

Maven Toys Analysis

Data Description

- Four tables: inventory, products, sales, and stores
- The toy store chain has categories: Electronics (8), Games (10), Art & Crafts (12), Sports & Outdoors (9), Toys (10)
- 49 products in total in all categories
- Stores' locations spread over four areas: airport, commercial, downtown, and residential
- In total there are 50 stores in 29 different cities in Mexico
- Data is from two-year period 2017 – 2018

Purpose of Analysis

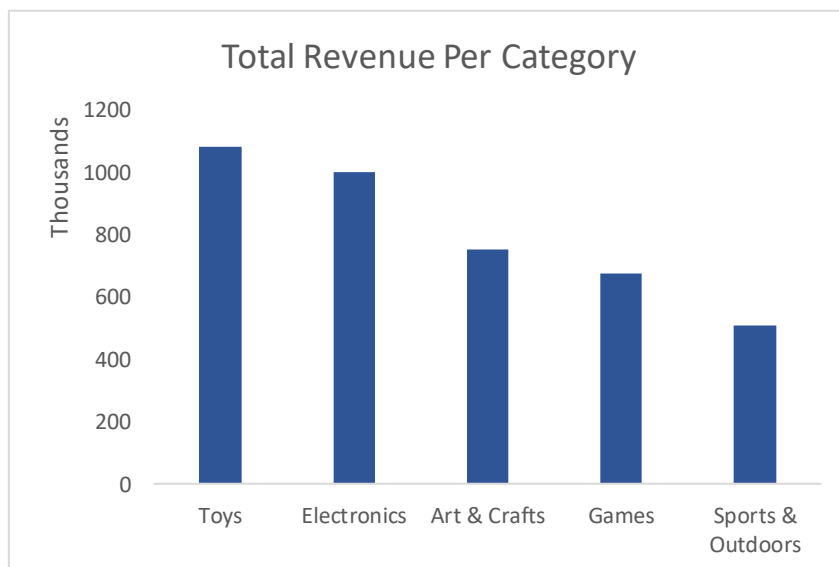
To identify which categories can be improved in sales strategy to increase profitability

Research Questions

1. Which categories generate the highest revenue?
2. Which categories demonstrate the most stable profitability over time?
3. How does internal competition between similar products affect sales trends and profitability?

Results

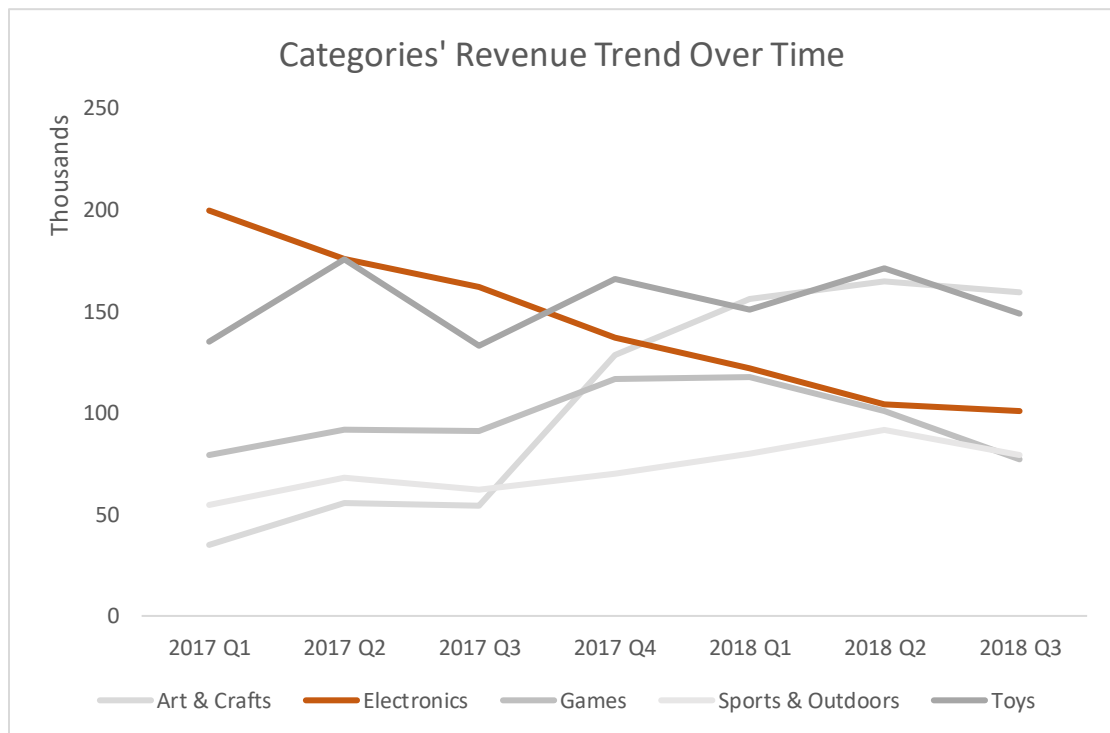
1. Toys and Electronics categories generate the highest total revenue



