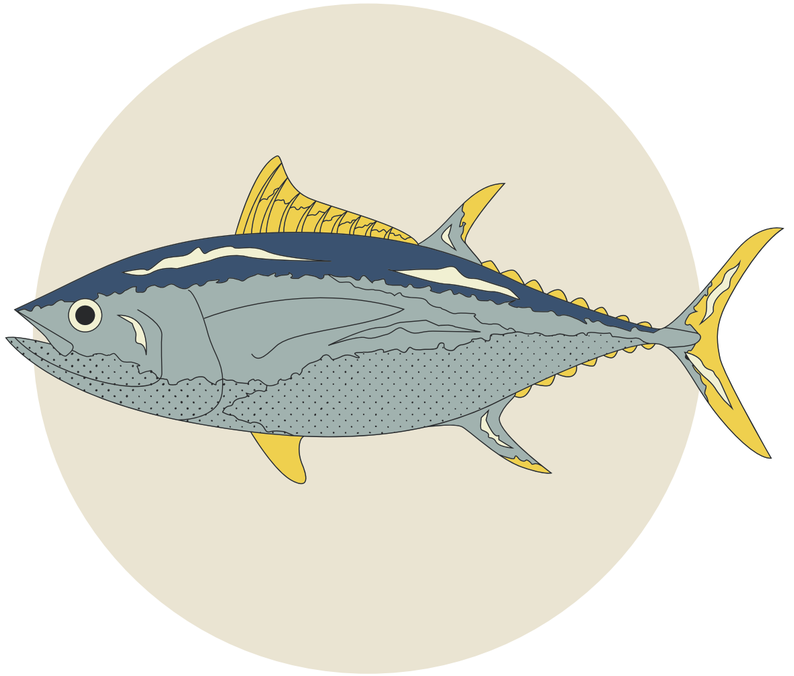
COMPETITIVE ANALYSIS OF TUNA BRANDS



GROUP 13: ANUSHA BHAT, AARAV DEWANGAN, BRUNA MEDEIROS, MAHIMA MASETTY

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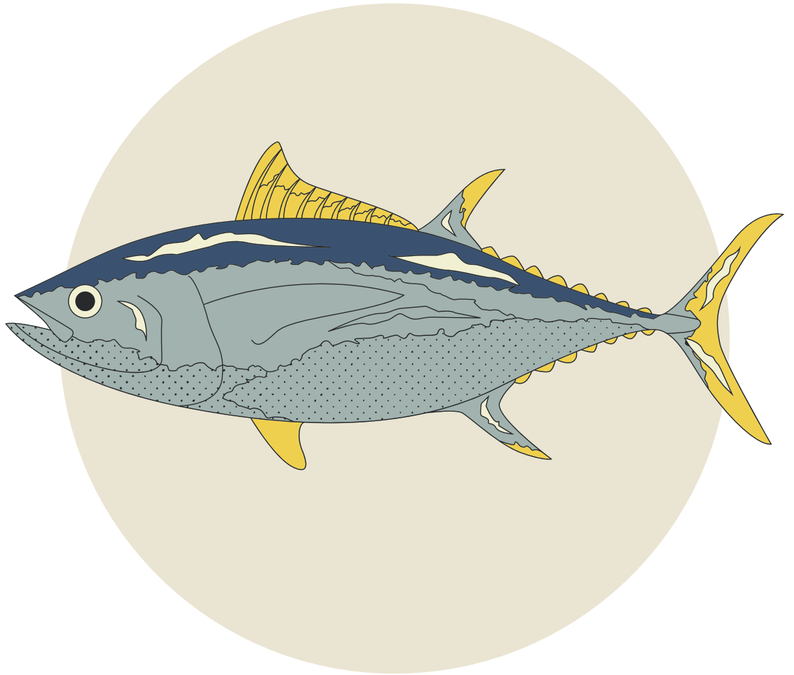
DATA INSIGHTS

