

# eBay Data Analysis Report

## Objective

Analyze pricing, seller behavior, product categories, and seasonal trends in eBay listings.

## Key Insights from Data Analysis

### 1. Pricing & Seller Rating

Hypothesis: Do sellers with higher ratings price items differently?

Result: No significant difference in pricing (p-value: 0.786).

Conclusion: Seller rating does not impact pricing.

#### *Recommendation:*

- Buyers may not need to pay extra for higher-rated sellers.
- Sellers should focus on trust signals (reviews, shipping speed) instead of price.

### 2. Product Condition & Price

Hypothesis: Are new items priced higher than used items?

Result: No significant price difference (p-value: 0.392).

Conclusion: Condition does not significantly impact price.

#### *Recommendation:*

- Sellers of used items should use strong descriptions & images.
- Buyers can look for good-condition used items for cost savings.

### 3. Product Categories & Price Differences

Hypothesis: Do different product categories have significantly different prices?

Result: No significant price variation (p-value: 0.100).

Conclusion: Categories do not strongly influence pricing.

#### *Recommendation:*

- Sellers should focus on competitive pricing.
- Buyers can compare similar items across categories to find better deals.

### 4. Seasonal Trends in Listings

Hypothesis: Do listings vary by season?

Result: No significant seasonal trend (p-value: 0.272).

Conclusion: Sellers list items consistently throughout the year.

**Recommendation:**

- Sellers do not need to wait for specific seasons to list products.
- Buyers should track price trends instead of waiting for seasonal drops.

**Final Summary of Findings**

Hypothesis	Test Used	P-value	Conclusion
Does Seller Rating Affect Price?	T-test	0.786	No impact
Does Condition (New vs. Used) Affect Price?	T-test	0.392	No impact
Does Category Affect Price?	ANOVA	0.100	No impact
Does Seasonality Affect Listings?	Chi-Square	0.272	No impact

**Actionable Recommendations**

**For Sellers:**

- Price competitively.
- Highlight product condition with strong descriptions.
- List anytime—no need to wait for seasonal trends.

**For Buyers:**

- Compare across sellers—look for good deals, not just high-rated sellers.
- Consider used items for cost savings.
- Track price trends instead of waiting for seasonal drops.