

There are multiple business insights derived from the data after performing EDA. Regional product demands, product trends as per their pricing and the latest inclination towards technology in a post pandemic world, are being highlighted in below business insight

1. Regional Preferences for Products

The preferences for products vary significantly across regions, indicating distinct customer tastes across the continents:

- In South America, the ActiveWear Smartwatch emerged as the most popular product, with 38 units sold. This suggests a high interest in wearable technology.
- In North America, the SoundWave Headphones took the lead with 37 units sold, highlighting the popularity of audio accessories.
- For Europe, ActiveWear Rug was the best-seller with 30 units sold, pointing to demand for lifestyle and home-oriented products.
- In Asia, HomeSense T-Shirt topped the list with 28 units sold, emphasizing the appeal of affordable, everyday apparel.

These patterns reflect opportunities to tailor marketing strategies and inventory based on regional preferences. Though a common trend of tech product is noticed in America (Both South and North), while cloth product in Eurasian continental side.

2. Revenue Contribution by Region

Analyzing the Average Order Value (AOV) reveals the financial performance of different regions:

- South America recorded the highest AOV at \$721.55, suggesting a higher purchasing power or preference for premium products.
- Europe closely followed with an AOV of \$710.49, showcasing a balanced spending pattern.
- Asia maintained a mid-tier AOV of \$697.59, likely reflecting competitive pricing or product demand.
- North America, with an AOV of \$624.23, showed relatively lower spending, possibly due to the higher frequency of smaller purchases.

This insight helps in identifying regions where high-ticket items might perform better and adjusting pricing or product variety accordingly.

3. Product Pricing Insights

The dataset reveals a wide price range among products, from **\$16.08 to \$497.76**. The average price of **\$267.55** indicates that the product portfolio is positioned for both budget-conscious and premium segments. A standard deviation of **\$143.22** in pricing shows significant variation, which can cater to diverse customer needs. This spread of pricing ensures accessibility while also capturing high-value customers seeking premium goods.

4. Customer Demographics and Behavior

The dataset includes 200 unique customers across four regions, with no missing values in customer information. Each customer has a unique ID, indicating individual-level data collection.

Most customers signed up recently, as reflected in the unique signup dates (179 unique entries out of 200). This suggests a steady growth in customer acquisition and opportunities for retention programs like loyalty rewards and personalized promotions.

5. Sales Volume Distribution

Transactions generally involve small quantities, with most orders comprising 1 to 4 items (**mean = 2.54**). However, the presence of high-value transactions exceeding **\$1,000** suggests a niche segment of premium customers. These insights allow businesses to target these segments with specialized offers, such as exclusive bundles or early access to premium products.

6. Top-Selling Products Across Regions

Despite regional differences, technology products such as ActiveWear Smartwatch and SoundWave Headphones consistently rank among the top-selling items. This trend demonstrates a strong demand for tech products, drawing similarity in recent trends noticed worldwide after Covid-19. It provides an apt opportunity to expand offerings in this category across all regions.

Conclusion,

In conclusion, there is a sharp liking for tech gadgets and people do not hesitate to spend towards (premium) quality products. With the above business insights, marketing and sales strategy could be devised to maximise revenue and diversify the portfolio of most liked products and improve less liked products as per customer taste.