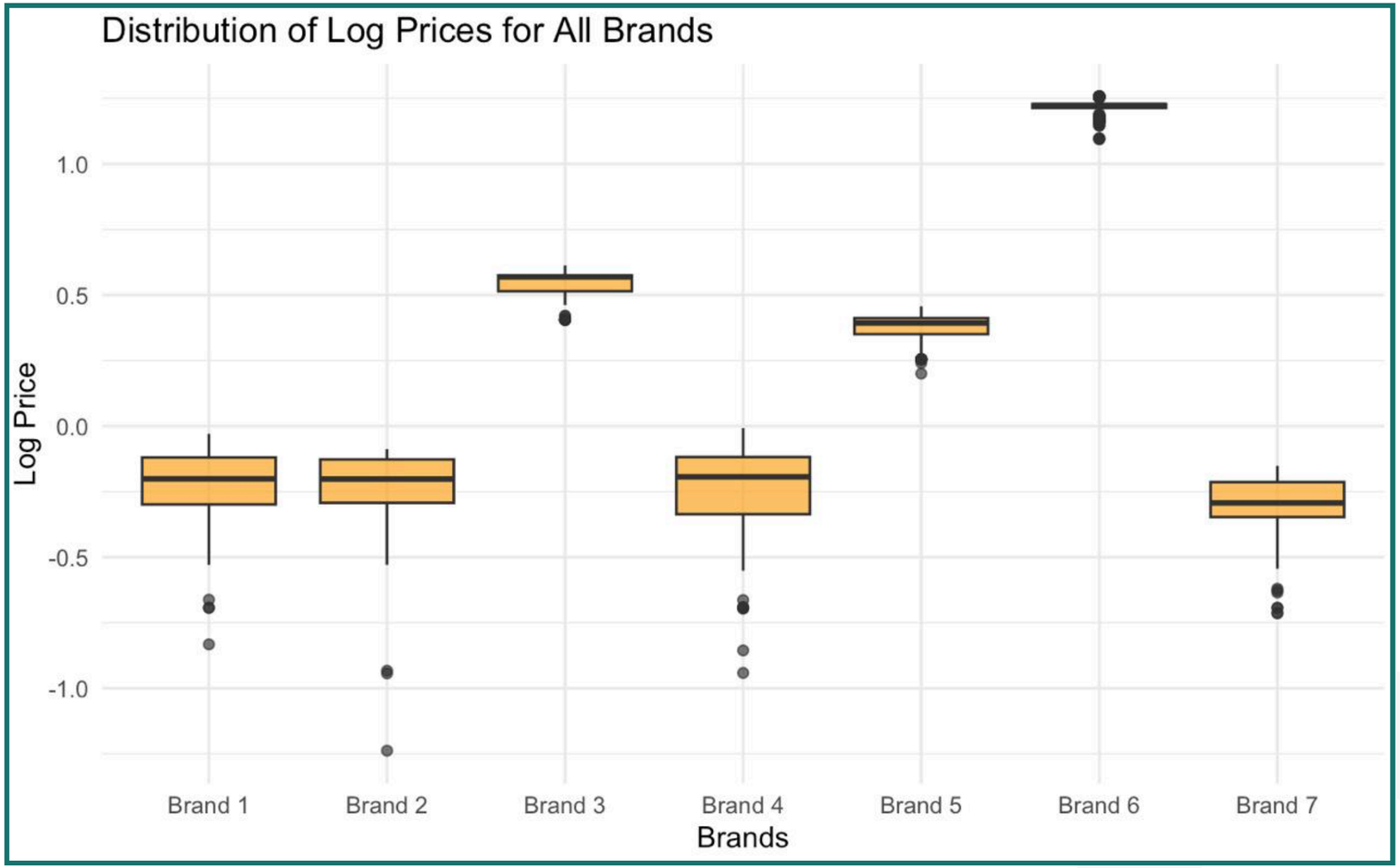


DESCRIBING THE DATA SET

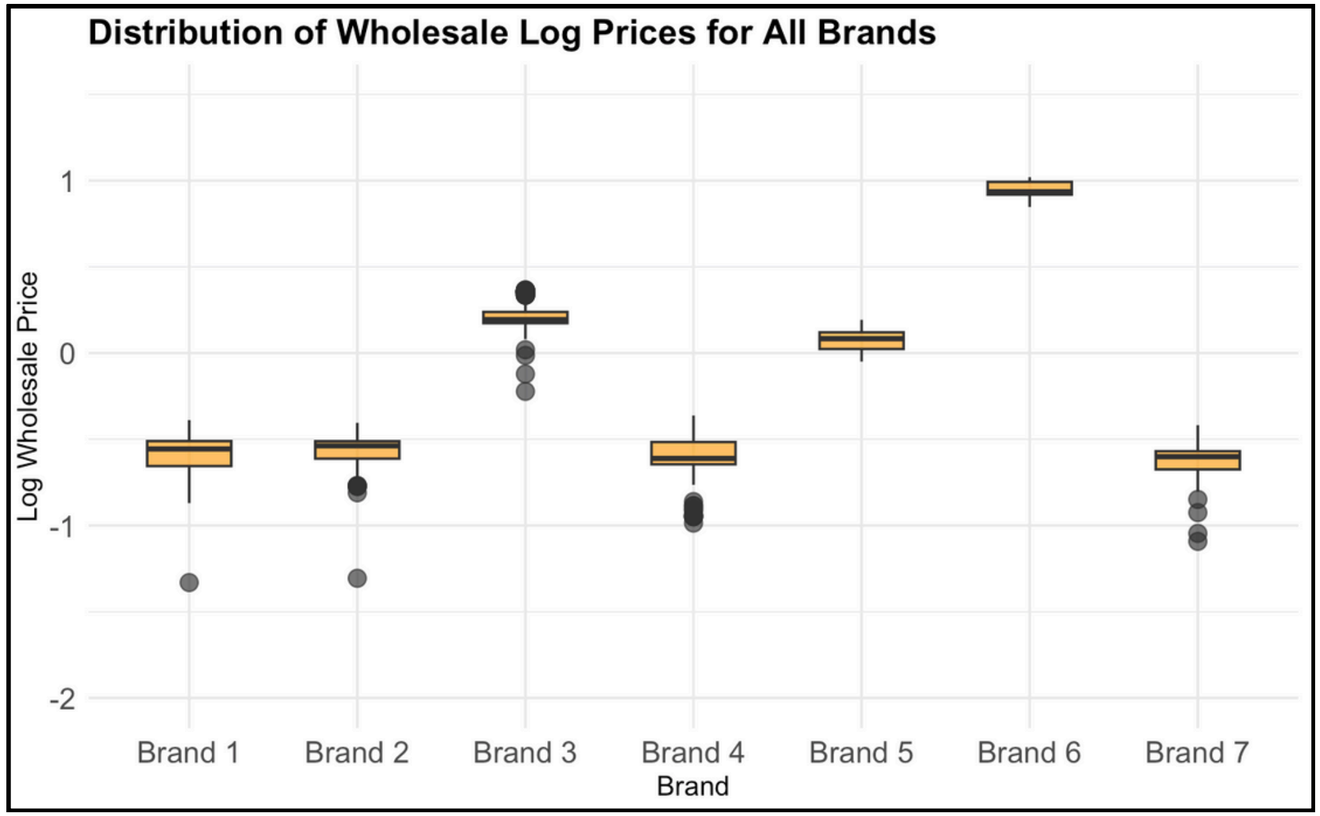
- The dataset contains no missing values
- The dataset contains 338 observations and 30 columns
- **WEEK:** The time variable (weekly data) - integer
- **MOVE1 to MOVE7:** Sales volume for seven different brands - integer
- **NSALE1 to NSALE7:** Measures of display activity or promotion for each brand - numeric
- **LPRICE1 to LPRICE7:** Log prices for each brand - numeric
- **LWHPRIC1 to LWHPRIC7:** Log wholesale prices for each brand - numeric
- **FULLCUST:** Total number of customers in the store - numeric

COMPARING DISTRIBUTION OF LOG PRICE ACROSS BRANDS

- Brand 6 is the **most expensive** brand
- Brands 1 and 2 are among the **cheapest** brands.
- Brand 4 has the most **variable pricing**, likely due to frequent price promotions.
- Brands 1, 2, 4, and 7 have outliers at lower prices, indicating temporary **discounts** or **promotional offers**.
- Brands with a tight Interquartile Range (IQR) (e.g., 3, 5, 6) have more stable pricing, suggesting less price sensitivity.

