**Shop Nest E-Commerce Store Analysis Report**



Shop-Nest, a leading department store in Portugal's e-commerce marketplace, plays a pivotal role in connecting small businesses from various regions across the country to a broader market. By serving as a seamless link, Shop-Nest enables merchants to showcase and sell their products efficiently through its platform, with the added convenience of direct shipment facilitated by Shop-Nest’s logistics partners.

This capstone project involves designing a comprehensive Power BI dashboard to analyze key business metrics and uncover insights from Shop-Nest’s anonymized commercial data. The project encompasses several analytical tasks, aimed at enhancing our understanding of sales performance, customer behaviour, and operational efficiency.

The provided datasets cover various aspects of Shop-Nest’s operations, including customer information, geolocation data, order items, payments, reviews, product details, sellers, and product categories. By integrating and analyzing these datasets, the Power BI dashboard addresses the following critical business questions:

* Identifying the rating distribution in the Shop Nest dataset, showcasing ratings categorized as Excellent, Very Good, Good, Bad, and Very Bad, along with corresponding orders.
* Top 10 and bottom 18 most popular product categories in the Shop Nest dataset against number of orders.
* Total number of active sellers by yearly and monthly.
* Payment methods which are most commonly used by Shop Nest customers.
* Identifying the product category wise profit margin using the
* To Determine the monthly payments made by customers using credit cards.
* Identifying sellers categorized by city, excluding cities starting with the letters S and B.
* Creating a visual that compares the number of delayed orders to the number of orders received earlier for each month by utilizing the drill through the cross-report feature to provide a detailed analysis of late and on-time deliveries.

**Order Rating Analysis**

A screen shot of a graph

Description automatically generated

This bar chart provides a clear representation of total rating across the orders. This visual breakdown provides insights into customer satisfaction with different products.

**Key-Insights**

* The chart shows that orders are rated, and the ratings would help the platform to align the strategies and configure the processes to address the issues.

**Product Category Analysis**

**(Top 10)**

A graph with text on it

Description automatically generated with medium confidence

The analysis of product categories is represented through Line chart for the Top 10 products. This visual breakdown provides insights into customer satisfaction with different products.

**Key-Insights**

* **Customer Satisfaction** – These visuals help identify which products are most liked by customers based on purchase.
* **Top-10 Products** – ‘Bed-bath-table’, ‘Health-beauty, and ‘Sports-leisure’ are the Top 3 products with highest sales, indicating high customer satisfaction and potentially strong sales performance. These products can be highlighted in marketing campaigns to attract more customers.
* **Leveraging High Ratings** – Use the information about the highest-selling products to promote them more aggressively. Highlight these products in advertising campaigns and consider using customer testimonials to boost sales.
* **Product Quality** – High sales suggest good product quality and customer satisfaction.

**(Bottom 18)**

A screen shot of a graph

Description automatically generated

The analysis of product sales is represented through Line chart for the Bottom 18 least selling products. This visual breakdown provides insights into customer satisfaction with different products.

**Key-Insights**

* **Customer Satisfaction** – These visuals help identify which products are least liked by customers.
* **Bottom 10 Lowest selling Products** – ‘Fashion\_Childrens\_Clothes, ‘security\_and\_services’, are the Bottom 2 Products with lowest sales. Suggesting dissatisfaction among customers. This could be due to various factors such as poor quality, mismatch with customer expectations, or other issues.
* **Improving Low sales** – Investigate the reasons behind the low ratings for the bottom products. Consider gathering detailed feedback from customers to understand the issues and make necessary improvements. This could involve quality checks, better product descriptions, or enhanced customer support.
* **Product Quality** – Low sales also indicate potential issues with product quality or customer expectations.

**Analysis of Active Sellers Yearly**

A screenshot of a graph

Description automatically generated

This visualization presents the number of active sellers yearly across total orders

**Key-Insights**

* Active sellers are the ones who have considerable amount of sales across various product categories and the year 2018 shows the high level of market capture through many sellers followed by the year 2017 and 2016 respectively.

**Analysis of Active Sellers Monthly**

A graph of sales on a computer screen

Description automatically generated

This visualization presents the number of active sellers Monthly across total orders

**Key-Insights**

* Active sellers are the ones who have considerable amount of sales across various product categories and the month AUG shows the high level of market capture through many sellers followed by the JULY and JUNE respectively.
* This shows that the order numbers have players a crucial role in these months which lead the increase in sales as compared to other months of the year.

**Payment Method Analysis**

A screen shot of a pie chart

Description automatically generated

The analysis of payment methods is represented through a pie chart, providing a clear visual breakdown of the most frequently used payment methods by customers.

**Key-Insights**

* **Most Used Payment Method** – The pie chart helps identify that ‘Credit Card’ payment method are most popular among customers. This can indicate customer preferences and potentially inform strategic decisions around payment options. The payment method that is used most frequently, which might indicate customer trust and satisfaction with that method.
* **Least Used Payment Method** – Debit cards are identified as the least frequently used payment method. This insight can prompt an investigation into why this method is not as popular among customers.
* **Improving Less Used Methods** – Investigate why debit cards are less popular. Potential actions could include improving the user experience, offering incentives, or ensuring better security measures.

**Credit Card Payment Analysis**

A graph of different colored bars

Description automatically generated with medium confidence

The analysis of monthly payment method is represented through a bar chart, providing a clear visual breakdown of the majorly used payment methods value distribution across months.

**Key-Insights**

* **Most Used Payment Method** – The pie chart helps identify that ‘Credit Card’ payment method are most popular among customers. This can indicate customer preferences and potentially inform strategic decisions around payment options. The payment method that is used most frequently, which might indicate customer trust and satisfaction with that method. As we can see in the chart, the months which have generated revenue predominantly through credit payment are May, August and March contributing largely across various product categories.

**City-wise Sellers Analysis**

A graph with numbers and text

Description automatically generated with medium confidence

This bar chart provides the detailed representation of sellers across various states.

**Key-Insights**

* The amount of sellers against each city shows us the capacity of geographical penetration into the market segment and the possible industrial presence to cater the need of the market. It shows the manufactured substances in these cities have demand and generates better profits as compared to other regions or cities.
* Top 3 cities within the given data are ‘Curitiba’ with 127 sellers followed by ‘Rio\_de\_Jeniero’ and ‘ribeirao’ Preto with 96 and 52 respectively.

**Monthly Comparison of On-time and Delayed Orders**

A graph of a delivery

Description automatically generated with medium confidence

The Monthly comparison of On-Time and Delayed Orders is represented in clustered column chart. This visual provides a clear month-by-month breakdown of the performance in terms of delivery punctuality.

**Key-Insights**

* **Monthly Delayed Delivery Trend** – April and March month appear to have the highest counts of delayed deliveries, indicating potential issues or challenges during this period.
* **Monthly On-Time Delivery** – August and May month appear to be the highest count of On-Time deliveries, suggesting a balance performance despite challenges.
* **Seasonal Trends** – The visual helps identify any Seasonal trends in delivery performance. For instance, an increase in delayed orders during certain months might indicate higher order volumes or potential issues in the supply chain.

By regularly Monitoring the visual, Shop-Nest can proactively manage its logistics and improve customer satisfaction by minimizing delivery delays, the detailed Drill through analysis further allows for a granular look into specific problem areas, enabling targeted improvements.

**Product Category-wise Profit**

A screenshot of a computer

Description automatically generated

By this matrix we can identify the profit margin of every product category and this will serve as a prime factor to determine any of the key business parameters in order to align if failing and promote if working good.