KPIs in Retail Data Analytics

KPI Name	Definition / Metric	Formula / Segmentation
Order Cost Growth Rate	% increase in total order cost (Jan–Aug 2017 vs. Jan–Aug 2018)	((Total Order Cost 2018 – 2017) ÷ 2017) × 100%
State-Wise Total Order Value	Total payment value of orders per state	SUM(payment_value) per state
State-Wise Average Order Value	Average payment value per order per state	AVG(payment_value) per state
State-Wise Total Freight Value	Total freight cost of orders per state	SUM(freight_value) per state
State-Wise Average Freight Value	Average freight cost per order per state	AVG(freight_value) per state
Monthly Order Volume by State	Number of orders per state, per month	COUNT(orders) per state per month
Customer Geographic Distribution	Number of unique customers per state	COUNT(DISTINCT customer_id) per state
Order Delivery Time (per order)	Days between order purchase and delivery	order_delivered_customer_date - order_purchase_timestamp
Delivery Lead Time Variance (per order)	Days between estimated and actual delivery date	order_estimated_delivery_date - order_delivered_customer_date
Top/Bottom 5 States by Average Freight Value	States with the highest/lowest average freight cost	Rank states by AVG(freight_value), show top/bottom 5
Top/Bottom 5 States by Average Delivery Time	States with the highest/lowest average days to deliver	Rank states by AVG(delivery time), show top/bottom 5
Top 5 States with Fastest Deliveries vs. Estimate	States where delivery is fastest compared to estimate (largest negative difference)	Rank states by AVG(diff_estimated_delivery), show most negative 5
Month-on-Month Order Volume by Payment Type	Orders per month, segmented by payment method	COUNT(orders) per month per payment_type
Order Count by Payment Installment Plan	Number of orders by payment installment number	COUNT(orders) per payment_installment

Actionable Insights

- The state of São Paulo (SP) accounts for significantly more orders than the next five states combined, highlighting substantial growth opportunities in other regions. Targeted strategies in these areas can increase orders and expand the customer base.

- Sales show clear seasonal peaks during festive periods. Aligning marketing and sales efforts with these cycles can maximize revenue and improve customer satisfaction.

- Reducing delivery times in regions with extended shipping durations will enhance customer satisfaction and encourage repeat purchases. Optimizing logistics and shipping processes is critical.

- High order volumes in SP and Rio de Janeiro (RJ) suggest a focus on customer retention through personalized marketing, loyalty programs, and excellent customer service to sustain growth and brand loyalty.

- Analyzing customer demographics facilitates tailored product offerings and marketing, driving increased sales and satisfaction.

- Order volumes decline during September and October. Implementing discounts or promotions during these off-peak months can stimulate demand and boost sales. Additionally, focusing on states with lower average ratings by reducing delivery delays, minimizing cancellations, and ensuring product quality will improve customer reviews.

- Though economic data is absent, evaluating economic influences on sales can guide strategies to increase resilience during market fluctuations.

Recommendations

- Optimize logistics and shipping by streamlining warehouse operations, refining shipping routes, and partnering with reliable couriers to reduce delivery times and boost customer satisfaction.

- Implement retention strategies such as loyalty programs, referral incentives, and personalized offers to encourage repeat purchases.

- Regularly review pricing and freight fees to balance market competitiveness with profitability.

- Invest in technology and infrastructure—including chatbots, website performance improvements, and personalized recommendations—to enhance the e-commerce experience.

- Collaborate with sellers to diversify and improve product quality, meeting varied customer preferences.

- Utilize social media and influencer partnerships to increase brand awareness and influence purchasing decisions.

- Enhance customer service with responsive chat support to ensure timely, effective responses.

- Monitor competitor activity and adapt pricing, product offerings, and service quality to maintain a competitive edge.

By implementing these recommendations, businesses can streamline operations, elevate customer satisfaction, and drive growth in Brazil's dynamic e-commerce market.

Key Takeaways

- São Paulo remains dominant in Brazil's e-commerce market, underscoring the need to develop other states for balanced growth.

- Customer demographic insights enable effective product and marketing customization, increasing engagement and sales.

- Strategic discounts during off-peak seasons can successfully stimulate demand.

- Continuous improvement of delivery performance and product quality fosters positive customer reviews and reduces cancellations.

- Monitoring economic conditions will support strategic planning for sustained resilience.