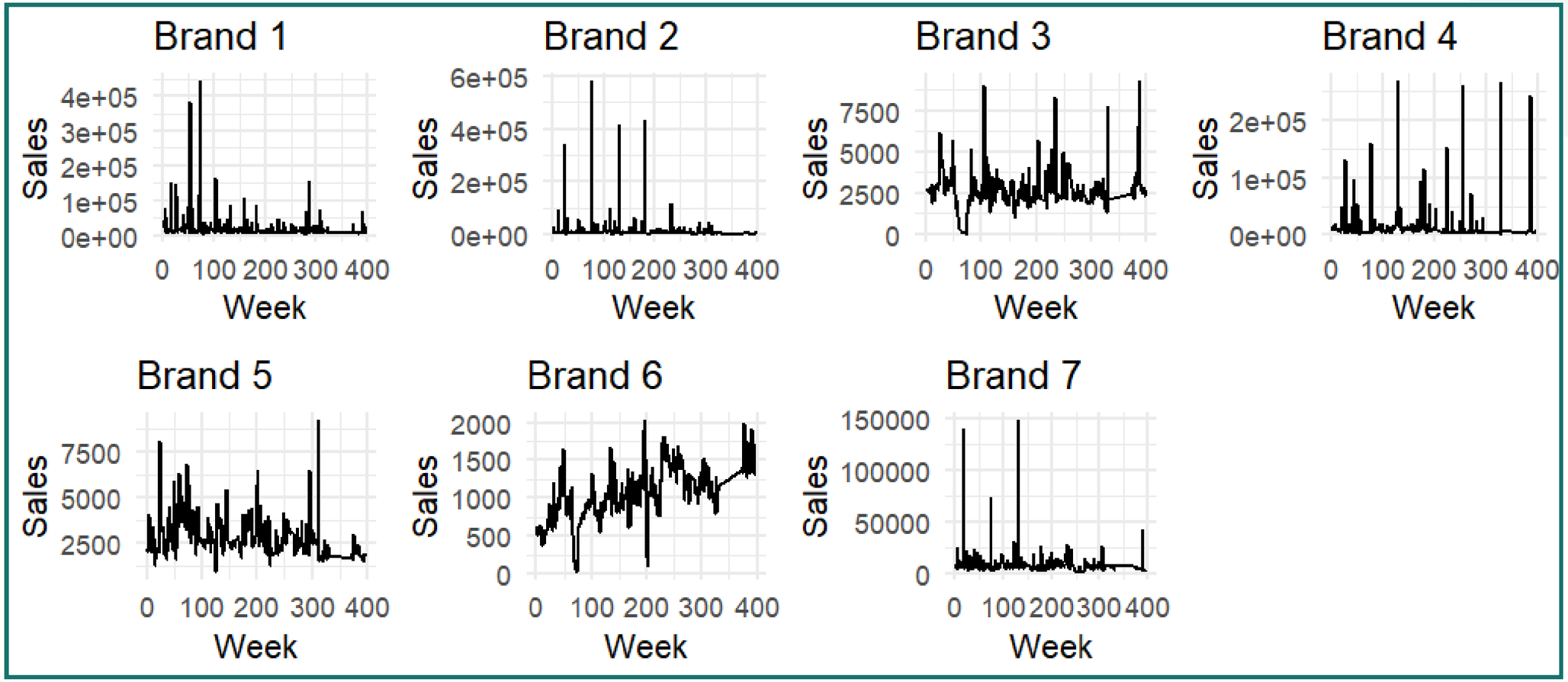


COMPARING DISTRIBUTIONS OF LOG WHOLESALE PRICE ACROSS BRANDS



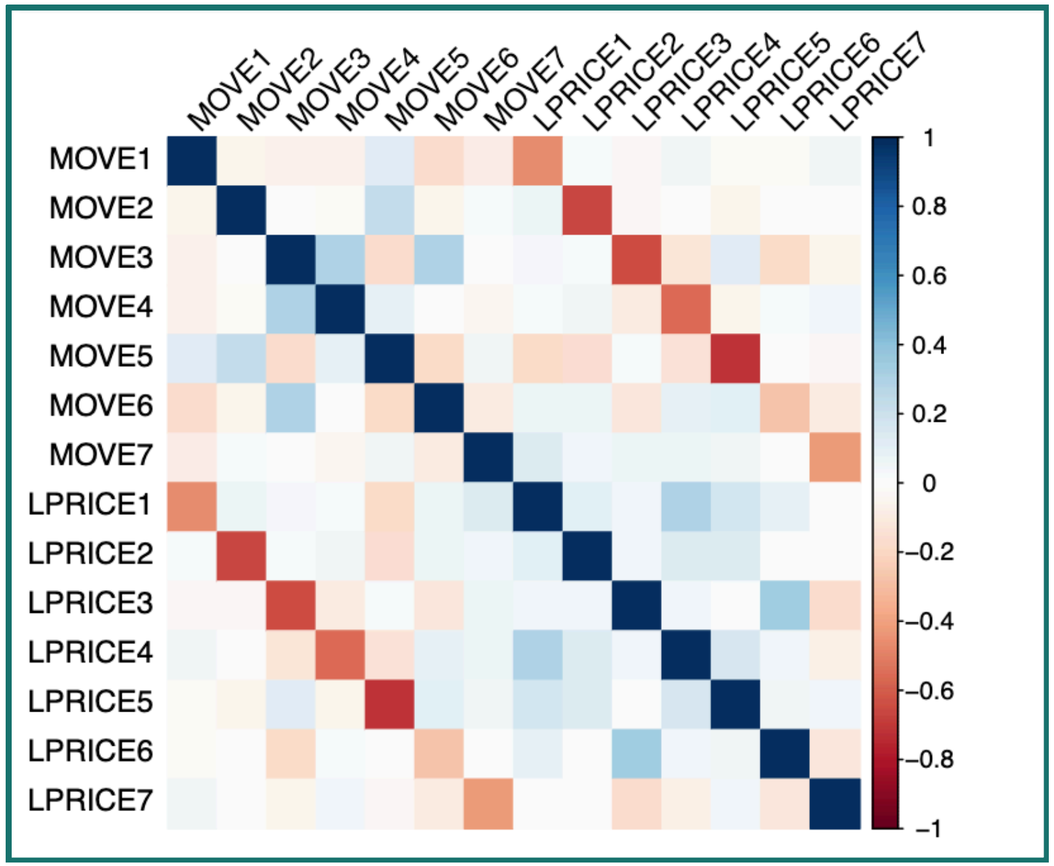
- Most wholesale prices are clustered near zero, meaning prices are **relatively stable**.
- Brand 2 has extreme negative outliers (e.g., around -10), which could indicate **data errors** or special **bulk discounts**.
- Brands 3, 5, and 6 have **higher wholesale costs** compared to others.