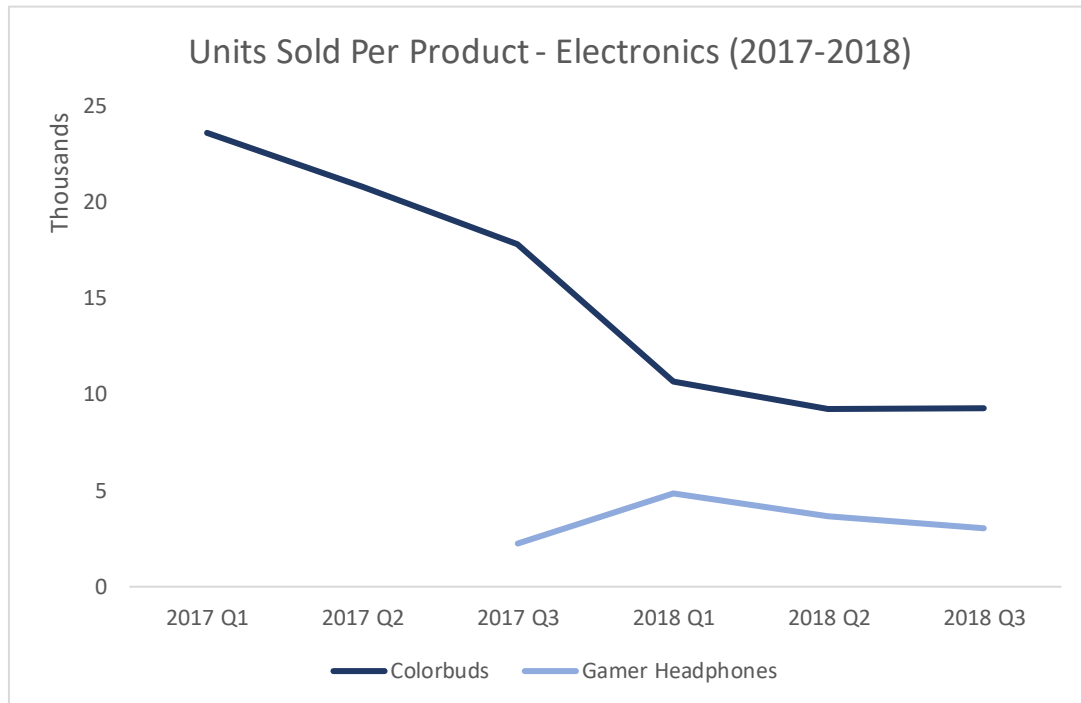
- The electronics category has the lowest CV (13.65%), confirming its stable profitability (per product) with minimal variability.

