



Brazilian Ecommerce by Olists

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Agenda

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Research Context & Questions

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Utilized data tools
in the project

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Suggested strategies
interpreting from results

Industry Overview

Market Size

The Brazilian e-commerce industry is valued at nearly **BRL 126 billion** (USD 24 billion), which account for **10%** of the Brazilian retail industry.

→ **Market Concentration is quite low for e-commerce retailing segment.**

Consumer Trends

- **Growing adoption of contactless payment:** mobile wallets and contactless cards
- **Mobile Commerce:** making purchase using mobile device.
- **Cross-Border Shopping:** buy from international websites due to wider product selection and attractive prices

Challenges

- **Highly competitive**, with both domestic and international players vying for market share.
- **Major players** include Mercado Livre, B2W Digital, Magazine Luiza, and Amazon.
- **High Internet access cost** in Brazil

Source: BRAZIL E-COMMERCE MARKET SIZE & SHARE ANALYSIS - GROWTH TRENDS & FORECASTS (2023 - 2028)

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Dataset Overview

Dataset Information

- **Location:** Brazil
- **Time Periods:** from 2016 to 2018
- **Number of Tables:** 9
- **Number of Observations:** more than 98,000
- **Purpose:** 2 years transactional is given to prepare a proposal for the CEO to help the company achieve BOD's goal
- **Source:** Kaggle

Tables in Dataset

- **Customers :** contain information about customers
- **Geolocation:** contain states name
- **Products:** overview about the products
- **Sellers:** sellers information
- **Product category name:** product name
- **Order items:** order status at each stage
- **Order payments:** order payment method
- **Order reviews:** customer review
- **Orders:** order information at each stage

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Project Context

Department: BODs, Sales, Logistics

Report to:

- Board of Directors
- Head of Sales Department
- Head of Logistics Department

Organization Goals:

- Identify weaknesses and opportunities
- Increase revenue by double

Time: The next 2 years

Demand from upper manager:

Address the current issues and build the business plan.

Project Questions

1. What is the best-selling product categories?
2. Which locations have the most orders created?
3. What time do consumers actively purchase on olists site?
4. Which customers bring the most value?
5. Which customers should be paid attention?
6. What are the problems that delivery process are facing ?



SQL



PYTHON



POWERBI



Mining, Cleaning, Observing and
Calculating Dataset.



Visualize the data and
building Dashboard

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1

Check number of
observations and
columns

2

Check and
remove
null/error
values

3

Merge table
together

4

Export to
excel file

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Olists Brazilian E-commerce

Year

2016

2017

2018

19.42M

Total Revenues

113.21K

Total Orders Created

0.01%

Cancellation Rate

4.08

Average review score

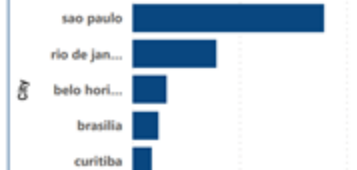
Total Revenue Generated Per Month



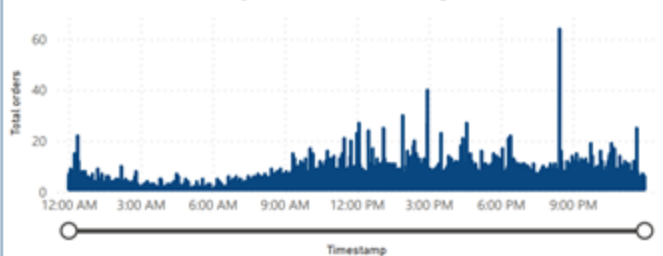
Top 5 Product category that have the most orders created



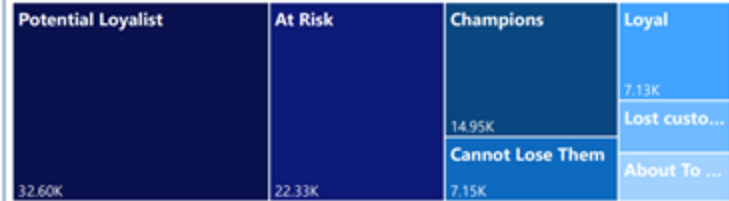
Top 5 City that have the most orders created