EXAMINING BRAND SALES OVER TIME



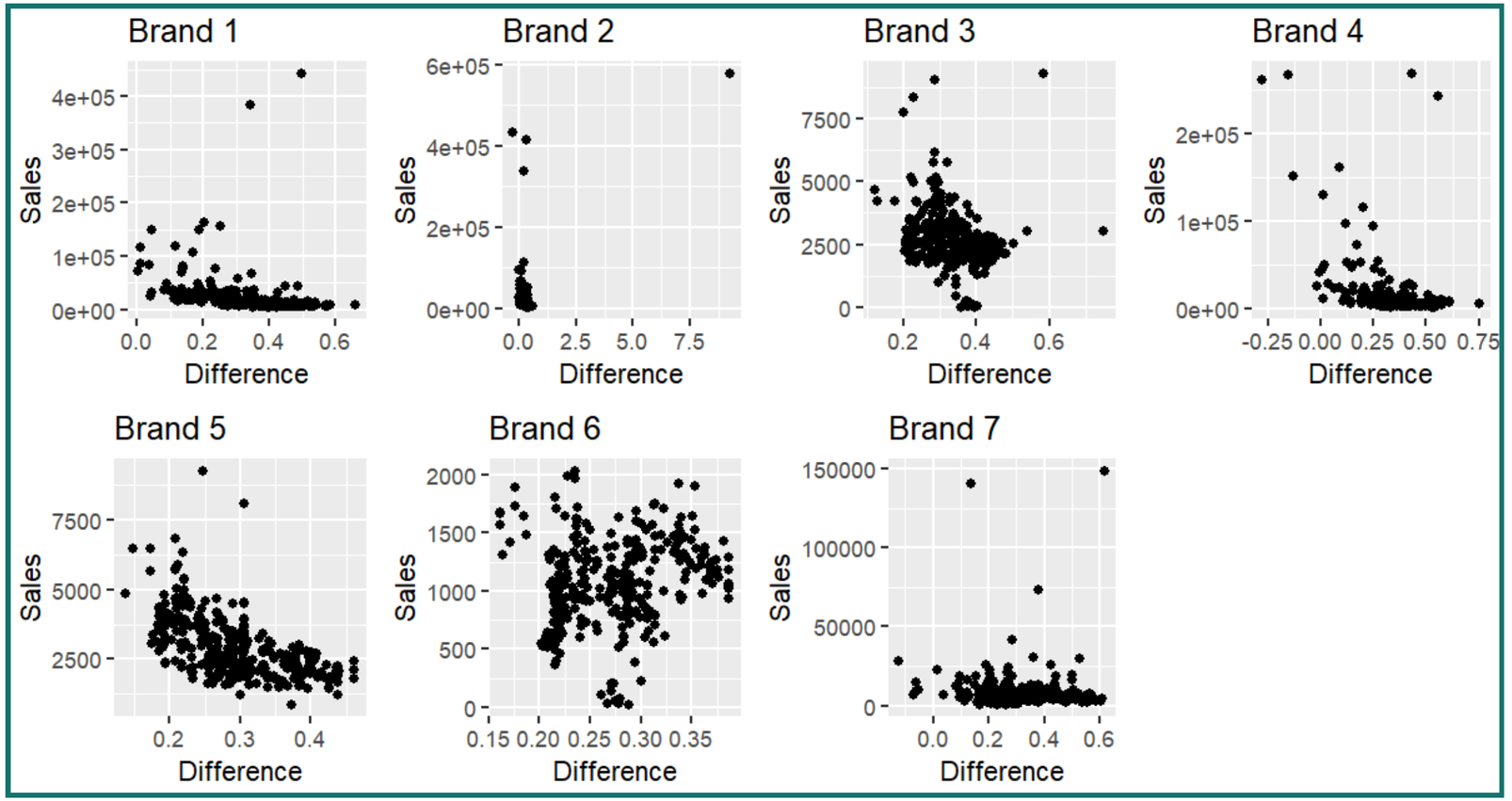
- Brands 1, 2, 4, and 7 have similar trends that are relatively **stable** with a **few large spikes** in sales over time.
- Brands 3 and 5 have **more fluctuation** but are relatively stable over time.
- Brand 6 shows an **increase in sales.**

CORRELATION BETWEEN SALES VOLUME AND LOG PRICE



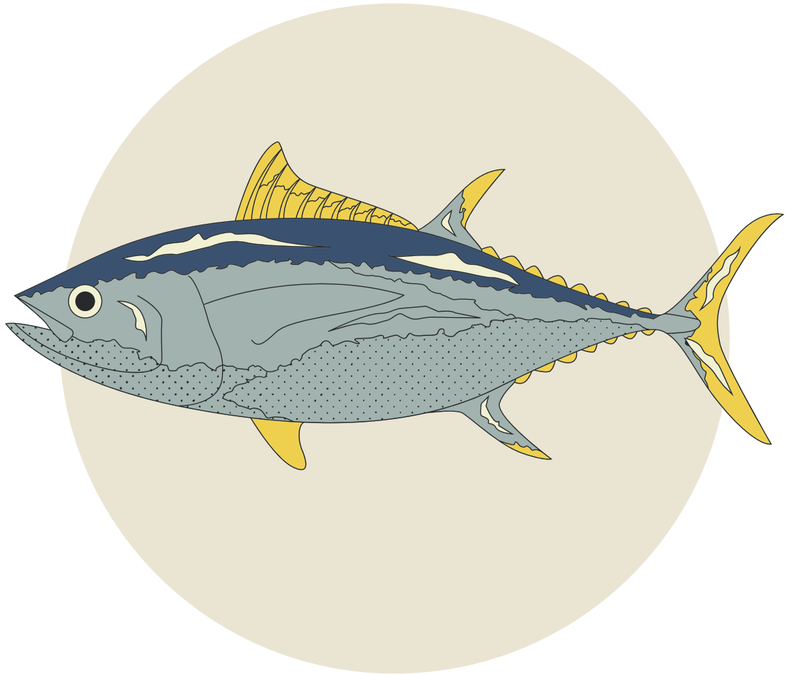
Brand	Correlation (Expected)	Price Sensitivity?
MOVE1 vs. LPRICE1	Moderate Negative	Price-sensitive
MOVE2 vs. LPRICE2	Strong Negative	Highly price-sensitive
MOVE3 vs. LPRICE3	Weak Negative	Less price-sensitive
MOVE4 vs. LPRICE4	Moderate Negative	Price-sensitive
MOVE5 vs. LPRICE5	Strong Negative	Highly price-sensitive
MOVE6 vs. LPRICE6	Weak	Possibly inelastic
MOVE7 vs. LPRICE7	Moderate Negative	Price-sensitive

