio can be used to **evaluate the ability to optimize logistics costs.**

This ratio is quite **important** because it can be used to **evaluate order fulfillment efficiency**. In addition, it is also a **factor for customers to consider when placing an order**. because if the freight-to-order ratio **is too high**, customers **may not buy anymore.**

This **decrease shows the ability to develop and optimize the cost of the order processing** logistics system.



# Freight Ratio by year, month



## GMV by year, month city

The value of freight **depends mainly on distance**. Therefore, the comparison of the freight rate to the order value is only **approximate.**

**This rate is abnormal in September (>20%) and December (>40%)** for an unknown reason. The following months fluctuate **around 10%.**

# 4. Addtional Information

Additional information is required:

- **Customer visit behavior**: identify touch points to maximize reach efficiency.
- **Seller's inventory**: determine their business size and responsiveness

# Thank you