

Initial Findings — 1-Page Summary

Quantum Retail Analytics

1. Data Cleaning Summary

Original transactions dataset: 264,836 rows
Outliers removed: 2 transactions (high PROD_QTY and TOT_SALES)
Final cleaned dataset: 264,834 rows
No missing values in transactional columns

Customer dataset:

- 72,637 customers
- No duplicates or missing values

Merging:

- Joined transactions with customer profiles on LYLTY_CARD_NBR
- All transactions matched successfully

2. Top Customer Segments

By Total Sales

- Mainstream — \$750,744.50 (highest spending group)
- Budget — \$676,211.55
- Premium — \$506,158.95

By Quantity Purchased (Lifestage)

- Older Singles/Couples — 104,203 units
- Older Families — 94,592 units
- Retirees — 94,166 units

High-Value Segment Combination

Older Singles/Couples + Mainstream/Budget = largest revenue and volume driver

3. Top Products

By Total Sales

- Dorito Corn Chp Supreme 380g — \$39,052
- Smiths Crinkle Chip Orgnl Big Bag 380g — \$36,367
- Smiths Crinkle Chips Salt & Vinegar 330g — \$34,804

By Quantity Sold

- Kettle Mozzarella Basil & Pesto 175g — 6,381 units
- Kettle Tortilla Hny&Jlpno; Chili 150g — 6,309 units
- Cobs Popd Sea Salt Chips 110g — 6,277 units

By Popularity (Transaction Count)

- Kettle Mozzarella Basil & Pesto 175g — 3,304 transactions
- Kettle Tortilla Hny&Jlpno; Chili 150g — 3,296 transactions
- Cobs Popd Swt/Chlli & Sr/Cream 110g — 3,269 transactions

4. Key Insights

- Older demographics consume the highest chip volume.
- Mainstream customers spend the most; Budget customers contribute strongly.
- Kettle and Smiths dominate sales and volume.
- Premium customers prefer large packs and premium brands.
- Strong repeat purchase behavior shows brand loyalty.
- Monthly sales trend indicates seasonal peaks.

5. Commercial Recommendations

(A) Target Older Customer Segments

- Bundle deals, multipacks, loyalty offers for Older Singles/Couples, Older Families, Retirees

(B) Focus on High-Performing Products

- Prioritize top Kettle and Smiths SKUs
- Increase premium large-pack availability

(C) Strengthen Loyalty & Retention

- Rewards for repeat buyers
- Exclusive trial packs for loyal customers

(D) Pricing & Promotion Strategy

- Mainstream: variety deals
- Budget: economy packs and discounts
- Premium: highlight quality and large sizes

(E) Seasonal Campaign Planning

- Promote during holiday peaks

(F) Product Innovation

- New flavors targeting Young Singles/Couples and New Families