Time in A Day that Customers Making Purchases



RFM Score by Segment



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BRL 19.42
Million

Total Revenues

> 113
Thousand

Total Orders
Delivered

71
Categories

Product Categories
offer by Olists

Overview

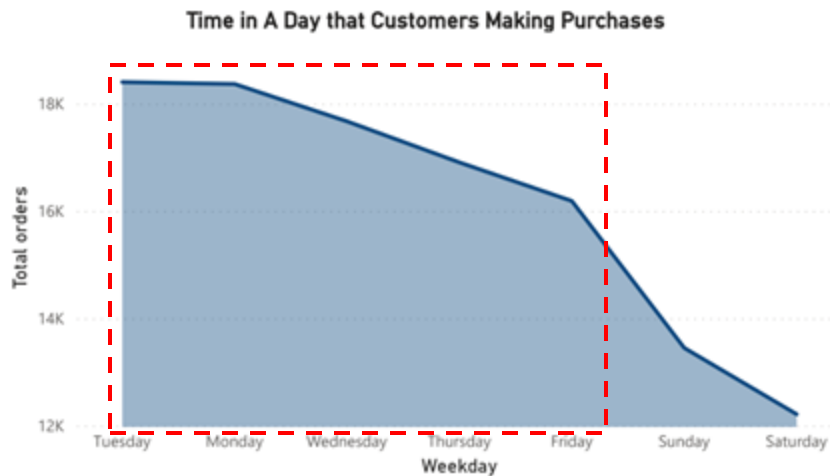
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Sales - Purchase Time



Consumers **prefer shopping on weekday** and **least prefer on weekend**.



Consumers most active buying **during the office hours** and **at night time**.

- 9am - 6pm
- After 9pm till Midnight

- Running promotion during weekday and during the active time frame.
- Improve sales and traffic during the weekend (low-demand period)

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Best Selling Product Categories

