

olist Executive Summary

Problem

- Olist, a Brazilian e-commerce company that has recently suffered losses, is looking to better manage its inventory in order to cut down on any superfluous costs. The inventory costs of this e-commerce company, Olist, must be managed.
- We need to identify the top revenue-generating products, as well as apply market basket analysis to analyse individual customer purchasing behaviour and estimate with relative certainty which items are more likely to be purchased separately or in combination with other products and determine ideal product category depth to manage Olist inventory efficiently.

Solution

There are two different techniques that I have used to analyse the given dataset by Olist:

- I. Market Basket Analysis
 - II. Pareto Analysis
- Retailers utilise market basket analysis, a data mining approach, to better understand customer purchase patterns and enhance sales. It entails evaluating huge data sets, such as purchase history, to identify product groups and products that are likely to be bought together.
 - We employed the Pareto analysis' 90-10 rule after obtaining a thorough understanding of the problem statement and dataset. In general, the 90-10 rule states that 10% of all causes (or inputs) result in 90% of all outcomes (or outputs) for any given occurrence. This would aid in choosing which product categories and goods should be kept in stock and which should be rejected in order to manage Olist revenue.

Recommended Steps of Action

- I. Concentrate on the top 20 product categories based on the number of orders and those that have been ordered more than five times.
- II. Customers who purchase toys also purchase other items. Toys should be offered in conjunction with new offers.
- III. Customers who purchase lower-cost toys should be offered relevant or complementary things in addition to their purchase.
- IV. Customers who purchase higher-end toys should be offered a comparable higher-end product in addition to the one they purchased.

- V. Products that are frequently ordered and generate a lot of revenue must always be available in stock.
- VI. Focus on the following product categories to manage inventory, as they generate large revenue and continue to be in high demand among customers.
 - toys
 - health_beauty
 - bed_bath_table
 - sports_leisure
 - computers_accessories
 - furniture_decor
 - watches_gifts
- VII. Check the Tableau workbook for 10% of items responsible for 90% of Olist's income or sale with their product ids, which sells as well as creates revenue for the company, to retain depth in the aforementioned categories.

Some other Valuable Insights:

- I. Over a two-year period, the maximum number of orders per month occurs between the months of March and August.
- II. Saturday and Sunday have a lower percentage of Olist customers ordering, but this is not the case with Monday, Tuesday, and Wednesday, which have the highest number of orders during the last two years.
- III. Approximately '56 percent' of consumers prefer to order in the morning, between 7 a.m. and 1 p.m., or at night, between 7 p.m. and 12 a.m.
- IV. The majority of customers like to order in the afternoon, between 1pm and 7pm, accounting for roughly 38% of all orders.
- V. Toys account for more than 75% of all products sold, with the remaining product categories accounting for 25% of total revenue.
- VI. Over the course of two years, 78974 payments (about 75%) were made by credit cards, followed by 20288 payments (around 20%) made via wallet.
- VII. Over the course of two years, Olist received 15022 (15.63 percent) of orders from the city of Sao Paulo, followed by 6593 (6.92 percent) from the city of Rio de Janeiro.
- VIII. Over the course of two years, Olist received the most orders in the state of Sao Paulo (SP) with 41.98 percent orders, followed by the state of Rio de Janeiro (RJ) with around 12.92 percent customers.