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Target Brazil E-Commerce Performance Dashboard Report

Executive Summary

This particular business case focuses on the operations of Target in Brazil and provides insightful information about 100,000 orders placed between 2016 and 2018.
By analyzing this extensive dataset, it becomes possible to gain valuable insights into Target's operations in Brazil. The information can shed light on various aspects of the business, such as order processing, pricing strategies, payment and shipping efficiency, customer demographics, product characteristics, and customer satisfaction levels.

Key Findings

- Over **100,000 orders** generated **$35 million** in **revenue** with an **average freight cost** of **$12.50 per order.**
- **Year over Year growth:**

  2017 vs 2016= Massive spike—since the percentage growth is (45101 - 329)/(329)*100 approx 13,608%.

  2018 vs 2017=Healthy growth, though much more stable since percentage growth is (54011-45101)/(45101)*100 approx 19.7%

- **Average delivery time** improved from 9.8 days in 2016 to 8.2 days in 2018.
- **Afternoon Dominates with** placing 38,135 orders — the highest volume,Suggests peak user activity or business transactions occur post-lunch.
- **São Paulo** and **Rio de Janeiro** accounted for 42% of orders, enjoying the lowest average freight rates
- **On-time deliveries** scored 4.3 on average, while late deliveries averaged 2.8 in customer reviews
- **Credit Card payments** comprised 65% of transactions

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INTRODUCTION

Target is a globally renowned brand and a prominent retailer in the United States. Target makes itself a preferred shopping destination by offering outstanding value, inspiration, innovation and an exceptional guest experience that no other retailer can deliver.

Project Goals :

- Analyse growing trend in the no. of orders placed over the past years (2016-2018)
- Identify top performing States and Product Categories.
- Observing Monthly seasonality in terms of number of orders.
- Understand Customer behaviour wrt State/City.
- Observing average delivery times.
- Analysing Freight value by seller state
- Enable actionable insights for marketing,sales and operations teams.

Tools Used: Power BI Desktop was used to build an interactive dashboard for Target's Brazilian operations (Power Query, DAX, KPI Cards, Maps, Decomposition Tree)

Dataset: Eight tables—**customers, geolocation, orders, order_items, payments, order_reviews, products, and sellers**—were modeled in a **star schema with a bridge table** for ZIP code matching. The goal was to unify sales, logistics, customer behavior, and payment data to support strategic decisions.

Key Highlights

- Five dashboard pages covering orders, customers, products & sellers, delivery & reviews, and freight & payments.
- Interactive slicers for year, state, product category.
- Decomposition tree visuals to drill into freight cost and payment value by multiple dimensions.
- Real-time KPIs for revenue, orders, freight, delivery performance, and customer satisfaction
- Export options: Publish to Web, Power BI Service sharing, PDF/PowerPoint export

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DASHBOARD OVERVIEW & ANALYSIS

1. Order Overview

- Displays **KPIs**—Total Orders, Total Revenue, Total Freight, Average Review Score, Unique Customers.
- Trend **charts** for yearly and monthly order volume, enabling quick assessment of sales performance and fulfillment health.
- Overall **growing trend** observed from 2016-2018.The 19.7% growth in 2018 indicates continued momentum.
- **Peak in early 2018**, Quarter 1**(Jan-Mar)** highest single quarter with **21208 orders**.
- 2018 started strong but declined each quarter, ending in a cliff (Probably due to **restricted data availability** from Sep 2016-Oct 2018).
- **Pie chart is** used to display time of the day segments in proportion to total orders. **Afternoon dominates** in placing of orders, Suggests peak user activity or business transactions occur post-lunch.
- **Night & Morning Are Competitive** — indicates steady demand throughout the day, possibly from different user segments (e.g., working professionals vs early risers).While **Dawn is Quiet** which reflect:Low user engagement,Operational downtime,Natural sleep cycle alignment.

2. Customer Insights

- **Maps** customer distribution by city and state, ranks top cities by unique customer count, and shows orders per state.
- **Slice**r used to select **Top N** (1-20) cities wrt state which shows regional marketing and expansion strategies by **highlighting high-value markets.**
- **São Paulo (SP) Dominates** with **40,302 customers** — nearly half of total Indicating strong brand presence, market penetration, or urban concentration.
- **Top 5 states** (SP, RJ, MG, RS, PR) account for **~72%** of all customers.
- **North** & Northeast **Underrepresented.**

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3. Product & Seller Performance

- **Ranks top products by revenue** and **top sellers by contribution.**
- A **matrix visual** breaks down **revenue by seller region and product category**, revealing high-margin items and top-performing seller partnerships.
- **HEALTH BEAUTY** leads with nearly **1.0M in revenue**, followed by **Watches**, **Bed Tables**, and **Sport Leisure**.
- A total of **3,095 sellers** are active in the dataset, indicating a **diverse and decentralized seller base**.
- **Datewise slider** used to see effect changes in revenue generation.