1

BED_BATH_TABLE

2

HEALTH_BEAUTY

3

SPORTS_LEISURE

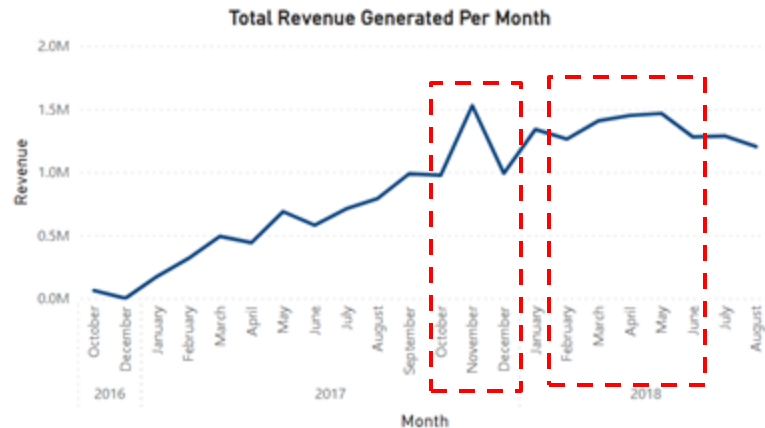
4

FURNITURE_DECOR

5

COMPUTER_ACCESSORIES

Sales - Product Category

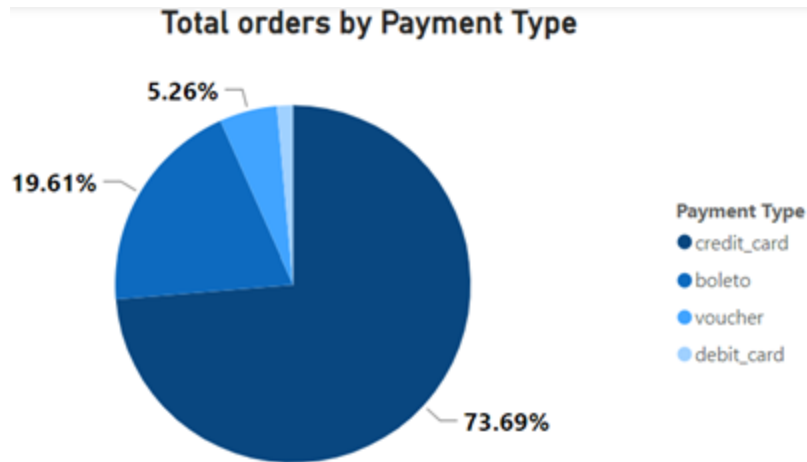


Christmas and New Year season receive the High Revenue Generated compared to other season.

- **November:** Increase demand for across the top 5 best-selling categories
- **February:** High peak for Computer_assessorries

- Inventory Management: Stock up the inventory and optimize delivery services during high-demand season
- January - March: Promote more technology products during the period (computer_assessorries)

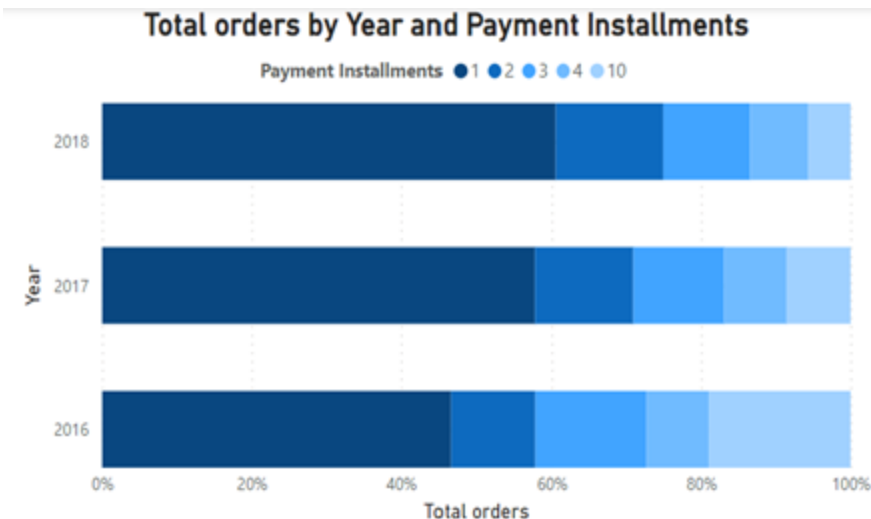
Sales - Payment Type



Consumers mainly use **Credit Card (73.69%)** and **Boleto (19.61%)** for making payment.

- Cooperate with banks to streamline the credit usage and having more credit payment from other banks for users to choose from and gain more users from other banks.

Sales - Payment Installments



Consumers mostly opt for **one-time payment**, followed by **two-time payment** and **three-time payment**.

- Cooperate with banks and non-bank financial institutions to diverse options for installment and promotion/benefits for consumers to consume more.

Sales - Locations



- Olists should push sales more in the city that it is popular among consumers there
- Expansion: try to review/renovate strategy for other region and have more investment for other city also.

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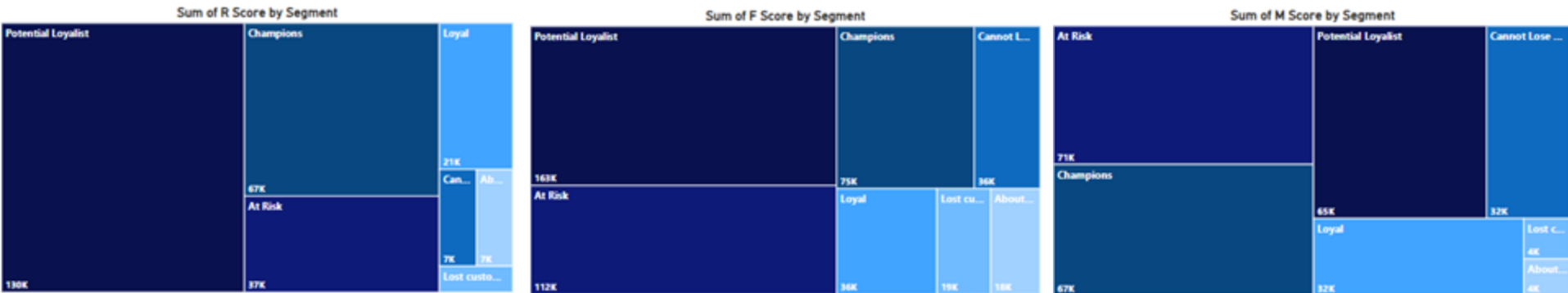
Solutions

