Olist Store Analysis – Project Report

1. Introduction

In today's rapidly evolving digital ecosystem, data-driven decision-making is essential for success in the competitive e-commerce industry.
E-commerce analytics empowers businesses to extract meaningful insights from large datasets, enabling

Problem Statement
The primary objective of this analysis is to uncover meaningful patterns from the Olist Store dataset and evaluate key performance areas influencing customer satisfaction and business efficiency.
This project focuses on:

- Comparing order volumes between **weekdays and weekends** to understand buying behavior.
- Counting orders with a **review score of 5** paid specifically via **credit card**.
- Measuring the **average delivery days** for the **pet_shop** product category.
- Analyzing **average price and payment values** for customers located in **São Paulo**.
- Examining the relationship between **shipping days** and **customer review scores** to determine how delivery times impact customer satisfaction.

This project aims to analyze the Olist Store dataset and derive actionable insights using dashboards built in Excel, Power BI, and Tableau.

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2. Key Performance Indicators (KPIs)

KPI 1: Weekday vs Weekend Payment Statistics

The analysis reveals that:

- **Weekdays show significantly higher payment transactions** compared to weekends.
- **Weekends represent an opportunity** for targeted marketing campaigns and promotional offers.

Recognizing consumer behavior across the week helps businesses create more personalized marketing strategies and optimize resource allocation.

KPI 2: Count of Orders with Review Score 5 & Payment Type: Credit Card

Key findings:

- **Credit card payments received the highest number of 5-star reviewed orders**, indicating smooth checkout and customer trust.
- Although **Boleto and voucher** payments are less frequently used, they still receive positive reviews.
- Businesses can further optimize these payment methods to increase customer satisfaction.

This insight helps improve the payment workflow and support strategy to enhance customer loyalty.

KPI 3: Average Delivery Days – Pet Shop Category

The analysis highlights notable differences in delivery times:

Category	Average Delivery Days
Pet Shop	**11 days**
Audio	13 days
Cool Stuff	11 days
Alimentos	10 days

- **Pet Shop deliveries are relatively fast**, showing efficient logistics.
- The **Audio category shows delays**, representing an improvement area.

Improving delivery timelines results in better customer satisfaction and improved review scores.

KPI 4: Average Price & Payment Values – São Paulo Customers

Insights:

- Average order price in São Paulo: **108**
- Average payment value: **135**

These values show:

- A **balanced purchasing pattern** across price categories
- Slightly higher spending habits among São Paulo customers
- Potential for premium product targeting and location-based marketing strategies

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KPI 5: Relationship Between Shipping Days and Review Scores

The findings show a clear **negative correlation** between shipping days and customer review scores:

- **Long shipping times → Lower review scores (1–2 stars)**
    - Example: Orders with 21 days shipping received low satisfaction.
- **Short shipping times → Higher review scores (4–5 stars)**
    - Example: Orders delivered in 11–12 days received excellent reviews.

This highlights the significant impact of logistics and delivery performance on customer sentiment.

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3. Dashboards Used in the Project

This project includes interactive dashboards created using:

Excel Dashboard

- Visual KPIs
- Payment method distribution
- Category-based delivery analysis

Power BI Dashboard

- Automated data refresh
- Drill-down reports
- Customer city-level insights

Tableau Dashboard

- Advanced visualization
- Trend analysis
- Review score heatmaps

Each dashboard provides unique perspectives on Olist's business performance.

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4. Conclusion

The Olist Store Analysis brings attention to the importance of analytics in understanding e-commerce performance. By leveraging the power of data visualization and KPI monitoring, businesses can:

- Improve logistics and reduce delivery delays
- Enhance customer satisfaction through faster shipping
- Optimize payment methods and checkout experience
- Develop targeted marketing strategies
- Drive higher conversion rates

E-commerce analytics is no longer optional—it is a **strategic necessity** for long-term growth in a digital-first marketplace.

5. Challenges and Solutions

Challenge 1: Data Collection

The vast size of e-commerce datasets makes collection and management difficult.
Solution: Automation and advanced extraction systems.

Challenge 2: Data Integration

Multiple sources and formats complicate integration.
Solution: Use ETL pipelines, data cleaning workflows, and structured data models.

Challenge 3: Data Analysis

Extracting insights from large volumes of data is resource-intensive.
Solution: Employ predictive modeling, machine learning, and efficient BI tools.