EXAMINING BRAND SALES COMPARED TO WHOLESALE AND PRICE DIFFERENCE



- Difference between the log price and the log wholesale price of the brand's item.
- Brands 1, 2, 3, 4, and 7 don't exhibit a linear trend between sales and price differences.
- Brand 5 has a decrease in sales as the price difference increases.
- Brand 6 shows an increase in sales as the price difference increases.

SALES ELASTICITY MODELS



UNDERSTANDING SALES ELASTICITY IN THE TUNA MARKET

WHAT IS SALES ELASTICITY?

- Measures the responsiveness of sales to price changes.
- **Own-price elasticity**: Impact of a brand's price on its own sales (negative values expected).
- **Cross-price elasticity**: Impact of competitors' prices on a brand's sales (positive for substitutes, negative for complements).

STRATEGIC IMPLICATIONS

- High own-price elasticity → Sales are very sensitive to price changes.
- Low own-price elasticity → Sales are not senstivie to price changes
- Positive cross-price elasticity → A competitor's price increase boosts a brand's sales (substitutes).
- Negative cross-price elasticity → A competitor's price increase reduces a brand's sales (complementary effects or weak substitution).
- Helps inform pricing, promotions, and competitive positioning.

OWN-PRICE ELASTICITY ACROSS BRANDS

Brand	Own-Price Elasticity	Implication
Brand 1	**-4.43**	A 1% price increase → 4.43% drop in sales
Brand 2	**-5.12**	Highly price-sensitive, a 1% increase → 5.12% drop
Brand 3	**-6.47**	Most price-sensitive, strong decline in sales
Brand 4	**-4.83**	Price changes significantly impact demand
Brand 5	**-5.13**	Large decline in sales with price hikes
Brand 6	**-2.67**	Less sensitive but still affected by price
Brand 7	**-3.21**	Moderate price sensitivity

Brands 2, 3, and 5 are highly price-sensitive—raising prices could significantly reduce sales.

CROSS-PRICE ELASTICITY

Positively Impacted Brands When Competitors Raise Prices

- Brand 1: Gains 1.12% in sales when Brand 4 raises prices.
- Brand 2: Gains 1.19% in sales when Brand 1 raises prices.
- Brand 3: Gains 2.88% in sales when Brand 5 raises prices

→ Strongest substitute effect.

Negatively Impacted Brands When Competitors Raise Prices

- Brand 3: Sales drop 1.39% when Brand 2 decreases prices.
- Brand 4: Sales drop 1.22% when Brand 3 decreases prices.
- Brand 7: Sales drop 4.32% when Brand 6 decreases prices

→ Strongest negative impact.