Consumers



- According to RFM Score the Potential Loyalist customer account for $\frac{1}{3}$ of Olist's customer which mean Olist need to pay more attention to this customer segment
- The At Risk and Can't Lose Them's group of customer needed to be pay attention because one of them are the second largest group of customers and the other purchase large quantity
- However, Olist can face the fact of losing over 3000 customers

Consumers



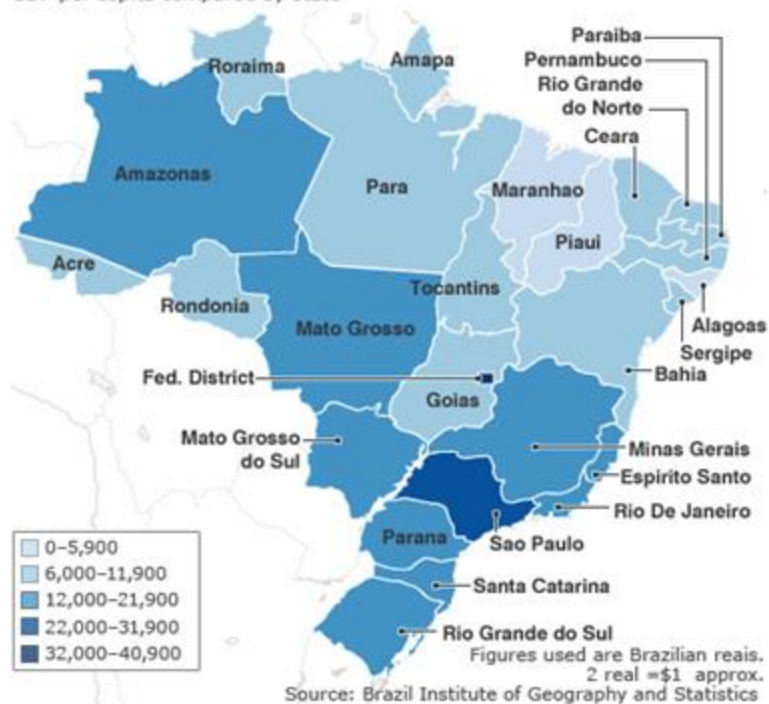
The top 3 groups of customers are Potential Loyalist, At Risk, and Champions:

- The Potential Loyalist group has the lowest M Score and the highest R and F Score
- At Risk has the lowest R score and the highest M Score so Olist can increase its revenue if it can make this group purchase more frequently
- The Champion is the most stable one but the number of people in this group is not much