4. Delivery & Review Analysis

- Analyzes **delivery efficiency** with a **line chart** of average delivery times.
- **Peak Delays in Feb, Apr, and Dec -** February and April show the highest average delivery times, peaking around **16 days**.December also sees a sharp rise, likely due to **holiday season demand** and **logistics strain**.
- **Fastest Deliveries in Late Summer to Early Fall -** From **May to September**, delivery times steadily improve, bottoming out in **September** at just under **9 days**.This could reflect **operational efficiency**, **lower demand**, or **favorable weather conditions**.
- **Consistent Yearly Pattern -** The cyclical nature suggests these trends are **seasonal**, not random.
- **List slicer** used to see the differences over years and months.
- A **histogram of review score** distribution identifies operational bottlenecks affecting customer satisfaction.
- **Score 5 dominates**:
    - With **~60K reviews**, score 5 is by far the most common.
    - This suggests a **strongly positive customer experience** overall.The high volume of 5s could indicate **consistent performance**.
- **Score 4 is solid**:
    - Around **20K reviews**, indicating many users were satisfied but not blown away
- **Polarized feedback**:
    - The sharp contrast between high (5) and low (1) scores suggests customers tend to rate based on **extreme experiences**.

- **Review bias**:
    - Happy customers may be more likely to leave reviews, skewing the distribution toward 5.
- **Total orders by order status** are also displayed using **Doughnut chart**.
- **Delivered orders dominate**:
    - With **96K orders**, **97.02%** of all orders are marked as *delivered*.
    - This suggests a **high fulfillment rate** and strong operational reliability
    - **Other statuses are negligible**: S*hipped*, *Canceled*, *Unavailable*, and *Invoiced* together make up just **1.11%** of total orders,indicating **minimal disruption** or backlog.

5. Freight & Payment Analysis

- Examines total freight costs and payment method popularity over the years.
- **$2.3M** in freight expenses over the selected period (2016–2018). Freight is a **significant operational cost**, and its breakdown reveals key drivers.
- A **decomposition tree** breaks down freight by state, order status and product category.
- **Credit Card** dominates with **77K orders**, followed by:
    - **UPI**: 20K
    - **Voucher**: 8K
    - **Debit Card**: 2K
- Two seller regions—**SP ($1.1M)** and **MG ($1.2M)**—account for **100% of freight costs**. All freight is tied to **delivered orders**; canceled orders incur **no freight**.
- Top freight-heavy categories:**Furniture Decoration** ($0.6M under SP),**Best Rate High Quality** ($0.5M under SP),**Health Beauty** and **Kitchen** ($0.6M each under MG)

Insights & Recommendations

- **Enhance Customer Retention** :

  - 96K customers vs 99K orders suggests low repeat purchase rate.

  - Launch loyalty programs or personalized offers for returning customers.

- Use segmentation to identify high-value customers and tailor outreach.

- Introduce subscription models for consumables or frequently purchased items.

- **Build a Time-Based Order Strategy** :

  - Orders are concentrated in afternoon,night and morning

  - Align ad spend and campaign timing with peak order windows.

  - Adjust customer support staffing to match order volume by time of day.

  - Test time-sensitive offers to boost morning engagement (currently lowest)

- **Double Down** on High-Density States (SP, RJ, MG) and **Expand** in Underpenetrated Regions:

  -SP alone contributes ~44% of customers — make it the core market:

  -Launch exclusive loyalty programs

  -Offer same-day delivery or premium services

  -Prioritize customer retention and upselling

- **Strengthen Peak Season Logistics:**

  - Pre-stock inventory in high-demand regions.

  - Partner with alternate carriers or offer expedited shipping options.

- **Leverage Strong Review Scores:**

  - Highlight top-rated products in marketing and on-site banners.

  - Encourage reviews with incentives to boost credibility.

  - Use sentiment analysis to identify customer delight drivers.

- **Category Strategy :**

  - Double Down on High-Performing Categories

  - Expand product lines in Health Beauty, Watches, and Sport Leisure.

  - Invest in targeted promotions and bundling strategies for these categories.

  - Revitalize Underperforming Segments

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- **Optimize Seller Performance :**

  - Identify top-performing sellers and replicate their success models.

  - Offer seller incentives, faster onboarding, and localized marketing support.

  - Expand in Underpenetrated Regions

- **Optimize Freight Efficiency**: Freight cost is ~17% of total revenue ($2.3M out of $13.6M):

  - Identify high-cost product categories and explore local warehousing or bulk shipping.

  - Negotiate better rates with logistics partners.

  - Introduce freight-saving incentives for customers (e.g., free shipping thresholds).

- **Promote Low-Cost Payment Channels :**

  - Credit cards dominate, but may carry higher transaction fees.

  - Encourage UPI and debit card usage via:

  - Discounts

  - Loyalty points

  - Faster checkout experience

Conclusion

Before this project, data lived in silos across multiple systems, delaying insights and driving reactive decisions. The dashboard consolidates diverse datasets into a unified, interactive view, enabling real-time monitoring, root-cause analysis, and proactive strategy adjustments for Target's Brazil operations.

Technical Appendix

Component	Details
Data Tables	customers; geolocation; orders; order_items; payments; order_reviews; products; sellers

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Data Model	Star schema with orders as fact table; ZipBridge table for ZIP code prefix relationships
Key DAX Measures	Total Orders; Total Revenue; Average Delivery Time; Average Freight Value; Unique Customers
Visualizations	KPI Cards; Line Charts; Bar/Column Charts; Map; Matrix; Decomposition Tree; Table
Platform & Tools	Power BI Desktop; Power BI Service; Power Query Editor; DAX; Publish to Web; PDF export