

OLIST Sales and Logistics Analysis Report

Executive Summary:

São Paulo (SP), Rio de Janeiro (RJ), Minas Gerais (MG), Rio Grande do Sul (RS), and Paraná (PR) are consistently the top 5 performing states from 2017-2018. SP consistently topped the Profit Rate, %share of Total NET Revenue, and Total NET Revenue measurements. The rest of the top performers boast similarly high Profit Rates (>80%) but are lower in NET revenue and %share of total NET revenue (13% and lower).

Watches_gifts, health_beauty, bed_bath_table, sports_leisure, and computer_accessories are the top performing categories in NET Revenue and Profit Rate and amongst the top performing states. Only the distribution of revenue and volume between these categories differs between the top states.

Orders are concentrated in wealthier states along the Eastern coast; SP and RJ alone account for >50% of total order volume. Western states are on average <1% of total order volume. Order volume highs occur during summer and lows during winter, regardless of state. Order concentration amongst all states is highest during November, the month before the official summer season.

Late order delivery distributions are similar across all states with median days late ranging from 5-10 days. States with higher order volumes exhibit more outlier late deliveries that are also more delayed. Summer season exhibits the majority of late deliveries across all states with an overall average of ~50% of late orders occurring during summer. Lastly, there is no relationship between product size, weight, and days late.

The payment structure is similar across all states, the overwhelming majority of payment is through credit cards (~65% or more), then boleto (~14% or more).

Introduction and Methodology:

This dashboard was created using OLIST's historical data from 2017-2018 to provide data-backed solutions to logistics pain points and the creation of a warehouse. Power BI was used to create performance metrics and visuals including Gross and NET Revenues, %share of Revenues and payment types, NET Revenue trend lines, scatter plots of state and product category performance, order volume maps and late delivery matrices.

Sales and Volume Analysis:

NET revenue trended up from 2017-2018, with peaks during summer, with a high of R\$861K in Nov 2017 and dips as the seasons transitioned towards winter, with a low of R\$363K Jun 2017.

The concentration of revenue, orders, and order volume is highest amongst SP, RJ, and MG, contributing ~64% of Total NET Revenue and ~66% of total order volume.

Watches_gifts, health_beauty, bed_bath_table, sports_leisure, and computer_accessories are consistently the top performers in all states. These categories also remain consistent in Profit Rates (80~90%) and contribute the majority share (5~10%) of NET Revenue and order volume in each state.

Logistics and Late Delivery Analysis:

Order volume concentration is overwhelmingly consistent amongst all states. 15% or greater yearly order volume consistently occurring in November, one month before the summer season. Higher order volume behaviour continues throughout the summer and tapers off towards the season's end.

Late delivery distribution is also overwhelmingly consistent with the days late for late deliveries being similar across all states (this relationship does not exist for very lower order volume states, e.g. AM and AP). Late deliveries also exhibit seasonality as summer exhibits the highest average share (50%) of late deliveries.

Key Insights and Recommendations:

Consistency in late delivery distribution across states suggests that priority should shift towards the seasonality of late deliveries. A seasonal contract with logistics companies to increase operation frequency during summer could help ease the late delivery experienced during summer. This could improve OLIST's marketplace reputation through reliability for both businesses and consumers.

Creating a warehouse in SP, the top-performing state, would allow a greater capacity for transactions for B2B and B2C. Additionally, some resource logistics could divert to RJ and MG (top 2 and 3), leading to an overall improvement in product delivery among these top three performing states.

Conclusion:

The creation of intermediary warehouses in SP would lead to performance improvements in revenue and logistics, allowing resource diversion to RJ and MG; leading to an overall improvement in the top three performing states. All while contributing to increasing the reputation and reliability of OLIST.

Seasonal logistics contracts would allow OLIST to tackle delivery pain points that exhibit seasonality.

Top performing categories, order volume yearly share, late delivery seasonality, and days late distributions are similar amongst the majority of states. Lastly, Revenue is unequally distributed, with wealthier and eastern coast states (e.g. SP, RJ, MG) contributing the overwhelming majority of order volume and revenue.