Logistics

Brazil's wealth map

GDP per capita compared by state



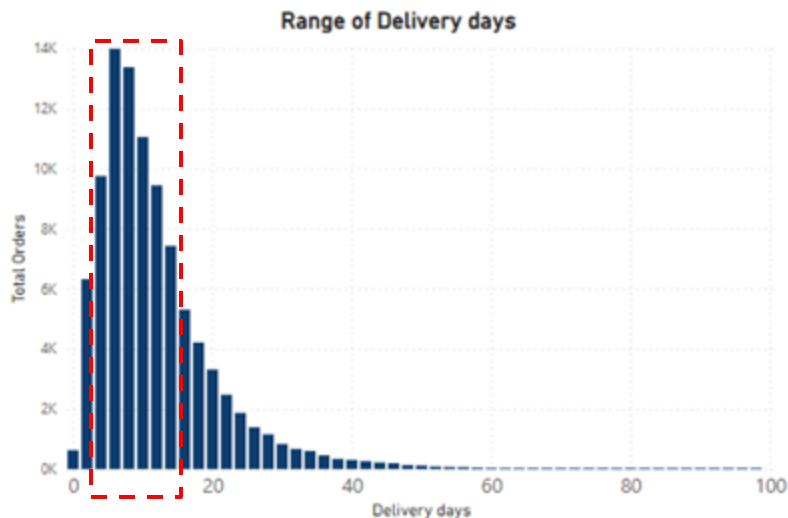
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- Range of delivered day is running up to 100 days due to some outliers.
- However, most of orders are delivered in range 5 – 15 days from ordered date.
- Dig down by top categories, there is not big difference on delivered days, still around 5 – 15 days.



customer_city	Count of order_id	Average of Delivery days
sao paulo	17402	8.01
rio de janeiro	7595	14.68
belo horizonte	3087	11.02
brasilia	2341	12.90
curitiba	1727	10.39
Total	110196	12.50

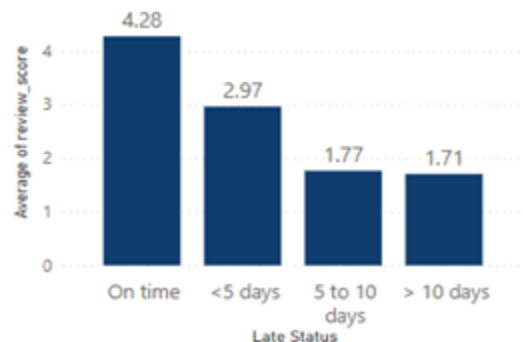
The average delivery days in top 5 cities (popular and large cities) with the most orders also consists with the total average delivery days

Percentage of Delivery Status



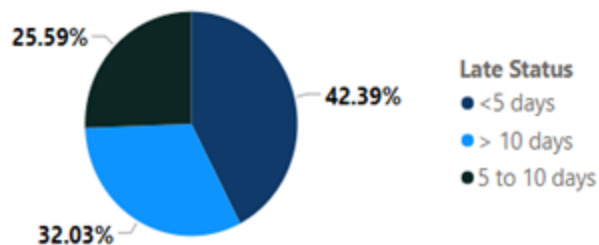
product_category_name_e_english	Average of Delivery days
home_appliances_2	45.81
office_furniture	42.23
furniture_mattress_and_upholstery	40.60
christmas_supplies	39.75
kitchen_dining_laundry	38.08
Total	31.24

Average of review_score by Late Status



Shipping late product

Percentage of Late Status



product_category_name_e_english	Average of Delivery days
home_appliances_2	69.50
office_furniture	64.04
furniture_mattress_and_upholstery	61.00
christmas_supplies	60.20
home_construction	57.00
Total	48.58

Olist has very good delivery performance with only 8.11% late delivery vs estimation. However, in the late delivered orders, over 57% of orders late delivered over 5 days vs estimation.

Shipping late product (>10 days)

Logistics



On time



Late from 5-10 days



Late > 10 days



Late < 5 days

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Promotion

- Running promotion during weekday and during the active time frame.
- Improve sales and traffic during the weekend (low-demand period)
- Cooperate with banks and non-bank financial institutions to diverse options for installment

Inventory Management

- Stock up the inventory during special occasion (Christmas and New Year) to meet up with the high demand.

Consumers

- Allow customers to customize their priority purchase
- This approach is based on the notion that clients are more inclined to buy from you again when you are still fresh in their minds.

Logistics

- Adopting a faster means of transport for deliveries.
- Forming partnerships with other shipping organizations to optimize the delivery process.
- Conducting research on routes with early deliveries to identify successful strategies for implementation across the company.
- Penalizing sellers with late drop-offs through late fees or increased commission, incentivizing timely deliveries.

Thank you
for listening!