Category	AVG Profit Per Unit	STDV Profit Per Unit	Median	CV(%)	Total Units Sold	Total Revenue
Electronics	7.37	1.09	8	15	134K	987K
Toys	4.09	2.02	4	49	267K	1M
Games	3.42	1.47	3	43	194K	666K
Sports & Outdoors	3.18	2.34	3	74	169K	538K
Art & Crafts	2.53	2.31	2	91	325K	823K

- Electronics total revenue (quarterly) steadily declines over time



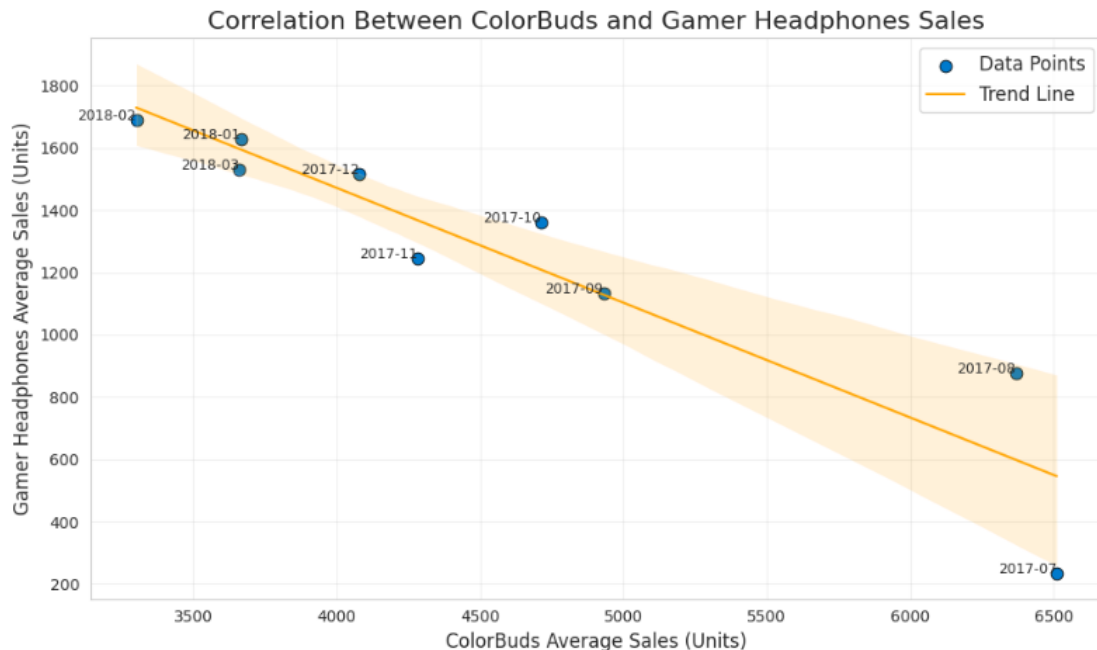
4. Within the electronics category, Colorbuds and Gamer Headphones displayed contrasting trends. Colorbuds experienced a sharp drop in purchases, declining from 23K to 9K, while Gamer Headphones steadily increased over the same period.



- Despite being priced lower, Colorbuds have a higher profit margin than Gamer Headphones

Product Name	Price	Cost	Profit
Colorbuds	\$14.99	\$6.99	\$8.00
Gamer Headphones	\$20.99	\$14.99	\$6.00

- Sales show a strong negative correlation, indicating internal competition between Colorbuds and Gamer Headphones.



The analysis reveals a strong negative correlation (Pearson Correlation = -0.930, p-value = 0.00027) between the monthly sales of **Colorbuds** and **Gamer Headphones** from Q3 2017 to Q1 2018. This indicates that as the sales of **Colorbuds** decrease, the sales of **Gamer Headphones** increase significantly. These findings suggest potential internal competition between the two products, where the success of **Gamer Headphones** may have contributed to the decline in **Colorbuds** sales.

*Monthly AVGs of both products are normally distributed

Conclusions & Recommendations

1. **Colorbuds Decline:**

The decline in Colorbuds sales from mid-2017 aligns with the rise of Gamer Headphones, highlighting internal competition within the category.

2. **Repositioning Strategy:**

Reposition Colorbuds to target a different market segment to mitigate competition, emphasizing unique features or use cases.

3. **Leveraging Gamer Headphone:**

Build on the success of Gamer Headphones by introducing a premium model with enhanced features and higher profit margins, positioning it as a flagship product.