COMPETITIVE IMPACT

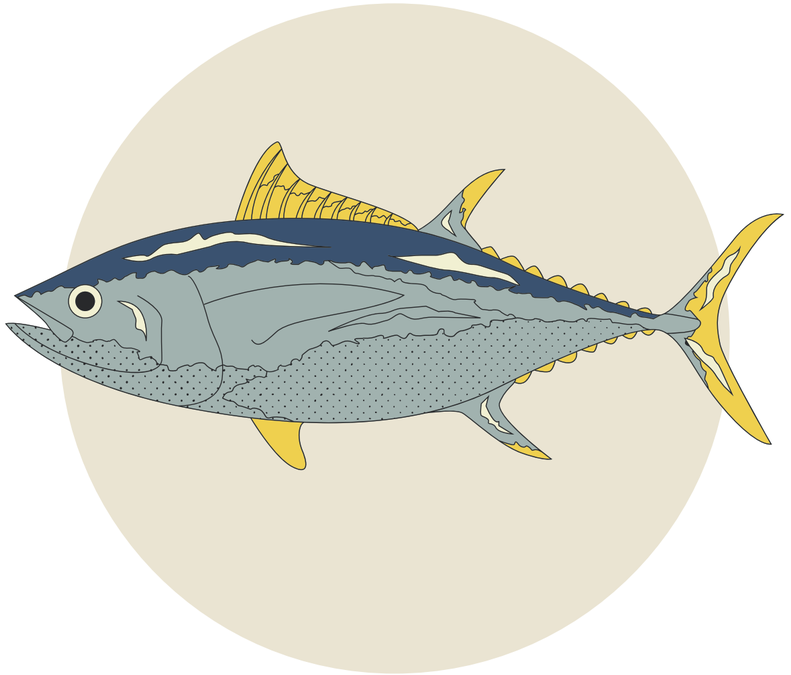
Opportunities for Price Optimization

- Brand 1 can benefit if Brand 4 raises prices.
- Brand 2 can benefit if Brand 1 raises prices.
- Brand 3 can use Brand 5's price increases to its advantage as there is potential to gain +2.88% in sales with minimal price changes.

Price Increase Risks

- Brand 3 & Brand 5 should avoid aggressive price hikes as their customers will likely switch to competitors.
- Brand 7 should be cautious if Brand 6 lowers prices, as it could lose a large share of sales.

MARKET SHARE ELASTICITY MODEL



UNDERSTANDING MARKET SHARE ELASTICITY IN THE TUNA MARKET

WHAT IS MARKET SHARE ELASTICITY?

Market share elasticity measures how a brand's market share responds to changes in its own price. It tells us:

- How sensitive customers are to price changes.
- How pricing decisions impact competitive positioning.
- Which brands are more or less price-elastic.

STRATEGIC IMPLICATIONS

- Helps brands optimize pricing strategies to protect or grow market share.
- Identifies which competitors pose the biggest pricing threat.
- Supports strategic promotions and discounting decisions.

SHARE-PRICE ELASTICITY ACROSS BRANDS

Brand	Share Price Elasticity	Implication
Brand 1	**-5.2**	1% price increase → 5.2% drop in market share
Brand 2	**-5.5**	1% price increase → 5.5% drop in market share
Brand 3	**-2.6**	1% price increase → 2.6% drop in market share
Brand 4	**-4.9**	1% price increase → 4.9% drop in market share
Brand 5	**-4.2**	1% price increase → 4.2% drop in market share
Brand 6	**-2.5**	1% price increase → 2.5% drop in market share
Brand 7	**-3.3**	1% price increase → 3.3% drop in market share

Brands 1, 2, 4 and 5 are highly price-sensitive—raising prices could significantly reduce market share.

KEY TAKEAWAYS FOR OPTIMIZING PRICING FOR MARKET SUCCESS

01 Price Sensitivity Varies Across Brands

- Brands 1, 2, and 4 rely on low prices and promotions but face high price sensitivity—small price increases significantly reduce sales.
- Brand 6 maintains premium pricing with increasing sales, suggesting strong brand loyalty and less price sensitivity.

02 Market Share & Competitive Positioning

- Price-driven brands (1, 2, 4) are vulnerable to competitor pricing changes, requiring careful discount strategies.
- Mid-tier brands (3, 5) have more stable pricing and potential to optimize margins.
- Brand 6 can sustain premium positioning but should monitor competitive shifts.

03 Strategic Recommendations

- Low-cost brands should balance discounting with profitability to avoid long-term margin erosion.
- Mid-tier brands can explore gradual price increases without losing substantial market share.
- Premium brands should leverage brand strength and optimize pricing for higher margins.

THANK YOU